

WAYNE STATE UNIVERSITY

Undergraduate Bulletin 2026-2027

TABLE OF CONTENTS

Undergraduate Bulletin: 2026-2027 9
Academic Calendar 2026-2027 10
Administration of the University 12
General Information 14
Accreditation 16
University Policies 20
Bachelor's Degree Requirements 23
General Education Program 24
Competency Requirements 25
Inquiry Course Requirements 26
Wayne Experience 31
Honors Curricula 33
Admission: Undergraduate 34
Admission: Graduate School 36
Academic Regulations 40
Tuition and Fees 46
Financial Aid 52
Records and Registration 55
Student Academic Success Services 57
Campus Life 62
Office of International Programs 66
Educational Outreach 69
Computing and Information Technology Division (C&IT) 72
University Libraries and Archives 73
Centers and Institutes (Undergraduate Programs) 75
Mike Ilitch School of Business 78
Academic Regulations: Mike Ilitch School of Business 79
Business Administration (B.A. and B.S.) 83
Business Administration Minor 85
Law Minor 86
Entrepreneurship and Innovation (Undergraduate Certificate) 87
Accounting 87
Accounting (B.A.) 88
Accounting (B.S.) 88
Accounting (Post-Bachelor Certificate) 88
Finance 89
Finance (B.A.) 89
Finance (B.S.) 90
Global Supply Chain Management 91
Entrepreneurship and Innovation (B.A.) 91
Entrepreneurship and Innovation (B.S.) 91
Global Supply Chain Management (B.A.) 92
Global Supply Chain Management (B.S.) 92
Management 93
Management (B.A.) 93
Management (B.S.) 94
Marketing 95
Marketing (B.A.) 95
Marketing (B.S.) 95
Technology, Information Systems and Analytics 97
Technology, Information Systems and Analytics (B.A.) 97
Technology, Information Systems and Analytics (B.S.) 97
College of Education 98
Academic Regulations: College of Education 99
Academic Services: College of Education 101
Administrative and Organizational Studies 102
Educational Leadership AGRADE 102
Kinesiology, Health and Sport Studies 103
Adapted Physical Education (Undergraduate Certificate) 103
Community Health (B.S.) 104
Exercise and Sport Science (B.S.) 107
Health and Physical Education Teaching (B.S.) 111
Sport Management (B.S.) 112
Yoga and Mindfulness Minor 115
Teacher Education 116
Early Childhood Education (B.S.Ed.) 117
Educational Studies (B.S.Ed.) 118
Elementary Education (B.S.Ed.) 118
Middle Childhood Education (B.S.Ed.) 120
Multi-Age Education (B.S.Ed.) 121
Secondary Education (B.S.) 122
Special Education (B.S.) 125
Deaf Studies Minor 136
Urban Education and Equity Studies Minor 136
Visual Arts Education (Teacher Certification) 137
Theoretical and Behavioral Foundations 138
James and Patricia Anderson College of Engineering 139
Academic Regulations: Engineering Division 142
Bachelor of Science: Engineering Division 144
General Engineering (B.S.) 150
Biomedical Engineering 150
Biomedical Engineering (B.S.) 150
Chemical Engineering and Materials Science 152
Chemical Engineering (B.S.) 153

Civil and Environmental Engineering 155
Civil Engineering (B.S.) 155
Computer Science 158
Computer Science (B.S.) 158
Computer Science Minor 161
Information Technology (B.S.) 161
Electrical and Computer Engineering 163
Electrical and Computer Engineering (B.S.) 163
Electrical and Computer Engineering Minor 165
Industrial and Systems Engineering 165
Industrial Engineering (B.S.) 165
Industrial Engineering Minor 167
Mechanical Engineering 168
Mechanical Engineering (B.S.) 168
Mechanical Engineering Minor 170
Engineering Technology Division 170
Advanced Energy Storage Systems (Undergraduate Certificate) 173
Computer Technology (B.S.) 174
Construction Management (B.S.) 175
Electrical/Electronic Engineering Technology (B.S.) 176
Electromechanical Engineering Technology (B.S.) 178
Mechanical Engineering Technology (B.S.) 179
Welding and Metallurgical Engineering Technology (B.S.) 181
College of Fine, Performing and Communication Arts 182
Academic Regulations: Fine, Performing and Communication Arts 183
Bachelor's Degree Requirements: Fine, Performing and Communication Arts 185
Law Minor 188
Art, Art History, and Design 188
Art (B.A.) 189
Art (B.F.A.) 190
Art History (B.A.) 192
Design (B.F.A.) 192
Design and Merchandising (B.A.) 194
Design and Merchandising (B.S.) 195
Animation and Interactivity Minor 195
Art History Minor 196
Art Minor 196
Blacksmithing Minor 196
Ceramics Minor 196
Design Minor 197
Digital Art and Photography Minor 197
Fashion Design Minor 197
Graphic Design Minor 198
Illustration Minor 198
Industrial Design Minor 198
Interior Design Minor 198
Jewelry Minor 199
Painting and Drawing Minor 199
Printmaking Minor 199
Sculpture Minor 200
Textile Design Minor 200
Communication 201
Bachelor of Arts Program Requirements 201
Communication and Media Studies (B.A.) 202
Film (B.A.) 203
Journalism and Media (B.A.) 204
Media Arts and Studies (B.A.) 204
Public Relations and Strategic Communication (B.A.) 205
Communication Studies Minor 206
Film Minor 206
Health Communication Minor 207
Journalism Minor 207
Media Arts and Studies Minor 207
Media Content Creation Minor 208
Public Relations Minor 208
Music 208
Bachelor Degree Requirements 208
Music (B.A.) 211
Music (B.Mus.) 211
Music Minor 217
Jazz Studies Minor for Instrumental Music Education Majors 218
Music Industry Studies Minor 218
Music Technology Minor 218
Theatre and Dance 219
Dance (B.F.A.) 219
Dance (B.S.) 220
Theatre (B.F.A.) 222
Theatre (B.A.) 225
Africana Theatre and Dance Minor 226
Dance Minor 226
General Theatre Minor 226
Musical Theatre Minor 227
Studio and Community Dance Minor 227
Theatre Design and Technology Minor 227

Theatre Management Minor ... 228
Irvin D. Reid Honors College ... 229
Academic Regulations ... 230
Honors College Programs ... 232
School of Information Sciences ... 234
Law School ... 236
Law (B.A.) ... 237
Law Minor ... 238
LawStart Program ... 239
College of Liberal Arts and Sciences ... 239
Academic Regulations: Liberal Arts and Sciences ... 241
Bachelor's Degree Requirements: Liberal Arts and Sciences ... 242
Programs Offered through the CLAS Dean's Office ...
Exploratory and Pre-Professional Curricula ... 243
Computer Science (B.A.) ... 243
General Studies (B.G.S.) ... 244
Professional Biomedical Sciences (B.S.) ... 244
Digital Humanities Minor ... 244
Jewish Studies Minor ... 245
African American Studies ... 246
African American Studies (B.A.) ... 246
African American Studies Minor ... 247
Anthropology ... 247
Anthropology (B.A.) ... 247
Anthropology Minor ... 248
Archaeology Minor ... 248
Forensics and Investigation Minor ... 249
Global Health and Social Medicine Minor ... 249
Biological Sciences ... 250
Bioinformatics and Data Analysis (Undergraduate Certificate) ... 250
Biological Sciences (B.A.) ... 251
Biological Sciences (B.S.) ... 252
Biological Sciences Minor ... 254
Chemistry ... 254
Biochemistry and Chemical Biology (B.S.) ... 255
Chemistry (B.A.) ... 256
Chemistry (B.S.) ... 257
Biochemistry and Chemical Biology Minor ... 260
Chemistry Minor ... 260
Cannabis Chemistry (Undergraduate Certificate) ... 261
Classical and Modern Languages, Literatures, and Cultures ... 261
CMLLC Program Requirements ... 262
Global Studies (B.A.) ... 262
World Languages, Literatures, and Cultures (B.A.) ... 265
Arabic Minor ... 269
Asian Studies Minor ... 270
Classical Civilization Minor ... 270
Folklore and Fairy-Tale Studies Minor ... 270
French Minor ... 270
German Minor ... 270
Global Studies Minor ... 271
Modern Greek Studies Minor ... 271
Israeli Studies Minor ... 271
Italian Minor ... 271
Latin Minor ... 272
Near Eastern Studies Minor ... 272
Polish Minor ... 272
Russian Minor ... 272
Spanish Minor ... 272
Arabic for the Health Care Professions (Undergraduate Certificate) ... 272
Professional Arabic (Undergraduate Certificate) ... 273
Conversational and Professional French (Undergraduate Certificate) ... 273
Practical French (Undergraduate Certificate) ... 273
Practical German (Undergraduate Certificate) ... 274
Practical Italian (Undergraduate Certificate) ... 274
Communication Sciences and Disorders ... 275
Communication Sciences and Disorders (B.A.) ... 275
Communication Sciences and Disorders Minor ... 276
Criminology and Criminal Justice ... 276
Criminal Justice (B.S.) ... 276
Criminal Justice Minor ... 277
Forensics and Investigation Minor ... 278
Economics ... 278
Economics (B.A.) ... 278
Mathematical Economics (B.A.) ... 279
Economics Minor ... 280
Health Economics Minor ... 281
Employment and Labor Relations ... 281
Employment and Labor Relations (B.A.) ... 281
English ... 282
English (B.A.) ... 282
Film Studies (B.A.) ... 285
Creative Writing Minor ... 286
English Minor ... 286

Film and Media Studies Minor 286
Professional Writing Minor 287
Environmental Science and Geology 288
Environmental Science (B.S.) 288
Geology (B.A.) 289
Geology (B.S.) 290
Environmental Science Minor 291
Geology Minor 291
Geochemistry Minor 291
Geophysics Minor 291
Gender, Sexuality and Women's Studies 292
Gender, Sexuality and Women's Studies (B.A.) 292
Gender, Sexuality and Women's Studies Minor 293
Queer Studies Minor 294
History 295
History (B.A.) 295
History Minor 296
History of Science, Technology, Environment, and Medicine Minor 297
Public History Minor 297
Society and the Environment Minor 297
Latino/a and Latin American Studies 298
Latino/a and Latin American Studies (Co-Major) 298
Latino/a and Latin American Studies Minor 298
Linguistics 299
Linguistics (B.A.) 299
Linguistics Minor 301
Mathematics 301
Mathematics Placement Information 302
Advanced Courses for Non-Majors 303
Actuarial Mathematics (B.A.) 304
Mathematical Economics (B.A.) 305
Mathematics (B.A.) 306
Mathematics (B.S.) 308
Statistics (B.S.) 310
Mathematics Minor 311
Statistics Minor 312
Neuroscience 313
Neuroscience (B.S.) 313
Neuroscience Minor 314
Nutrition and Food Science 316
Nutrition and Food Science (B.A.) 316
Nutrition and Food Science (B.S.) 317
Nutrition and Food Science Minor 318
Peace and Conflict Studies 318
Peace and Conflict Studies (Co-Major) 318
Philosophy 319
Philosophy (B.A.) 319
Health Care Ethics Minor 321
Humanities Minor 321
Law (B.A.) 322
Law Minor 323
Medical Humanities Minor 324
Philosophy Minor 324
Pre-Law Minor 325
Religious Studies Minor 325
Physics and Astronomy 326
Astronomy (B.A.) 326
Astronomy (B.S.) 326
Biomedical Physics (B.S.) 327
Physics (B.A.) 328
Physics (B.S.) 329
Astronomy Minor 330
Biomedical Physics Minor 331
Physics Minor 331
Political Science 332
Peace and Conflict Studies Minor 332
Political Science (B.A.) 333
Public Affairs (B.P.A.) 336
Political Science Minor 337
Psychology 338
Psychology (B.A.) 338
Psychology (B.S.) 339
Health Psychology Minor 340
Psychology Minor 340
Public Health 341
Public Health (B.S.) 341
Public Health Minor 342
Sociology 343
Sociology (B.A.) 343
Sociology Minor 344
Urban Studies and Planning 344
Urban Studies and Planning (B.A.) 344
Urban Studies Minor 346
Urban Sustainability Minor 346
School of Medicine 348
Doctor of Medicine (M.D. Program) 351
College of Nursing 353

Academic Regulations ... 354
Nursing (B.S.N.) ... 357
Eugene Applebaum College of Pharmacy and Health Sciences ... 362
Academic Regulations: College of Pharmacy and Health Sciences ... 365
Applied Health Sciences ... 369
Applied Health Sciences (B.S.) ... 369
Medical Laboratory Science ... 371
Medical Laboratory Science (B.S.) ... 371
Laboratory Science Concentration (B.H.S.) ... 373
Mortuary Science (B.S.) ... 374
Health Care Sciences ... 377
Physical Therapy Concentration (B.H.S.) ... 377
Radiation Therapy Technology (B.S.) ... 378
Pharmaceutical Sciences ... 380
Pharmaceutical Sciences Concentration (B.H.S.) ... 380
Pharmacy (Pharm.D.) ... 381
Pharmacy Practice ... 383
School of Social Work ... 384
Academic Regulations ... 385
Social Work (B.S.W. Program) ... 386
Social Work and Social Justice Minor ... 393
Law Minor ... 394
Additional Academic Programs ... 395
Complete Course List ... 397
ACC - Accounting ... 400
ACO - Art: Core ... 403
ACR - Art: Ceramics ... 403
ACS - Art: Special Seminars ... 404
ADA - Art: Digital Art ... 405
ADN - Art: Design ... 405
ADR - Art: Drawing ... 406
ADX - Art and Design Exposure ... 407
AED - Art Education ... 407
AET - Alternative Energy Technology ... 408
AFA - Art: Design and Merchandising ... 409
AFI - Art: Fibers ... 410
AFS - African American Studies ... 411
AGD - Art: Graphic Design ... 413
AH - Art History ... 415
AHS - Applied Health Sciences ... 417
AIA - Art: Interior Design ... 418
AID - Art: Industrial Design ... 419
AME - Art: Metalsmithing ... 420
AN - Anesthesia ... 420
ANA - Anatomy and Cell Biology ... 424
ANT - Anthropology ... 424
APA - Art: Painting ... 430
APH - Art: Photography ... 431
APR - Art: Printmaking ... 432
ARB - Arabic ... 433
ARM - Armenian ... 434
ART - Art Courses ... 435
ASE - American Sign Language ... 435
ASL - Art: Sculpture ... 436
ASN - Asian Studies ... 437
AST - Astronomy ... 437
AT - Art Therapy ... 438
ATR - Athletic Training ... 439
AUD - Audiology ... 440
BA - Business Administration ... 442
BBE - Bilingual/Bicultural Education ... 444
BE - Basic Engineering ... 444
BIO - Biological Sciences ... 445
BLW - Business Law ... 456
BMB - Biochemistry and Molecular Biology ... 456
BME - Biomedical Engineering ... 457
BMS - Basic Medical Science ... 461
CB - Cancer Biology ... 461
CE - Civil Engineering ... 463
CED - Counselor Education ... 471
CHE - Chemical Engineering ... 473
CHI - Chinese ... 476
CHM - Chemistry ... 477
CLA - Classics ... 484
CMT - Construction Management ... 485
COM - Communication ... 487
CRJ - Criminal Justice ... 495
CSC - Computer Science ... 498
CTE - Career and Technical Education ... 505
DNC - Dance ... 505
DR - Dispute Resolution ... 509
DSA - Data Science and Analytics ... 509
DSB - Data Science for Business ... 510
DSE - Data Science for Engineering ... 510
ECE - Electrical and Computer Engineering ... 511
ECO - Economics ... 517
ED - Education ... 522

EDA - Educational Administration 523
EDP - Educational Psychology 525
EED - English Education 528
EER - Educational Evaluation and Research 529
EET - Electrical/Electronic Engineering Technology 531
EGR - Engineering: Special Topics 531
EHP - Educational History and Philosophy 532
EI - Entrepreneurship and Innovation 532
ELE - Elementary Education 533
ELI - English Language Institute 537
ELR - Employment and Labor Relations 538
ENG - English 541
EPS - Educational Leadership and Policy Studies 550
ESG - Environmental Science and Geology 551
ET - Engineering Technology 555
EVE - Electric-drive Vehicle Engineering 557
FIN - Finance 558
FPC - Fine Arts: Interdisciplinary 562
FPH - Family Public Health 562
FRE - French 564
FYS - First Year Seminar 567
GER - German 567
GKA - Greek: Ancient 569
GKM - Greek: Modern 570
GLS - Global Studies 570
GPH - Geography 572
GS - Graduate School 573
GSC - Global Supply Chain Management 573
GSW - Gender, Sexuality and Women's Studies 576
HA - Health Administration 578
HE- Health Education 579
HEB - Hebrew 581
HIS - History 581
HMB - Healthcare MBA 591
HON - Honors 591
HPE - Health and Physical Education 592
IBS - Interdisciplinary Biomedical Sciences 593
IE - Industrial Engineering 594
IM - Immunology and Microbiology 601
INF - Information Sciences 602
ITA - Italian 606
JPN - Japanese Studies 608
KHS - Kinesiology, Health and Sport Studies 609
KIN - Kinesiology 610
LAS - Latino/Latina and Latin American Studies 611
LAT - Latin 613
LDT - Learning Design and Technology 613
LED - Language Education 616
LEX - Law 616
LFA - Life Fitness Activities 637
LGL - Language Learning 638
LIN - Linguistics 638
MAE - Mathematics Education 640
MAT - Mathematics 641
MCT - Mechanical Engineering Technology 647
MD1 - Medical School: Year 1 648
MD2 - Medical School: Year 2 651
MD3 - Medical School: Year 3 655
MD4 - Medical School: Year 4 656
MDR - Medical Research 665
ME - Mechanical Engineering 665
MED - Music Education 671
MGG - Molecular Genetics and Genomics 671
MGT - Management 673
MIT - Manufacturing and Industrial Engineering Technology 677
MKT - Marketing 677
MLC - Med-Direct Community Learning 680
MLS - Medical Laboratory Science 680
MS - Mortuary Science 682
MSL: Master of Studies in Law 683
MSE - Materials Science and Engineering 686
MUA - Music Ensembles and General Courses 687
MUH - Music History 691
MUP - Music Private Instruction 694
MUT - Music Theory 700
NE - Near Eastern Studies 702
NEU - Neuroscience 704
NFS - Nutrition and Food Science 705
NUR - Nursing 709
OT - Occupational Therapy 727
PAA - Pathologists' Assistant 731
PAS - Physician Assistant Studies 734
PCS - Peace and Conflict Studies 736
PH - Public Health 737
PHA - Pharmacy 739
PHC - Pharmacology 740
PHI - Philosophy 743
PHY - Physics 747

POL - Polish 753
PPR - Pharmacy Practice 754
PS - Political Science 757
PSC - Pharmaceutical Sciences 764
PSL - Physiology 767
PSY - Psychology 770
PT - Physical Therapy 778
PTH - Pathology 781
PYC - Psychiatry 782
RDT - Radiologic Technology 783
RLL - Reading, Language and Literature Education 785
ROC - Radiation Oncology 786
RSE - Research, Service and Engagement 788
RT - Radiation Therapy Technology 788
RUS - Russian 790
SAM - Sport Administration and Management 791
SCE - Science Education 792
SED - Special Education 793
SEM - Sport and Entertainment Management 794
SLA - Slavic 795
SLP - Speech and Language Pathology 795
SOC - Sociology 797
SPA - Spanish 802
SSE - Social Studies Education 805
STA - Statistics 806
STE - Sustainable Engineering 807
STS - Study Skills 807
SW - Social Work 807
SWA - Swahili 816
SYE - Systems Engineering 816
TED - Teacher Education 817
THD - Theatre and Dance 824
THR - Theatre 825
TIS - Technology, Information Systems and Analytics 836
UGR - Undergraduate Research 840
UP - Urban Planning 840
US - Urban Studies 842
WMT - Welding and Metallurgical Engineering Technology 842
University Faculty 844
Index 885

UNDERGRADUATE BULLETIN: 2026-2027

University Mission

Wayne State's mission is to create and advance knowledge, prepare a diverse student body to thrive, and positively impact local and global communities.

Our vision

Wayne State will be a pre-eminent, public, urban research university known for academic and research excellence, success across a diverse student body, and meaningful engagement in its urban community.

Our values

While our vision and mission show where we want to go, our values guide us on the way. They cut across organizational boundaries, bind us culturally, and permeate our strategic and tactical initiatives. They are the defining traits of the Wayne State community.

Collaboration: When we work together, drawing upon various talents and perspectives, we achieve better results.

Integrity: We keep our word, live up to our commitments and are accountable to ourselves and each other.

Innovation: We are unafraid to try new things and learn by both failure and success.

Excellence: We strive for the highest quality outcomes in everything we do.

Diversity and Inclusion: We value all people and understand that their unique experiences, talents and perspectives make us a stronger organization and better people.

Wayne State intends to remain one of the nation's most respected public research universities, and feels that these goals provide a way to make that happen. National recognition is not an end in itself; what matters most is how Wayne State's progress as shaped by these goals will position the university to benefit its students and, ultimately, its city, state, nation and the world.

Accreditation

Wayne State University has been accredited by the Higher Learning Commission since 1915.

Academic Calendar 2026-2027

The following academic calendar includes deadlines for the academic year as determined by full-term classes meeting from the first day through final exams.

Parts of term/adjusted deadlines: Some classes may meet for shorter parts of term and their deadlines are adjusted accordingly. Deadlines for these class sections are available in the class details panel (https://wayne.edu/registrar/classdetails) of the schedule of classes.

Religious holidays: Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

Fall Term: 2026

University Year Appointments Begin [1]	August 18, 2026
Priority Registration	March 30 - August 23, 2026
Open Registration	August 24-30, 2026
Semester Begins	August 31, 2026
Classes Begin	August 31, 2026
Holiday - University Closed	September 7, 2026
Late Registration and 1st Week Late Add	August 31 - September 7, 2026
Late Registration and 2nd Week late Add Override required	September 8-14, 2026
Last Day for Tuition Cancellation - Full Term Courses/ Census Date	September 14, 2026
Early Assessment/Mid-Term Grading	TBD
Degree Applications Due	October 2, 2026
Holiday - No Classes	October 12-13, 2026
Last Day to Withdraw	November 9, 2026
Holiday - No Classes	November 25, 2026
Holiday - University Closed	November 26-28, 2026
Classes End	December 15, 2026
Study Day - Final Exams May Not Be Scheduled	December 16, 2026
Final Exams	December 17-23, 2026
Commencement	TBD
Semester Ends	December 31, 2026
Holiday - University Closed	December 25, 2026 - January 3, 2027

Winter Term: 2027

Priority Registration	November 2, 2026 - January 3, 2027
Open Registration	January 4-10, 2027
Semester Begins	January 1, 2027
Classes Begin	January 11, 2027
Holiday - University Closed	January 18, 2027
Late Registration and 1st Week Late Add	January 11-18, 2027
Late Registration and 2nd Week late Add Override required	January 19-25, 2027
Last Day for Tuition Cancellation - Full Term Courses/ Census Date	January 25, 2027
Early Assessment/Mid-Term Grading	TBD
Degree Applications Due	February 12, 2027
Last Day to Withdraw	March 29, 2027
Spring Break - No Classes	March 15-21, 2027
Classes End	April 26, 2027
Study Day - Final Exams May Not Be Scheduled	April 27, 2027
Final Exams	April 28 - May 4, 2027
Semester Ends	May 4, 2027
Commencement	TBD
University Year Appointments End [1]	May 14, 2027

Spring/Summer Term: 2027

Priority Registration	February 8 - May 6, 2027
Classes Begin	May 7, 2027
Late Registration	May 7-20, 2027
Last Day to Drop w/ Tuition Canceled	May 20, 2027
Holiday - University Closed	May 31, 2027
Day Scheduled as a Monday [2]	June 4, 2027

Degree Applications Due	June 3, 2027
Holiday - University Closed	June 18, 2027
Census Date	July 6, 2027
Holiday University Closed	July 5, 2027
Last Day to Withdraw	July 15, 2027
Classes End	July 30, 2027
Study Day - Final Exams May Not Be Scheduled	July 31, 2027
Final Exams	August 2-5, 2027

Spring Term: 2027

Priority Registration	February 8 - May 6, 2027
Classes Begin	May 7, 2027
Late Registration	May 8-13, 2027
Last Day to Drop w/ Tuition Canceled	May 13, 2027
Holiday - University Closed	May 31, 2027
Day Scheduled as a Monday [2]	June 4, 2027
Degree Applications Due	June 3, 2027
Last Day to Withdraw	June 14, 2027
Holiday - University Closed	June 18, 2027
Classes End	June 25, 2027
Study Day - Final Exams May Not Be Scheduled	June 26, 2027
Final Exams	June 28-29, 2027
Census Date	July 6, 2027

Summer Term: 2027

Priority Registration	February 8 - May 6, 2027
Degree Applications Due	June 3, 2027
Classes Begin	June 30, 2027
Late Registration	June 30 -July 6, 2027
Last Day to Drop w/ Tuition Canceled	July 6, 2027
Census Date	July 6, 2027
Holiday - University Closed	July 5, 2027
Last Day to Withdraw	August 5, 2027
Classes End	August 17, 2027
Study Day - Final Exams May Not Be Scheduled	August 18, 2027
Final Exams	August 19-20, 2027

[1] University Year Appointments are a full nine months in length. Individual service assignments are the responsibility of the appropriate Dean, or, by delegation, the Department Chairperson

[2] An equal number of class days is needed for courses.

Administration of the University

The general governance of Wayne State University is constitutionally vested in the Board of Governors, consisting of eight popularly elected members and the President of the University, who is named by the elected members. The president is the chief executive officer of the university and is charged by the Board of Governors with responsibility for its administration. For educational and administrative purposes, the university is organized into major academic units — schools, colleges, divisions, centers and institutes. The following schools, colleges and divisions constitute the heart of the University:

Mike Ilitch School of Business
College of Education
James and Patricia Anderson College of Engineering
College of Fine, Performing and Communication Arts
Irvin D. Reid Honors College
Graduate School
Law School
College of Liberal Arts and Sciences
School of Information Sciences
School of Medicine
College of Nursing
Eugene Applebaum College of Pharmacy and Health Sciences
School of Social Work

The dean of the college or school is its chief executive officer. More than half the colleges and schools are organized into departments or divisions, each administered by a chairperson (or assistant dean). Academic standards, curricular development, course revision and similar academic matters are the primary responsibility of the faculty and dean of the college or school, although these matters are subject to review and approval by the Provost and Senior Vice President for Academic Affairs and by the President of the University. Major educational policy decisions are also subject to review by the Academic Senate.

The Graduate School is the central unit for the supervision and encouragement of graduate work in the university and has basic responsibility for the improvement and review of existing programs and the approval of new graduate programs. Except for applicants and candidates for the Doctor of Philosophy degree, the detailed supervision of graduate students' work is conducted by the college and school and, where appropriate, by the departments.

All degrees are granted by the university through the colleges and schools, except that the Dean of the Graduate School, with the approval of the Graduate Council, recommends candidates for the Doctor of Philosophy degree.

Board of Governors

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ANIL KUMAR
TERRI LYNN LAND
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University Leadership

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Academics and Research

ALI ABOLMAALI, Ph.D., Dean of the James and Patricia Anderson College of Engineering
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PAUL BRACKE, Ph.D., Dean of the University Libraries and the School of Information Sciences
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STEPHANIE HARTWELL, Ph.D., Dean of the College of Liberal Arts and Sciences
CHRISTINE JACKSON, Ph.D., Vice Provost for Partnerships and Workforce
VIRGINA FRANKE KLEIST, Ph.D., Dean of the Mike Ilitch School of Business
SHERYL KUBIAK, Ph.D., Dean of the School of Social Work
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ELENA PAST, Ph.D., Interim Dean, Irvin D. Reid Honors College
JENNIFER WAREHAM, Ph.D., Interim Vice Provost for Faculty Affairs & Academic Personnel
KELLY YOUNG, Ph.D., Interim Dean, College of Fine, Performing and Communication Arts

Health Affairs

RAMONA BENKERT, Ph.D., Dean of the College of Nursing
BERNARD COSTELLO, M.D., Senior Vice President for Health Affairs
BRIAN CUMMINGS, Ph.D., Dean of the Eugene Applebaum College of Pharmacy and Health Sciences
WAEL SAKR, M.D., Dean of the School of Medicine
MARK SCHWEITZER, M.D., Special Associate for Public Planning

Business Operations

ROBERT DAVENPORT, Associate Vice President for Facilities Planning and Management
BRAD DICK, Senior Associate Vice President for Finance and Business Affairs, and Deputy Chief Business Officer
BETHANY GIELCZYK, M.P.P., Senior Vice President for Finance and Business Affairs, Chief Financial Offer and Treasurer
CAROLYN P. HAFNER, B.B.A., Associate Vice President for Human Resources

Engagement and Advocacy

TAUNYA PHILLIPS, M.B.A., Assistant Vice President for Technology and Commercialization
DAVID RIPPLE, M.A., Vice President for Development and Alumni Affairs
MELISSA SMILEY, Ph.D., Chief of Staff and University Relations Officer
EDWARD (NED) STAEBLER, M.S., Vice President for Economic Development
ERIKA WALLACE, M.P.A., Director of Athletics

Digital Strategy and Operational Excellence

ROHINI ANANTHAKRISHNAN, Vice President for Digital Strategy and Operational Excellence
ROB THOMPSON, Chief Information Officer and Associate Vice President, C&IT

University Governance

JULIE MILLER, M.A., University Secretary and Executive Officer to the Board of Governors
MIKE POTERALA, J.D., Vice President and General Counsel

General Information

History of the university

Wayne State University's story begins in 1868 with the founding of the Detroit Medical College, now the School of Medicine. In 1881, the Detroit Normal Training School was established, which is now the College of Education. The now-iconic Old Main Hall opened in 1896 as Central High School, which began adding college classes in 1913. Those classes evolved into the Detroit Junior College (offering a two-year liberal arts and sciences program) in 1917, which became the College of the City of Detroit (with four-year degree programs) in 1923, and now is the College of Liberal Arts and Sciences.

Frank Cody became the first president in 1933, with the existing colleges united into a university organization, eventually named Wayne University, taken from Wayne County in honor of General Anthony Wayne. In 1956, Wayne University became Wayne State University. In 1959, Wayne State was designated as one of Michigan's three constitutionally established universities.

Today, Wayne State offers more than 375 academic programs through 13 schools and colleges.

Learn more about our history (https://wayne.edu/about/history).

Timeline

1868 — The Detroit Medical College, predecessor of the School of Medicine, was established.

1881 — The Detroit Normal Training School, predecessor of the College of Education, was established.

1917 — The Detroit Junior College, offering a two-year liberal arts and sciences program, was established in 'Old Main' and later developed into the College of Liberal Arts.

1920 — The Detroit Normal Training School became a four-year degree-granting institution under the name of the Detroit Teachers College. The first bachelor's degrees were granted in 1924. The Detroit Junior College became the College of the City of Detroit with four-year degree programs. The first degrees were conferred in 1925.

1924 — The College of Pharmacy was founded.

1933 — The College of Engineering and the Graduate School were established.

1933 — The Colleges of Liberal Arts, Education, Engineering, Medicine and Pharmacy and the Graduate School were united by action of the Detroit Board of Education into a university organization.

1934 — The name Wayne University was adopted, taken from Wayne County and, ultimately, from General Anthony Wayne.

1935 — The School of Social Affairs was founded. In 1950, it became the present School of Social Work.

1937 — The Law School, established in 1927 as Detroit Law School, was incorporated into the university.

1945 — The first doctoral programs were authorized in the fields of chemistry, physiological chemistry and education.

1945 — The College of Nursing, which began as a program in the College of the City of Detroit, became a separate college.

1946 — The School of Business Administration, originating in the College of Liberal Arts, became the tenth academic unit in the university.

1956 — Wayne University became Wayne State University by Public Act 183 of Michigan Public Acts of 1956.

1959 — Monteith College was established.

1959 — Wayne State University became a constitutionally established university by a popularly adopted amendment to the Michigan Constitution.

1973 — The College of Lifelong Learning was established as the successor to the Division of Urban Extension.

1974 — College of Pharmacy and Division of Allied Health Programs merge into the College of Pharmacy and Allied Health Professionals.

1985 — The College of Fine and Performing Arts and the College of Urban, Labor and Metropolitan Affairs were established.

1989 — The name of the College of Fine and Performing Arts was changed to the College of Fine, Performing and Communication Arts.

1992 —The College of Science was established.

2001 — The name of the College of Pharmacy and Allied Health Professions was changed to the Eugene Applebaum College of Pharmacy and Health Sciences.

2002 — The College of Lifelong Learning was discontinued and its programs transferred to other units.

2005 — The College of Liberal Arts and the College of Science were merged into the College of Liberal Arts and Sciences.

2005 — The College of Urban, Labor and Metropolitan Affairs was discontinued and its programs were transferred to other units.

2008 — The Irvin D. Reid Honors College was established.

2009 — The Library and Information Science Program was established as the School of Library and Information Science.

2011 — The Warrior football team made its first appearance in the NCAA Division II championship game.

2014 — The Advanced Technology Education Center opens in Warren, Michigan.

2015 — The Integrative Biosciences Center, a $90 million facility dedicated to eliminating health disparities in Detroit, opens.

2015 — The name of the School of Business Administration was changed to the Mike Ilitch School of Business.

2017 — The name of the School of Library and Information Science was changed to the School of Information Sciences.

2018 — The Mike Ilitch School of Business opens its new facility.

2019 — Wayne State opens the Anthony Wayne Drive Apartments.

2025 — The name of the College of Engineering was changed to the James and Patricia Anderson College of Engineering.

Location of the university

More than 100 buildings provide housing for the services, instructional and research needs of the university and its students and staff. Most academic and service units of the university are located on the main

campus in Midtown Detroit, largely bounded by York Street on the north, Woodward Avenue on the east, Forest Avenue on the south and Trumbull Street on the west. The major classroom, laboratory, library and other academic buildings are located east of the John C. Lodge Freeway; most of the athletics and recreational facilities are on the west side of the freeway.

The School of Medicine and its affiliated teaching hospitals and clinics are located a short distance south and east of the main campus in the Detroit Medical Center. The Eugene Applebaum College of Pharmacy and Health Sciences is also located on the medical campus. The Mike Ilitch School of Business is located south of main campus in the District Detroit area. Certain smaller instructional and service units are located in other parts of the metropolitan area.

Accreditation

Wayne State University as a whole is accredited as a doctoral degree-granting institution by the regional accrediting agency:

The Higher Learning Commission
230 South LaSalle St., Suite 7-500
Chicago, Illinois 60604-1411
telephone: 800-621-7440

In addition, many specific programs and curricula are accredited individually by specialized or professional accrediting agencies. A report is produced annually for the Board of Governors which designates the accrediting agencies of the University's programs; the report is available from the Office of the Provost (https://provost.wayne.edu/apr/accreditations). The principal accreditation agencies are as follows:

Accreditation Statuses (as of January 2026)

Institutional Accreditation

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
WSU	Wayne State University	The Higher Learning Commission	Accredited	2026-2027

Mike Ilitch School of Business

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
MISB	Baccalaureate Programs Graduate Programs	The Association to Advance Collegiate Schools of Business (AACSB)	Accredited	2031

College of Education

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
ED	All teacher education certification programs	Council for the Accreditation of Educator Preparation (CAEP)	Accredited	2031
ED	MA & M.Ed in Art Therapy	Commission on Accreditation of Allied Health Education Programs (CAAHEP)	Accredited	September 2030
ED	Counselor Education (MA, Ed.D. and Ph.D.)	Council for Accreditation of Counseling and Related Educational Programs (CACREP)	Accredited	October 2032
ED	Counseling Psychology (Ph.D.)	American Psychological Association (APA)	Accredited	2029
ED	BS in Exercise and Sport Science	Commission on Accreditation of Allied Health Education Programs (CAAHEP)	Accredited	2026
ED	MEd and PhD Learning Design and Technology	Association for Educational Communications and Technology (AECT)	Accredited	2026, MEd on moratorium; PhD seeking moratorium

James and Patricia Anderson College of Engineering

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
EN	Division of Engineering-Undergraduate Programs: Biomedical Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering	Accreditation Board of Engineering & Technology, Inc. (ABET, Inc.) – Engineering Accreditation Commission	Accredited	2030

EN	Division of Engineering Technology-Undergraduate Programs: Electrical/ Electronic, Engineering Technology, Mechanical Engineering Technology	Accreditation Board of Engineering and Technology (ABET) – Engineering Technology Accreditation Commission	Accredited	2031
EN	Computer Science-Undergraduate Programs	Accreditation Board of Engineering and Technology (ABET) – Computing Accreditation Commission	Accredited	2031

College of Fine, Performing and Communication Arts

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
FPCA	BA/BM in Music, MA/MM in Music	National Association of Schools of Music (NASM)	Accredited	2030-2031
FPCA	Bachelor of Arts in Communication (Public Relations concentration)	The Public Relations Society of America	Certified	2028-2029

School of Information Sciences

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
SIS	Master of Library and Information Science	American Library Association (ALA)	Accredited	2031

The Law School

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
LAW	The Law School	American Bar Association (ABA)	Accredited	2024-25; Reviewed in 2025 and decision forthcoming

College of Liberal Arts and Sciences

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
CLAS	Bachelor of Science in Chemistry	American Chemical Society	Approved	2029
CLAS	Bachelor of Science in Biochemistry and Chemical Biology	American Society for Biochemistry and Molecular Biology	Approved	2029
CLAS	Doctor of Audiology	American Speech-Language-Hearing Association (ASHA)	Accredited	2033
CLAS	M.A. - Speech-Language Pathology	American Speech-Language-Hearing Association (ASHA)	Accredited	2030
CLAS	Nutrition and Food Sciences Coordinated Program in Dietetics	Accreditation Council for Education in Nutrition and Dietetics (ACEND)	Accredited	2031
CLAS	PhD in Clinical Psychology	American Psychological Association (APA)	Accredited	2028
CLAS	Master of Public Administration	Network of Schools of Public Policy, Affairs, and Administration (NASPAA)	Accredited	2027
CLAS	Master of Urban Planning	Planning Accreditation Board (PAB)	Accredited	2026

School of Medicine

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
SOM	Continuing Medical Education for M.D.s	Accreditation Council for Continuing Medical Education (ACCME)	Accredited	March 2028
SOM	Master of Science in Genetic Counseling	Accreditation Council for Genetic Counseling	Accredited	August 2028

SOM	Graduate Medical Education Program	Accreditation Council for Graduate Medical Education, (ACGME)	Accredited	2026
SOM	Master of Public Health	Council on Education for Public Health (CEPH)	Accredited	2032
SOM	Doctor of Medicine Degree Program (M.D.)	Liaison Committee on Medical Education (LCME)	Accredited	2030-2031
SOM	Medical Physics (MS, PhD, DMP, Graduate Certificate)	Commission on Accreditation of Medical Physics Educational Programs (CAMPEP)	Accredited	June 2026
SOM	Radiation Oncology Physics Residency Program	Commission on Accreditation of Medical Physics Educational Programs (CAMPEP)	Accredited	June 2026

College of Nursing

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
CON	Baccalaureate Programs, Master of Science in Nursing, Doctor of Nursing Practice	Commission on Collegiate Nursing Education (CCNE)	Accredited	December 2033
CON	MSN Nurse-Midwifery Program	Accreditation Commission for Midwifery Education (ACME) Nurse-Midwifery Option	Accredited	December 2033

Eugene Applebaum College of Pharmacy and Health Sciences

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
EACPHS	BS Medical Laboratory Science (formerly Clinical Laboratory Science)	National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)	Accredited	2029
EACPHS	BS Mortuary Science	American Board of Funeral Service Education, Inc. (ABFSE)	Accredited	2030
EACPHS	Nurse Anesthesia, Master of Science, DNAP	Council on Accreditation of Nurse Anesthesia Educational Programs (COA)	Accredited	May 2034
EACPHS	Occupational Therapy Master of Science	American Council on Occupational Therapy Education (ACOTE)	Accredited	2030-2031
EACPHS	Pathologists' Assistant Master of Science	National Accrediting Agency for Clinical Laboratory Science (NAACLS)	Accredited	October 2027
EACPHS	Pharmacy Doctor of Pharmacy (PharmD Program)	American Council on Pharmaceutical Education (ACPE)	Accredited	June 2032
EACPHS	Doctor of Physical Therapy	Commission on Accreditation in Physical Therapy Education (CAPTE)	Accredited	December 2030
EACPHS	MS Physician Assistant Studies	Accreditation Review Committee on Education for the Physician Assistant, Inc. (ARC-PA)	Accredited - Probation	2033
EACPHS	BS Radiation Therapy Technology	Joint Review Committee on Education in Radiologic Technology (JRCERT)	Accredited	2032
EACPHS	BS Radiologic Technology	Joint Review Committee on Education in Radiologic Technology (JRCERT)	Accredited - Probation	2025; program discontinued effective May 2026

School of Social Work

S/C/D	Program(s)	Accreditor	Accreditation Status	Accredited Through
SW	Bachelor of Social Work, Master of Social Work	Council on Social Work Education (CSWE)	Accredited	June 2031

University Policies

University Equality of Opportunity Policy

Wayne State University is committed to a policy of non-discrimination and equal opportunity in all of its operations, employment opportunities, educational programs and related activities.

This policy embraces all persons regardless of race, gender, color, sex (including gender identity), national origin, religion, age, sexual orientation, marital status, familial status, disability, arrest record, weight, qualified Vietnam era veterans, qualified special disabled veterans, recently separated veterans and other protected veterans, or any other characteristic protected by applicable federal or state law. It expressly forbids discrimination, sexual harassment or any form of harassment in hiring, terms of employment, tenure, promotion, placement and discharge of employees, admission, training and treatment of students, extra-curricular activities, the use of University services, facilities and in the awarding of contracts.

This policy also forbids retaliation and/or any form of harassment against an individual as a result of filing a complaint of discrimination or harassment, or participating in an investigation of a complaint of discrimination or harassment.

Wayne State University, as an equal opportunity/affirmative action institution, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. In furtherance of this policy, the University is also committed to promoting institutional diversity to achieve full equity in all areas of University life and service and in those private clubs and accommodations that are used by University personnel. No off-campus activities sponsored by or on behalf of Wayne State University shall be held in private club facilities or accommodations which operate from an established policy barring membership or participation on the basis of race, color, sex (including gender identity), national origin, religion, age, sexual orientation, familial status, marital status, height, weight, disability or veteran status. Affirmative action procedures, measures and program may be used to the extent permitted by law to establish, monitor and implement affirmative action plans for all budgetary units and the University as a whole.

Inquiries regarding equal opportunity Academic/Administrative policies or complaints may be made to:

Office of Equal Opportunity
4324 Faculty/Administration Building
Wayne State University
Detroit, Michigan 48202
Telephone: 313-577-2280
or http://www.oeo.wayne.edu

Disability Non-Discrimination Policy

In accordance with federal requirements of the Americans with Disabilities Act of 1990 and the Rehabilitation Act of 1973, there shall be no discrimination on the basis of disability in Wayne State University's programs, operations and activities, in the hiring, terms and conditions or privileges of employment or any matter directly or indirectly related to such employment, or in the admission, education and treatment of students. The Student Disability Services Office (http://studentdisability.wayne.edu/) has complete information on services available to students.

Drug and Alcohol Free Workplace Policy

Wayne State University is committed to providing a drug-free environment for its faculty, staff, and students. The Board of Governors has made this commitment a formal policy of the University. All faculty, staff and students must abide by the terms of the Board policy as a condition of employment or enrollment at the University. The unlawful possession, use, distribution, sale or manufacture of drugs or alcohol is prohibited on University premises, at University activities, and at University work sites.

Pursuant to that policy, the unlawful possession, use, distribution, dispensation, sale or manufacture of any illicit drugs, and the unlawful possession, use or distribution of alcohol on University property, or at any University work site, or as part of any University activity, is prohibited.

Any employee or student employee who is convicted of a criminal drug offense occurring at the workplace is subject to appropriate employee discipline in accordance with established University policies and collective bargaining agreements, and may be required to participate satisfactorily in a drug abuse or rehabilitation program as a condition of further employment or enrollment.

Any student or employee who, while on University premises or at any University activity, engages in the unlawful possession, sale, manufacture, distribution, or use of drugs or alcohol shall be subject to appropriate sanctions, in accordance with established University policies, the Student Code of Conduct, and collective bargaining agreements, and in conformity with local, state and federal law, up to and including expulsion or termination.

The University encourages employees who may have a problem with the use of illicit drugs or with the abuse of alcohol to seek professional advice and treatment. Individuals who seek assistance with such problems may obtain additional information on a confidential basis by telephoning the Employee Assistance Program (EAP) at 1-800-448-8326. Students may also seek referral assistance by contacting University Counseling and Psychological Services (CAPS), at 313-577-3398.

Policy Governing the Use of Alcoholic Beverages on Campus

The use or possession of alcoholic beverages is expressly prohibited in classrooms, lecture halls, laboratories, the libraries, the chapel and within buildings or arenas where athletic events, lectures, and concerts are held. The use of alcoholic beverages is expressly prohibited in all public areas of campus buildings except as follows: the use of alcoholic beverages, subject to State law, is permitted in areas designated by, and with the approval of, the Office of the President, and the use of alcoholic beverages at student social events, subject to State law, is permitted in areas designated by, and with the approval of, the Office of the President.

Sexual Misconduct Policy (including sexual harassment)

Title IX of the Education Amendments of 1972 is a federal civil rights law that prohibits discrimination on the basis of sex in education programs and activities. Under Title IX, discrimination on the basis of sex includes sexual harassment.

Sex discrimination is prohibited by Title IX and by University Policy. (WSU Statute 2.28.01).

Sexual harassment is a form of sex discrimination that is prohibited by Title IX and by the University's Interim Title IX Policy . It is the policy of Wayne State University that no member of the University community may sexually harass another. (WSU Statute 2.28.06).

Under the regulations that went into effect on August 14, 2020, and which are reflected in the Interim Title IX Policy, “sexual harassment” is defined as conduct on the basis of sex that satisfies one or more of the following:

1. An employee of the University conditioning the provision of an aid, benefit, or service of the University on an individual's participation in unwelcome sexual conduct;
2. Unwelcome conduct determined by a reasonable person to be so severe, pervasive, and objectively offensive that it effectively denies a person equal access to the University's education program or activity; or
3. "Sexual assault" as defined in 20 U.S.C. 1092(f)(6)(A)(v), "dating violence" as defined in 34 U.S.C. 12291(a)(10), "domestic violence" as defined in 34 U.S.C. 12291(a)(8), or "stalking" as defined in 34 U.S.C. 12291(a)(30).
    a. sexual assault - an offense classified as a forcible or nonforcible sex offense under the uniform crime reporting system of the Federal Bureau of Investigation.
    b. dating violence – violence committed by a person who is or has been in a social relationship of a romantic or intimate nature with the victim; and where the existence of such a relationship shall be determined based on a consideration of the following factors:
        i. The length of the relationship.
        ii. The type of relationship.
        iii. The frequency of interaction between the persons involved in the relationship.
    c. domestic violence – includes felony or misdemeanor crimes of violence committed by:
        i. a current or former spouse or intimate partner of the victim,
        ii. by a person with whom the victim shares a child in common,
        iii. by a person who is cohabitating with or has cohabitated with the victim as a spouse or intimate partner,
        iv. by a person similarly situated to a spouse of the victim under the domestic or family violence laws of the jurisdiction receiving grant monies, or
        v. by any other person against an adult or youth victim who is protected from that person's acts under the domestic or family violence laws of Michigan.
    d. Stalking - means engaging in a course of conduct directed at a specific person that would cause a reasonable person to fear for his or her safety or the safety of others; or suffer substantial emotional distress.

For the purpose of the Interim Title IX Policy, “consent” means knowing, voluntary and clear permission by word or action to engage in sexual activity. Since individuals may experience the same interaction in different ways, it is the responsibility of each party to determine that the other has consented before engaging in the activity. Consent cannot be given if force, coercion, or incapacitation as defined below are present:

1. **Force** is the use of physical strength or action (no matter how slight), violence, threats of violence or intimidation (implied threats of violence) as a means to engage in sexual activity. A person who is the object of actual or threatened force is not required to physically, verbally or otherwise resist the aggressor.
2. **Coercion** is unreasonable pressure for sexual activity. Coercive conduct differs from seductive conduct based on factors such as the type and/or extent of the pressure used to obtain consent. When someone makes it clear that they do not want to engage in certain sexual activity, that they want to stop, or that they do not want to go past a certain point of sexual interaction, continued pressure beyond that point can be coercive.
3. **Incapacitation**– A person is incapacitated when they are unable to understand what is happening or is disoriented, helpless, asleep, or unconscious, for any reason, including by alcohol or other drugs. Incapacitation is determined through consideration of all relevant indicators of an individual’s state and is not synonymous with intoxication, impairment, blackout, and/or being drunk.

Reporting Sexual Misconduct

There are several options for reporting sexual misconduct:

Title IX Coordinator

All reports of sexual misconduct, including sex discrimination, sexual harassment and retaliation, may be made to the university’s Title IX coordinator:

Brandy Banks, Title IX Coordinator
656 W. Kirby,
Suite 4324 Faculty/Administration Building
Detroit, MI 48202
Phone: 313-577-9999
Email: titleix@wayne.edu
Website: https://titleix.wayne.edu/

Sexual Misconduct Incident Reporting Form (https://cm.maxient.com/reportingform.php?WayneStateUniv&layout_id=3)

Deputy Title IX Coordinators

These University officials are available to assist individuals with reporting sexual harassment, seeking supportive measures and filing a formal complaint.

Amy Stirling Lammers, Associate Vice President for Equal Opportunity
Office of Equal Opportunity, Faculty/Administration Building
656 W. Kirby, Suite 4324
Detroit, MI 48202
313-577-2280
oeo@wayne.edu

Nikolina Dmitruchina, Assistant Dean of Students
Student Center Building
5221 Gullen Mall, Suite 301
Detroit, MI 48202
313-577-1010
nikolina@wayne.edu

WSU Police

Individuals are encouraged to report sexual misconduct that may also violate criminal law to the Wayne State police at 313-577-2222.

Violence in the Workplace Policy

Wayne State University is committed to providing a work and educational environment that is free from threats, assaults, or acts of violence. Threats of violence or of physical harm, and any form of physical or sexual assault or threats of physical assault are prohibited. This includes conduct that harasses, disrupts, or interferes with another person’s work performance or creates an intimidating, offensive or hostile work or educational environment.

The University has also adopted a Campus Safety Ordinance (WSU Statute 2.87.03) which applies to all property owned, leased or otherwise controlled by Wayne State University and applies to all individuals when present on such property, regardless of whether the individual has a concealed weapons permit or is otherwise authorized by law to possess, discharge or use any device referenced in therein. The ordinance states that no person shall, while on any property owned, leased, or otherwise controlled by WSU:

1. possess or carry on his or her person any firearm, explosive or chemical weapon;
2. carry on his or her person any sword, switchblade knife, or other knife with a blade longer than three inches; and
3. carry on his or her person any other object or device with the intent of intimidating or injuring another person.

Upon conviction of any violation of this ordinance, the violator shall be sentenced to a fine not to exceed $500.00. In addition, violations of this policy may result in disciplinary action under existing University administrative policies. Limited exceptions to this policy exist for University employees expressly authorized to possess or use such weapons, devices or substances, law enforcement officials so authorized, and any individual whose possession or use is in connection with a research or regularly scheduled educational program authorized by the University, for which the Chief of the Wayne State University Police Department has been given at least one week's advance notice.

University personnel are expected to notify appropriate management personnel of any violent or threatening behavior, when that behavior is work-related, carried out on University property, or is connected to University employment. Any individual who has obtained a personal protection order that identifies the workplace as a protected area should provide that information to the Wayne State University Police Department.

Bachelor's Degree Requirements

Bachelor's Degree

To earn a bachelor's degree at Wayne State University, a student must satisfy the following *minimum* requirements, as well as any other requirements for specific degrees stipulated by the Schools/Colleges, Departments, and Programs of the University:

1. Complete a minimum of 120 credits with a cumulative grade point average of 2.00 or higher for all Wayne State University course work.
2. Complete the University General Education Requirements (p. 24).
3. Complete all School/College, Departmental and Program requirements.
4. Complete a minimum of thirty credits at Wayne State University.
5. Observe the following credit limitations:
   a. Credit by special examination may not be counted as resident credit, but such credit, if earned during a semester in which the student is registered for a regular course(s), will not be considered an interruption of residence.
   b. There shall be no limit to the number of credit hours earned through one or more of the following programs: credit earned by the College-Level Examination Program, Advanced Placement, International Baccalaureate, Credit by Special Examination, or other credit earned for a course in which the student has not been regularly enrolled in a University course.
   c. Not more than sixteen credits by Special Examination may be earned in any one subject.

Concurrent Degrees

A student who wishes to simultaneously receive two different bachelor's degrees from Wayne State University must complete all University, School/College, Department, and Program requirements for each degree.

Second Bachelor's Degree

A student who holds a bachelor's degree from any accredited institution may receive a second bachelor's degree from Wayne State University by satisfying the following minimum requirements:

1. Complete at least thirty credits at Wayne State University beyond the first bachelor's degree.
2. Meet all School/College, Department, and Program requirements for the degree.

Statement on School/College Requirements

Schools/Colleges, Departments, and Programs may establish degree requirements above and beyond those stated here. For statements of any such specific degree requirements, students should consult the School/College and Departmental sections of this bulletin.

Bulletin-in-Effect Graduation Policy

All undergraduate students at Wayne State University may choose to graduate under the academic regulations and degree requirements as stated in the Bulletin in effect at the time of their graduation or any of the bulletins in the previous seven academic years, provided one of the Bulletins covers a period of the student's registration. All requirements of the chosen Bulletin must be met. However, if necessary, the university-wide Bulletin-in-Effect Committee, Colleges, and Schools can make appropriate adjustments in order to accommodate students as best they can to adapt their previous coursework to a new Bulletin.

Graduation

Degrees are NOT awarded automatically upon completion of scholastic requirements. To be considered as a candidate for a degree, students must file an Application for Degree form with Student Records by the degree application deadline published in each term's Academic Calendar, for the term in which the student expects to graduate.

Application for Degree or Certificate: Each candidate for a degree or certificate must file an Application for Degree (https://wayne.edu/registrar/graduation), no later than the Friday of the fourth week of classes for the semester in which the student expects to complete the requirements for the degree or certificate. If an application for a degree was filed for a previous graduation term in which the student did not graduate, a new application is required.

Commencement: Information concerning commencement announcements, caps and gowns, invitations, tickets, time and place, assembling and other relevant items will be mailed to the graduates by the Commencement Office (http://commencement.wayne.edu) prior to the event. Candidates for advanced degrees are requested and expected to attend the commencement at which the University confers upon them the honor of the degree earned.

Graduation with Distinction

Wayne State University bestows upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative grade point average: Cum Laude, Magna Cum Laude, and Summa Cum Laude.

Graduation with distinction will be indicated on the student's diploma and on the transcript.

Graduation with Distinction will recognize at each graduation the top twenty per cent of students in each College who have earned the highest grade point average in their Colleges, with the following approximate distribution:

- *Summa Cum Laude:* Top five percent
- *Magna Cum Laude:* Next five percent
- *Cum Laude:* Next ten percent

The specific minimum grade point averages will be determined each year in the following manner, but graduation with distinction will not be awarded in cases of any g.p.a. less than 3.0.

Based on the grade point average distributions of the previous year's senior class, the grade point average cut-offs for each College will be established to provide for recognition of the top eighteen to twenty per cent of the graduating students.

The criteria for Graduation with Distinction include:

1. A minimum of fifty-six credits in residence at Wayne State University.
2. A qualifying minimum grade point average (calculated as explained above) on all course work at Wayne State University must be completed by the end of the semester of graduation. (For notation in the commencement program, the grade point average on all course work completed prior to the semester of graduation will be used.)

General Education Program

The General Education Program at Wayne State was established in 1987 for all undergraduate students pursuing bachelor's degrees regardless of their academic specialties. These requirements ensure that all students have the fundamental skills to succeed in college while simultaneously providing the intellectual breadth necessary to place specialized and professional curricula in proper perspective. By means of the General Education program, undergraduate students improve their skills and are introduced to methods of inquiry, modes of thought, bodies of knowledge, and representative ideas drawn from a wide range of academic disciplines.

The University implemented major revisions to the General Education curriculum in Fall 2018. Our program provides both structure and flexibility to help students develop core skills and information literacy, explore new pathways, cultivate habits of lifelong learning, and take advantage of Wayne State's extraordinary resources. Each of these efforts is aligned with the University's mission to create knowledge and prepare a diverse body of students to thrive in an increasingly complex and global society. The program requires a maximum of 35 credits in the categories of Competencies and Inquiries as described below. Please contact your advisor if you have questions about General Education requirements specific to your academic plan of work.

General Education Competencies

Competency requirements ensure that students develop and demonstrate early in their academic careers fundamental skills that underlie and make possible the acquisition of knowledge. Competencies include:

- Written Communication (Basic Composition (BC), and Intermediate Composition (IC));
- Oral Communications (OC); and
- Quantitative Experience (QE), satisfied through an appropriate course in mathematics, statistics, or quantitative reasoning.

General Education Inquiries

Inquiry requirements have a two-fold purpose:

1. To enable students to acquire knowledge and demonstrate understanding in a broad range of academic disciplines; and
2. To enable students to develop and demonstrate the ability to apply methodological skills that encourage continued exploration on an independent level throughout their lives.

Inquiry requirements are organized into the following categories:

- Civic Literacy (CIV)
- Cultural Inquiry (CI)
- Diversity, Equity, and Inclusion Inquiry (DEI)
- Global Learning Inquiry (GL)
- Natural Scientific Inquiry (NSI)
- Social Inquiry (SI)

General Education Exemptions for Second Degree and Transfer Students

Students who hold a Bachelor's degree from an accredited institution and who seek a second Bachelor's degree are exempt from the University's General Education requirements, but still must satisfy all School/College, Department, and Program requirements.

Equivalent courses taken at another institution may satisfy General Education requirements. Transfer students who have satisfied all requirements of the Michigan Transfer Agreement (MTA) are exempted from the University's General Education requirements, but still must satisfy all School/College, Department, and Program requirements.

Competency Requirements

Competencies include the following four requirements:

- **Written Communication (BC, IC)**
- **Oral Communication (OC)**
- **Quantitative Experience (QE)**

Success in college and the ability to function as an educated citizen require a series of fundamental skills that underlie and make possible the acquisition of knowledge. Competencies may be demonstrated by satisfactory completion of designated courses or by earning appropriate scores on designated examinations.

Competencies or skills are preconditions for higher education, and thus Competency requirements should be completed early in a student's baccalaureate degree program. Students who fail to meet the specified deadline will be allowed two additional semesters (or equivalent) in which to satisfy the Competency requirement. After the two-semester limit, students who have not satisfied the requirement may be barred from enrolling in courses other than those which satisfy the Competency requirement until the requirement has been completed.

The following general principles apply to all Competency requirements:

1. Students who satisfy any Competency requirement by passing a prescribed Wayne State University placement, qualifying, screening, competency, or proficiency examination shall be excused from equivalent course work but will receive NO course credit.
2. Course credit granted for satisfactory completion of an Advanced Placement, CLEP, International Baccalaureate, or Departmental examination will satisfy the appropriate Competency or Inquiry requirement; credit so earned will be applicable to a baccalaureate degree.
3. Courses used to satisfy Competency requirements shall not generally also be used to satisfy Inquiry requirements.
4. **Competency requirements BC, IC, and QE must be completed with a grade of C or higher.**

Written Communication (BC, IC)

Writing ability is a cornerstone of academic study and is often considered the touchstone of a university education. Skill and effectiveness in writing serve an individual throughout their life — in career, in community, and in social and leisure activities. An ability to write well allows an individual to effectively address general audiences as well as specialized audiences within professional fields. Moreover, writing is a skill that that requires constant renewal. The Written Communication requirements are structured not only to provide training in how to write well, but also to insure that writing skills continue to be exercised and enhanced throughout the undergraduate years. The progression of the Written Communication requirements reflect the important notion of 'writing across the curriculum,' and Intermediate Composition courses therefore build from the skills learned in Basic Composition courses.

Basic Composition (BC) Requirement

All students must demonstrate competence in basic English composition prior to completing thirty credits. Basic composition competence shall be determined by satisfactory completion of a designated course that includes instruction in multiple genres of writing, or its course equivalent or earning credit for Basic Composition through a national standardized test.

BC has four program learning outcomes.

After successful completion of this requirement, students will be able to demonstrate their ability to:

1. Describe the arguments, purpose, context, and audience in college-level texts.
2. Reference credible, relevant sources in ethical ways.
3. Employ the conventions of a genre.
4. Explain their own writing choices and process.

Satisfactory completion requires a grade of C or better. Course(s) satisfying the Basic Composition requirement include:

Code	Title	Credits
ENG 1020	Introductory College Writing	3

Students can also demonstrate competence in Basic Composition by:

1. Earning credit for basic composition through Advanced Placement CLEP, or International Baccalaureate; OR
2. Transferring credit received for successful completion of a comparable course completed with a grade of C or better at another college or university.

Students demonstrating completion of a transferred IC/ICN course with no BC course on their record will be eligible to have BC waived.

Intermediate Composition (IC) Requirement

All students must complete satisfactorily a designated intermediate, or more advanced, course in which the teaching of English composition and rhetoric is a major component prior to completing seventy-five credits.

IC has four program learning outcomes.

After successful completion of this requirement, students will be able to demonstrate their ability to:

1. Utilize rhetorical practices appropriate to academic or public audiences.
2. Reference credible, relevant sources in ethical ways.
3. Synthesize academic research that is relevant and appropriate for a specific audience.
4. Construct a research argument that responds to scholarly questions of a specific audience.

Satisfactory completion requires a grade of C or better. Courses currently approved for Intermediate Composition are:

Code	Title	Credits
AFS/ENG 2390	Introduction to African-American Literature: Writing about Texts	3
ENG 3010	Intermediate Writing	3
ENG 3020	Writing and Community	3
ENG 3050	Technical Communication I: Reports	3

Schools and colleges may also have specific requirements, such that careful course selection can lead to meeting both General Education and college requirements. Please consult the College/School listing for specific requirements.

Students can also demonstrate competence in Intermediate Composition by transferring credit received for successful completion of a comparable course completed with a grade of C or better at another college or university.

Oral Communication (OC) Requirement

Educated persons should be comfortable in situations which require them to make oral presentations, be able to convince others of a point of view, or make appropriate remarks in an informal setting. Along with an ability to write cogently, communicating orally is mentioned most frequently by employers and others who evaluate the preparedness of college students as a fundamental skill to be able to compete in contemporary society. Consequently, oral communication is a crucial skill needed for success in virtually every field of endeavor.

OC has five program learning outcomes.

After successful completion of this requirement, students will be able to demonstrate their ability to:

1. Adapt to the needs of a distinct speaking situation.
2. Reference credible, relevant sources in ethical ways.
3. Utilize relevant presentation technology in an oral presentation.
4. Employ verbal techniques for effective delivery in an oral presentation.
5. Employ non-verbal techniques for effective delivery in an oral presentation.

Courses satisfying the Oral Communication requirement include:

Code	Title	Credits
COM 1010	Oral Communication: Basic Speech	3
ENG 3060	Technical Communication II: Presentations	3

Students can also demonstrate competence in oral communication by:

1. Passing the Oral Communication Competency Examination; OR
2. Transferring credit received for successful completion of a comparable course taken at another college or university.

Quantitative Experience (QE) Requirement

Individuals with competency in quantitative skills possess the ability to reason and solve problems from a wide range of authentic contexts and everyday life situations. They can interpret quantitative data and use that analysis to provide support for sophisticated arguments. They can clearly communicate those arguments in a variety of formats as appropriate. This requirement is aimed at developing such skills in all of our students.

QE has four program learning outcomes.

After successful completion of the QE requirement, students will be able to:

1. Convert real-world information into appropriate mathematical form.
2. Perform mathematical or symbolic computations relevant to a multistep problem.
3. Draw reasonable conclusions based on quantitative evidence.
4. Communicate arguments or interpretations supported by quantitative evidence.

***Please note, revised QE Learning Outcomes were approved on 3/4/2023. Previous versions are available in archived editions (https://bulletins.wayne.edu/archive/2023-2024/archive/) of the bulletin.**

Satisfactory completion requires a grade of C or better.

Courses satisfying the Quantitative Experience requirement include:

Code	Title	Credits
AST 2030	Life in the Universe	3
COM 3150	Science Communication	3
FIN 1200	Personal Finance Planning	3
FPC 1010	Math for the Arts	3
MAE 1000	Detroit by the Numbers	3
MAT 1000	Mathematics in Today's World	3
MAT 1070	College Algebra	5
MAT 1010	Beginning Algebra	3,5
MAT 1110	Mathematics for Elementary School Teachers I	3
MAT 1120	Mathematics for Elementary School Teachers II	3
MAT 1800	Elementary Functions	4
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
PHI 1070	Games, Risk, and Logic	3
PHY 1020	Conceptual Physics: The Basic Science	3
PS 1050	Understanding Political Science Statistics	4
SOC 2211	Numbers in Society	3
STA 1020	Elementary Statistics	3
STA 2210	Probability and Statistics	4
THR 2651	Introduction to Life Skills for the Creative Entrepreneur	3
TIS 2300	Quantitative Methods I: Probability and Statistical Inference	3

Competency in quantitative skills must be demonstrated by all students prior to completion of the first 30 credits taken at Wayne State University. Students can also demonstrate a suitable quantitative experience by:

1. Placing into a mathematics course above the level of MAT 1000 or MAT 1070 on the Mathematics Placement Examination; or
2. Achieving appropriate scores on national standardized tests; or
3. Transferring credit received for successful completion of a course equivalent to or higher than MAT 1000 completed with a grade of C or better at another college or university.

Inquiry Course Requirements

Inquiry groups include:

- **Civic Literacy Inquiry (CIV) (p. 27)**
- **Cultural Inquiry (CI) (p. 27)**
- **Diversity, Equity, and Inclusion Inquiry (DEI) (p. 28)**
- **Global Learning Inquiry (GL) (p. 29)**
- **Natural Scientific Inquiry (NSI) (p. 30)**
- **Social Inquiry (SI) (p. 31)**

Inquiry courses introduce students to differing perspectives, methodologies, and questions that shape the production of knowledge. In these courses students will learn how scholars think in different disciplines, and they will also engage in inquiry themselves, using diverse disciplinary methodologies to ask questions, analyze data, and make their own evidence-based arguments.

Through courses that fulfill Inquiry requirements, students will:

1. Gain exposure to different disciplinary ways of understanding the world;
2. Develop basic competencies in these disciplinary methodologies; and
3. Apply disciplinary methodologies to analyze relevant data or examples.

The three primary categories of inquiry include Social Inquiry, Cultural Inquiry, and Natural Scientific Inquiry. There are three additional cross-

inquiry categories: Civic Literacy; Diversity, Equity, and Inclusion; and Global Learning. Cross-inquiry courses provide focus on themes that may cut across the primary inquiry categories, such that any cross-inquiry courses could be conceivably be found in a primary inquiry category. For example, a course focused on Global Learning outcomes could be offered from the perspective of the social sciences and/or the arts and humanities.

Each student must complete a course of at least three credits from each of the six inquiry groups; the Natural Scientific Inquiry (NSI) group requires a second NSI course with a lab section, for a minimum total of seven courses.

NOTE: Schools and Colleges may also have specific requirements, such that careful course selection can lead to meeting both General Education and College requirements. Please consult the College/School listing for specific requirements.

Civic Literacy Inquiry (CIV)

CIV has four program learning outcomes.

After successful completion of the CIV requirement, each student will be able to:

1. Describe concepts and contexts relevant to US history, political institutions, and democratic principles.
2. Describe the significance of citizenship status and national identity, past or present.
3. Describe forms, barriers, and facilitators to civic participation or engagement by individuals and groups.
4. Describe the economic, historic, political, and social bases for conflict and cooperation between groups.

Please note, revised CIV Learning Outcomes were approved on 1/12/2024. Previous versions are available in* archived editions *(https://bulletins.wayne.edu/archive/) of the bulletin.

Code	Title	Credits
AFS 2210	Black Social and Political Thought	4
AFS 3250	Politics and Culture in Anglophone Caribbean	3
CRJ/PS 3120	Politics of the Criminal Justice Process	3
ELR/ANT/HIS/PS 1110	Work and Democracy: An Introduction	3
HIS 1050	History of the Headlines: United States Since World War II	3
HIS 1060	Law, Citizenship, and American Culture	3
HIS 2040	American Foundations to 1877	3-4
HIS 2050	Modern America: Since 1877	3-4
PS 1000	Introduction to Political Science	3
HON 1000	The City: Changing Detroit	4
PS 1010	American Government	4
PS 1030	The American Governmental System	3
PS 1100	Changing Detroit	4
PS 3080	Gender and Politics	4

Cultural Inquiry (CI)

CI has three program learning outcomes.

After successful completion of the CI requirement, each student will be able to:

1. Analyze an artistic practice, cultural form, artifact, or philosophical idea.
2. Compare artistic practices, cultural forms, artifacts, or philosophical ideas.
3. Relate the significance of artistic practices, cultural forms, artifacts, or philosophical ideas to historical or contemporary societal subjects.

Please note, revised CI Learning Outcomes were approved on 4/15/2025. Previous versions are available in* archived editions *(https://bulletins.wayne.edu/archive/) of the bulletin.

Code	Title	Credits
AED 5050	Integrating the Arts into the Elementary Classroom	3
AFS 2010	African American Culture	4
AFS/LAS 2250	AfroLatino/a History and Culture	3
AFS 3200/ COM 3230	The African-American Film Experience	4
AH 1000	Introduction to Art	3
AH 1110	Survey of Art History: Ancient through Medieval	3-4
AH 1120	Survey of Art History: Renaissance through Modern	3-4
AH 1130	Encounters with the Arts of Global Africa	3
ANT 2300	Material Culture and Meaning in East Asia	3
ANT 2400	Food and Culture	3
ANT 2500	Archaeology of the Great Lakes	3
ANT 3100	World Cultures	3
ANT 3220	The Inca and their Ancestors	3
ASE 2050	Deaf Culture	3
ASN/JPN 2800	Culture Studies in Japan (Homestay and Study Abroad Tour)	3
CHI 2050	Gateway to Chinese Civilizations	3
CHI 3000	Chinese Mythology and the Supernatural	3
CHI 3022	Introduction to Chinese Literature	3
CLA 1010	Classical Civilization	3-4
CLA 2000	Greek Mythology	3-4
CLA 2200	Introduction to Greek Tragedy	3-4
CLA 2300	Ancient Comedy	3
CLA 3720	Greek Identity from Antiquity to Modernity	3
COM 2010/ ENG 2450	Introduction to Film	4
COM 2020	History of Film	3
COM 2160	Campaigns and Social Movements	3
DNC 2000	Introduction to World Dance	3
DNC 2310	History of Dance from 1800 to the Present	3
ENG 2420	Environmental Writing: Writing about Texts	3
ENG 2560	Children's and Young Adults' Literature: Writing about Texts	3
ENG/GSW 2570	Women Writers: Writing about Texts	3
ENG 2200	Shakespeare: Writing about Texts	3
ENG 2250	British Literature: Writing about Texts	3
ENG 2350	American Literature: Writing about Texts	3
ENG 2415	Geopolitics and Literature: Writing about Texts	3
ENG 2425	Rhetoric and Social Change: Writing about Texts	3
ENG 2430	Digital Literacies: Writing about Texts	3
ENG 2440	Introduction to Visual Culture: Writing about Texts	3
ENG 2445	Comics and Graphic Novels: Writing about Texts	3
ENG 2450	Introduction to Film	4
ENG 2470	Television Culture: Writing about Texts	4
ENG 2500	Literature and Religion: Writing about Texts	3
ENG 2510	Popular Culture: Writing about Texts	3

ENG 2720	Basic Concepts in Linguistics	3
ENG 2800	Foundations of Creative Writing	3
ENG 3210	Public Humanities	3
FRE/GER/ITA/ SPA 2700	Anguish and Commitment: European Existentialist Literature	3-4
FRE/GER 2991	Understanding the Fairy Tale	3
GER 2310	Short Fiction from Central Europe and Russia	3
GER 2710	Resistance, Rebellion, Revolution: Transitional Moments in German Culture and History	3
GLS 2700	Introduction to Global Stories	3
GSW/PHI 2360	Feminist Philosophy	3
GSW 2500	Humanities Perspectives on Gender, Sexuality, and Women	3
HIS 1800/ NE 2030	The Age of Islamic Empires: 600-1600	3
HIS 1810/ NE 2040	The Modern Middle East	3
HON 2000	Foundation Seminar	3
HON 4200	Seminar in Philosophy and Letters	3
ITA 2710	Italy and Italians I	3
ITA 2720	Italy and Italians II	3
ITA 2991	Italian Fairy Tales	3
ITA/NFS 3300	Science, History, and Culture of Italian Cuisine	3
JPN 2720	Japanese Culture through Myth, Fairy Tales, and Media	3
LAS 2100/ SPA 2400	Chicano/a Literature and Culture	3
LAS 2110/ SPA 2500	Puerto Rican Literature and Culture	3
LIN 2720	Basic Concepts in Linguistics	3
MUH 1340	Music Appreciation: World Music	3
MUH 1345	Music Cultures	3
MUH 1350	History of American Popular Music	3
MUH 1351	History and Styles of Rock and Roll	3
MUH 1370	Music Appreciation: Beginnings to the Present	3
MUH 3380	American Music	3
MUH 5340	Survey of World Music	3
NE 2010	The Bible and Ancient Mythology	3
NE 2060	Trends and Themes in Films of the Middle East	3
PHI 1010	Introduction to Philosophy	3
PHI 1020	Honors Introduction to Philosophy	3-4
PHI 1100	Contemporary Moral Issues	3
PHI 1110	Ethical Issues in Health Care	3
PHI 1120	Professional Ethics	3
PHI 1130	Environmental Ethics	3
PHI 1150	AI and Data Ethics	3
PHI 1200	Life and Death	3
PHI/MAT 1400	Artificial Intelligence and the Conscious Mind	3
PHI 1500	Race, Sex, and Religion	3
PHI 2100	Ancient Greek Philosophy	3
PHI 2110	Philosophy of the Scientific Revolution and Enlightenment	3
PHI 2140	Ancient Greek Medicine and Psychology	3
PHI 2320	Introduction to Ethics	3
PHI 2400	Introduction to the Philosophy of Religion	3
PHI 2550	Introduction to Philosophy of Science	3
PHI/PSY 2650	Minds and Machines	3
PHI 3500	Theory of Knowledge	3
PHI 3550	Metaphysics	3
PHI 3700	Philosophy of Art	3
POL 2710	Survey of Polish Culture	3
POL/SLA 3750	Polish and Yugoslavian Cinema	3
PS 3520	Theories of Justice	4
RUS 2710	Introduction to Russian Culture	3
RUS 2991	Understanding the Fairy Tale	3
RUS 3600	Nineteenth Century Russian Literature	3
RUS 3650	Russian Literature Since 1900	3
SLA 2310	Short Fiction from Central Europe and Russia	3
SLA 3710	Russian and East European Film	3-4
THR 1010	Introduction to the Theatre	3
THR 1041	Musical Theatre Appreciation	3

Diversity, Equity, and Inclusion Inquiry (DEI)

DEI has four program learning outcomes, which focus on the U.S as their primary context:

After successful completion of the DEI requirement, each student will be able to:

1. Explain current diversity, equity, or inclusion issues within the context of U.S. history, institutions, practices, or policies.
2. Explain how cultural values and prejudices influence individual or group behavior.
3. Explain the ethical and moral issues related to diversity, equity, or inclusion present in complex domestic (U.S.) situations.
4. Explain strategies that promote diversity, equity, or inclusion at the local or national level.

Please note, revised DEI Learning Outcomes were approved on 3/24/2023. Previous versions are available in* archived editions (https://bulletins.wayne.edu/archive/) *of the bulletin.

Code	Title	Credits
AFS 1010	Introduction to African American Studies	3
AFS 2010	African American Culture	4
AFS 2210	Black Social and Political Thought	4
AFS/HIS/US 2350	Black Detroit	3
AFS/ENG 2390	Introduction to African-American Literature: Writing about Texts	3
AFS/SOC 2600	Race and Racism in America	3
AFS/HIS 3140	African American History I: 1400-1865	3-4
AFS/HIS 3150	African American History II: 1865-1968	3-4
AFS/HIS 3155	African American History III: 1968 - Present	3-4
AFS/HIS 3160	Black Urban History	4
AFS/HIS 3170	Ethnicity and Race in American Life	3-4
AFS/HIS 3180	Black Social Movements	4
AH 3750	African American Art	3
ANT 1100	Introduction to Anthropology	3
ANT 2020	Global Detroit	3
ANT/GLS/POL/ RUS 3111	Digital Storytelling and Ethnic Detroit	3
ANT 3400	Introduction to Medical Anthropology	3

ANT 3520/ PS 3760	Understanding Africa: Past, Present and Future	3
ANT 3530	Native Americans	3
ANT/LAS 3540	Cultures and Societies of Latin America	3
ANT/NE 3550	Arab Society in Transition	3
ANT 3560	World's Religions	3
ARM/GER/POL/ RUS/SLA 3410	New Soil, Old Roots: The Immigrant Experience	3
COM 2300	Intercultural Communication	3
MGT 1040	Managing Diversity in the Workplace	3
CRJ 2550	Race, Crime and Justice	3
CRJ/GSW 2650	Gender and Crime	3
CRJ/GSW 2750	Diversity Issues in Criminal Justice	3
ENG 2530	Queer Literatures: Writing about Texts	3
ENG/GSW 2570	Women Writers: Writing about Texts	3
GLS 2900	Intercultural Competence for a Global World	3
GSW/PHI 2360	Feminist Philosophy	3
GSW 2500	Humanities Perspectives on Gender, Sexuality, and Women	3
GSW 2600/ HIS 2605	History of Women, Gender and Sexuality in the Modern World	3
GSW 2700	Social Science Perspectives on Gender, Sexuality, and Women	3
HIS/LAS 1910	Latin America from Independence to the Present	3
HIS/LAS 2430	History of Latino/as in the United States	3
HIS 2530/ PCS 2050/ PS 2550/ SOC 2050	The Study of Non-Violence	3
HIS 3240/ PS 3250	Detroit Politics: Continuity and Change in City and Suburbs	4
HIS/US 3650	History of Detroit	3
HON 1000	The City: Changing Detroit	4
LAS 1420	Introduction to Interdisciplinary Latino/a Studies Research	3
LAS 2100/ SPA 2400	Chicano/a Literature and Culture	3
LAS 2110/ SPA 2500	Puerto Rican Literature and Culture	3
LAS/HIS 2420	History of Puerto Rico and Cuba	3
MUH 1350	History of American Popular Music	3
MUH 1351	History and Styles of Rock and Roll	3
MUH 2210	African American Music History: A Detroit Perspective	3
MUH 3360	Jazz History	3
PH 2500	Race and Ethnic Disparities in Public Health	3
PHI 1100	Contemporary Moral Issues	3
PHI 1110	Ethical Issues in Health Care	3
PHI 1500	Race, Sex, and Religion	3
PS 1100	Changing Detroit	4
SAM 3020	Sociology of Sport	3
SOC 1020	Social Problems	3
SOC 2202	Gendered Worlds	3
SOC 2300	Social Inequality	3
SW 1010	Introduction to Social Work and Social Welfare	3
THR 1030	Introduction to Black Theatre and Performance	3
THR 5821	Black Dramatic Literature and Performance	3
US/GPH/HIS/PS 2000/SOC 2500	Introduction to Urban Studies	4

Global Learning Inquiry (GL)

GL has three program learning outcomes.

After successful completion of the GL requirement, each student will be able to:

1. Analyze social, economic, cultural and/or political phenomena in a past or present global context.
2. Explain how worldviews are shaped by differing historical, scientific, and/or cultural contexts.
3. Compare their worldview to those in communities outside of the US.

Please note, revised GL Learning Outcomes were approved on 4/15/2025. Previous versions are available in* archived editions *(https://bulletins.wayne.edu/archive/) of the bulletin.

Code	Title	Credits
AFS 3250	Politics and Culture in Anglophone Caribbean	3
AFS 3420/ PS 3820	Pan Africanism: Politics of the Black Diaspora	4
AFS 3610	Interdisciplinary Perspectives on Foreign Culture: The Africans	4
AH 1130	Encounters with the Arts of Global Africa	3
AH 3470	Islamic Art and Architecture	3
ANT 2050	Anthropology of Business	3
ANT 2200	Lost Cities and Ancient Civilizations	3
ANT 2400	Food and Culture	3
ANT 3100	World Cultures	3
ANT/GLS/PH 3410	Global Health	3
ANT 3520/ PS 3760	Understanding Africa: Past, Present and Future	3
ANT/LAS 3540	Cultures and Societies of Latin America	3
ANT 3550	Arab Society in Transition	3
ANT 3560	World's Religions	3
ANT/GLS 3700	Globalization: Theories, Practices, Implications	3
ARB 2010	Intermediate Arabic I	4
ARM/GER/POL/ RUS/SLA 3410	New Soil, Old Roots: The Immigrant Experience	3
ASN/HIS 1710	History of Modern East Asia	3
CHI 2010	Intermediate Chinese	4
CHI 2050	Gateway to Chinese Civilizations	3
CRJ 3900	Comparative Criminal Justice	3
DNC 2000	Introduction to World Dance	3
DNC 2400	Introduction to African Dance	3
ENG 2415	Geopolitics and Literature: Writing about Texts	3
ENG 2540	Global Literatures: Writing about Texts	3
ENG 2670	Introduction to Canadian Studies	3
ENG 2730	Languages of the World	3
FRE 2010	Intermediate French	4
FRE 2710	Introduction to French Civilization I	3
FRE 2720	Introduction to French Civilization II	3
GER 2010	Intermediate German	4
GER 2710	Resistance, Rebellion, Revolution: Transitional Moments in German Culture and History	3
GKA 2010	Intermediate Ancient Greek I	4

GKM 2010	Intermediate Modern Greek I	4
GKM 3710	Modern Greek Literature and Culture in English	3-4
GLS 2700	Introduction to Global Stories	3
GLS/HIS 2800	Introduction to Global Issues and Institutions	3
GLS 2900	Intercultural Competence for a Global World	3
GPH 1100	World Regional Patterns	4
GPH/HIS/PS 2700	Introduction to Canadian Studies	3
GPH 3130	Introductory Urban Geography	4
GSW 2600/ HIS 2605	History of Women, Gender and Sexuality in the Modern World	3
HEB 2010	Intermediate Hebrew I	4
HIS 1000	World Civilization to 1500	4
HIS 1400	The World Since 1945	4
HIS 1610	African Civilizations Since 1800	3-4
HIS 1800/ NE 2030	The Age of Islamic Empires: 600-1600	3
HIS 1810/ NE 2040	The Modern Middle East	3
HIS/LAS 1910	Latin America from Independence to the Present	3
HIS 2440/ LAS 2410	History of Mexico	3
HON 4260	Seminar in Foreign Culture	3
ITA 2010	Intermediate Italian	4
ITA 2710	Italy and Italians I	3
ITA 2720	Italy and Italians II	3
ITA 2991	Italian Fairy Tales	3
JPN 2010	Intermediate Japanese I	4
JPN 2720	Japanese Culture through Myth, Fairy Tales, and Media	3
JPN 4550	Japanese Culture and Society I	4
JPN 4560	Japanese Culture and Society II	4
LAS 2100/ SPA 2400	Chicano/a Literature and Culture	3
LAS/HIS 2420	History of Puerto Rico and Cuba	3
LAT 2010	Intermediate Latin	4
LIN 2730	Languages of the World	3
LAS/HIS 3431	Revolutionary Movements in Latin America	3
MUH 1340	Music Appreciation: World Music	3
MUH 1345	Music Cultures	3
MUH 1370	Music Appreciation: Beginnings to the Present	3
MUH 5340	Survey of World Music	3
NE 2000	Introduction to Islamic Civilization of the Near East	3
NE 3225	Modern Israeli Culture: A Pluralistic Perspective	3
NE 3550	Arab Society in Transition	3
NUR 3200	Global Healthcare	3
NUR 4800	Transcultural Health Through the Life Cycle	3
PH 2550	MENA Public Health	3
PHI 2150	Chinese Philosophy	3
PHI/NE 2170	Islamic and Near Eastern Philosophy	3
POL 2010	Intermediate Polish	4
POL 2710	Survey of Polish Culture	3
RUS 2010	Intermediate Russian I	4
RUS 2710	Introduction to Russian Culture	3
SOC 2510	People on the Move	3
SPA 2010	Intermediate Spanish	4
SWA 2010	Intermediate Swahili	4
THR 5751	Study Abroad: Moscow Art Theatre School	3
US 2200	Global Urbanism	3

Natural Scientific Inquiry (NSI)

NSI has four program learning outcomes.

After successful completion of the NSI requirement, students will be able to demonstrate their ability to:

1. Explain scientific concepts related to natural phenomena.
2. Discriminate between valid and invalid inferences made using scientific concepts and evidence.
3. Describe the relevance of scientific concepts to historical or contemporary societal subjects.
4. Describe data collected via the scientific method (required for lab courses only, optional for non-lab courses).

***Please note, revised NSI Learning Outcomes were approved on 1/12/2024. Previous versions are available in* archived editions *(https://bulletins.wayne.edu/archive/) of the bulletin.**

Code	Title	Credits
ANT 2110	Introduction to Biological Anthropology	3
AST 2010	Descriptive Astronomy (Satisfies the NSI Lab requirement when taken concurrently with AST 2011.)	4
AST 2030	Life in the Universe	3
BIO 1011	The Basics of Climate Change	3
BIO 1030	Biology Today (Satisfies the NSI Lab requirement when taken concurrently with BIO 1040.)	3
BIO 1050	An Introduction to Life (Satisfies the NSI Lab requirement when taken concurrently with BIO 1040.)	3
BIO 1500	Basic Life Diversity (Satisfies the NSI Lab requirement when taken concurrently with BIO 1501.)	3
BIO 1510	Basic Life Mechanisms (Satisfies the NSI Lab requirement when taken concurrently with BIO 1511.)	3
CHM 1000	Chemistry and Your World (Satisfies the NSI Lab requirement when elected for 4 credits.)	4
CHM 1020	Survey of General Chemistry (CHM 1020 is a lecture/lab course and satisfies the NSI Lab requirement)	4
CHM 1060	General, Organic and Biochemistry (CHM 1060 is a lecture/lab course and satisfies the NSI Lab requirement)	5
CHM 1100	General Chemistry I (Satisfies the NSI Lab requirement upon completion of both CHM 1100 and CHM 1130.)	4
CHM 1125	General Chemistry I for Engineers (Satisfies the NSI Lab requirement upon completion of both CHM 1125 and CHM 1130)	3
DNC 2180	Anatomy of Human Movement	3
ESG 1010	Geology: The Science of the Earth (Satisfies the NSI Lab requirement when taken concurrently with ESG 1011.)	3
ESG 1500	Introduction to Environmental Science	3

HON 4220	Seminar in Life Science	3
HON 4230	Seminar in Physical Science	3
NFS 2030	Nutrition and Health (Satisfies the NSI Lab requirement upon completion of both NFS 2030 and NFS 2220.)	3
PH 2100	Introduction to Public Health	3
PHY 1020	Conceptual Physics: The Basic Science (Satisfies the NSI Lab requirement when taken concurrently with PHY 1021.)	3
PHY 2130	Physics for the Life Sciences I (Satisfies the NSI Lab requirement when taken concurrently with PHY 2131.)	4
PHY 2170	University Physics I for Scientists and Engineers (Satisfies the NSI Lab requirement when taken concurrently with PHY 2171.)	4
PHY 2171	University Physics I Experimental Laboratory	1
PHY 2180	University Physics II for Scientists and Engineers	4
PHY 2181	University Physics II Experimental Laboratory	1
PHY 3100	The Sounds of Music (PHY 3100 is a lecture/lab course and meets the NSI Lab requirement)	4
PSY 1010	Introductory Psychology (PSY 1010 is a lecture/lab course and meets the NSI Lab requirement)	4
PSY 1020	Elements of Psychology	3
SCE 2100	Integrated Science Content PK-6 (Satisfies the NSI Lab requirement when taken concurrently with SCE 2105.)	3

Social Inquiry (SI)

SI has three program learning outcomes:

After successful completion of the SI requirement, students will be able to:

1. Explain the behaviors, practices, institutions, and/or systems that define a society or social group.
2. Explain concepts or methods in analyzing societies or social groups.
3. Explain social institutions and social interactions.

Please note, revised SI Learning Outcomes were approved on 3/24/2023. Previous versions are available in* archived editions *(https://bulletins.wayne.edu/archive/) of the bulletin.

Code	Title	Credits
AFS 1010	Introduction to African American Studies	3
AFS 2210	Black Social and Political Thought	4
AFS/HIS 3360	Black Workers in American History	4
ANT 1100	Introduction to Anthropology	3
ANT 2200	Lost Cities and Ancient Civilizations	3
ANT 3400	Introduction to Medical Anthropology	3
ANT/GLS/PH 3410	Global Health	3
ANT/GLS 3700	Globalization: Theories, Practices, Implications	3
ASN/HIS 1700	East Asia to the 1700s	3
ASN/HIS 1710	History of Modern East Asia	3
CE 2000	How Cities Work: An Introduction to Civil and Environmental Infrastructure	3
CLA/GKM 3590	Byzantine Civilization	3
COM 1700	Media Literacy	3
COM 2200	Interpersonal Communication	3
CRJ 1010	Introduction to Criminal Justice	3
ECO 1000	Survey of Economics	4
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
ECO 2550	U.S. Health Care: Policy and Economics	4
GLS/HIS 2800	Introduction to Global Issues and Institutions	3
GPH 1100	World Regional Patterns	4
GPH 3130	Introductory Urban Geography	4
GPH 3200	Europe	3
GSW 2700	Social Science Perspectives on Gender, Sexuality, and Women	3
HIS 1000	World Civilization to 1500	4
HIS 1050	History of the Headlines: United States Since World War II	3
HIS 1300	Europe and the World: 1500-1945	4
HIS 1400	The World Since 1945	4
HIS 1600	African Civilizations to 1800	3-4
HIS 1610	African Civilizations Since 1800	3-4
HIS/LAS 1900	History of Colonial Latin America	3
HIS/LAS 1910	Latin America from Independence to the Present	3
HIS 1995	Nature and Societal Transitions	3
HIS 2040	American Foundations to 1877	3-4
HIS 2050	Modern America: Since 1877	3-4
HIS 3250	The Family in History	3-4
HON 2000	Foundation Seminar	3
KHS 1000	Contemporary Issues in Sport, Exercise, and Health Sciences	3
LAS/HIS 3431	Revolutionary Movements in Latin America	3
LAS 3610	Seminar in Latino/a Urban Problems	3
MUA/ELR 2400	Survey of the Music Business and Labor	3
NUR 3200	Global Healthcare	3
PH 3100	Social and Behavioral Aspects of Public Health	3
PS 1000	Introduction to Political Science	3
PS 1010	American Government	4
PS 1030	The American Governmental System	3
PS 2240	Introduction to Urban Politics and Policy	4
SAM 2020	History of Sport	3
SOC 1010	Understanding Human Society	3
SOC 1020	Social Problems	3
SOC 2203	Social Psychology	3
SOC 2208	Sociology of Sport	3
SOC 2214	Stress and Society: The Sociology of Mental Health	3
SOC 2209	Sociology of Religion	3
SOC 2300	Social Inequality	3
SOC 2510	People on the Move	3
US/GPH/HIS/PS 2000/SOC 2500	Introduction to Urban Studies	4

Wayne Experience

The Wayne Experience (WE) requirement is currently suspended. While a number of WE courses will continue to be offered, all students are encouraged to discuss the election of a WE course with an advisor before officially registering for the course.

The Wayne Experience (WE), a course required of all first-year students and selected from a list of specialized one-credit courses, plays an instrumental role in socializing students into the university community. WE provides activities that will increase students' connections with fellow

students, academic advising staff, and their instructors. The course will enhance student engagement, success, and retention by implementing high-impact practices within a student's first year in college, and will help to build key skills and habits for successful navigation of the university. These skills and habits include time management, study and test-taking skills, and engaging in on- and off-campus community activities. Transformative educational experience like WE can foster student motivation, engagement, learning, achievement, persistence and degree attainment.

Transfer students: Wayne Experience (WE) will be automatically waived if a student transfers a minimum of 24 credits to WSU. Advanced Placement (AP) tests, International Baccalaureate (IB) tests, CLEP exams, High School Dual Enrollment, and Early/Middle College DO NOT count towards waiving WE.

Goals

The goals of WE include:

1. *Belonging*: WE will foster a sense of belonging and connection; cultivate the development and expanding of relationships; meet students where they are; and promote their sense of personal purpose at Wayne State University;
2. *Acculturation to the academic community*: WE will promote an understanding of what it means to be a Wayne State student. Acculturation includes grasping the value of general education and linking theory to practice by participating as a member of a diverse and inclusive academic community;
3. *WSU in Detroit*: WE will cultivate an understanding of WSU's role in local cultures and history as well as develop an appreciation of how public service can transform individuals and communities; and
4. *Academic Support and Study Skills*: WE will promote the understanding of and use of the full spectrum of academic support services to collectively empower students to transform themselves into self-directed learners and powerful problem-solvers.

Learning Outcomes

Specific learning outcomes of WE may vary from offering to offering but draw from the LEAP Essential Learning Outcomes, as adapted through our general education reform process.

After successful completion of this requirement, students will be able to demonstrate their ability to:

- Describe meaningful connections with Wayne State peers, faculty, staff, and campus resources.
- Demonstrate foundational skills necessary for undergraduate-level academic and personal achievement at Wayne State University.
- Relate the value of attending WSU to the student's own academic and personal pursuits.
- Develop self-advocacy to optimize the use of campus resources and academic opportunities.

Courses

Courses currently approved for Wayne Experience include:

Code	Title	Credits
BE 1060	Building a Foundation for College Success	1
FPC 1020	Building a Foundation for College Success	1
HON 1110	Passport to Success	1
KHS 1010	Wellness at Wayne	1
RSE 1010	Building a Foundation for College Success	1
UGR 1050	Research Methods - BUILD Scholars	1

Honors Curricula

The University's honors curricula serve to challenge highly motivated students through courses of advanced study; to provide academic programs of unusual breadth and depth; to provide recognition of outstanding scholastic achievement; to foster interest in research and scholarly activity; and to provide students an opportunity to work with outstanding faculty.

Dual Recognition: Students who complete the requirements for University Honors and, in addition, the requirements of a College/Department Honors Program, shall have both designations on the transcript and the diploma. Only a single senior essay, thesis, or project shall be required.

More information about both University Honors and departmental Honors is available online (http://www.honors.wayne.edu) and at the Honors College as well as through the respective departments/colleges.

University Honors Curriculum

The University-wide Honors curriculum, managed by the Irvin D. Reid Honors College, allows undergraduate students in any College or School to pursue individually-designed Honors Programs which complement their majors.

Benefits of membership in the Honors College include Honors advising, Honors pre-priority registration, Honors sections of general education and major courses, and designation of completion of the Honors curriculum on the diploma and transcript.

Admission

There are multiple ways that high achieving students can join the Irvin D. Reid Honors College.

Entering First-Year Student: Entering first-year students admitted to the University are automatically considered for membership in the Irvin D. Reid Honors College based on information provided in their University application. No additional application is required. Qualified students are notified with an invitation to join the Honors College and to attend an optional Honors Showcase event, which provides additional information about the Honors experience. Deadlines for Honors consideration varies depending on the number of invitations to eligible students. Typically, first-year students need to be admitted to Wayne State University no later than March 1st in order to be eligible for an automatic invitation to join the Honors College.

Current Wayne State Students and Transfer Students: Students who have a minimum cumulative grade point average of 3.3 or above at Wayne State University may apply for acceptance to the Honors College. Applications are available online (https://honors.wayne.edu/admissions).

Eligibility to register for Honors courses: Students whose cumulative grade point average is at least 3.3, but who are not formally in the Honors College, are eligible to elect honors courses to enrich their educational experiences.

Retention: The academic record of each student shall be reviewed at regular intervals. To remain in the Honors College, a student normally shall be expected:

1. to pursue a course of study consistent with the objectives of the Honors College, as recommended by the University Honors Council and approved by the President or his/her designee; and
2. to maintain a cumulative grade point average greater than or equal to 3.3; however, Colleges/Departments may establish a higher g.p.a. requirements for retention in a College/Department program.

A student whose cumulative grade point average is below 3.3 and is, for that reason, dropped from the Honors College, may reapply when his/her cumulative g.p.a. is 3.3 or higher.

University Honors Requirements

The College shall require Honors-designated course work totaling a minimum of twenty-eight credits for the baccalaureate program the student is pursuing. Students in this College MUST SATISFY THE GENERAL EDUCATION REQUIREMENTS, but the approved General Education courses may differ for the Honors College after review by the Honors Council and the General Education Implementation Committee and approval by the President or his/her designee. The Honors College General Education core curriculum will define a common body of knowledge beginning with the freshman Honors first-year sequence, and including a specified complement of Honors courses chosen from existing General Education options as determined by individual departments in consultation with the College.

Graduation: For graduation with University Honors, students must have a minimum cumulative grade point average of 3.3, and must complete a minimum of twenty-eight credits in honors-designated course work (including HON 1000, an Honors Foundational Seminar course, a service learning course with HON 3000, at least one HON 4200-level Honors seminar and a minimum of three credits in an independent research project, essay, or thesis). Graduates of the University Honors curriculum will be so recognized on the transcript and diploma.

College or Department Honors Requirements

Undergraduate departments in Colleges and Schools have developed programs leading to honors degrees. Details of these programs are included in the College and Department sections of this Bulletin.

College or Department Honors Curricula require a minimum of twelve credits in honors-designated course work of which at least three credits may be in an independent research project, essay, or thesis in the student's College/Department and at least one HON 4200-level Honors seminar. Students also must meet the requirements of their major fields. The honors requirements for the major may include approved modifications of normal major requirements.

Graduation: For graduation with department honors, students must meet the requirements approved by their department/college/school, including a minimum 3.30 grade point average, an Honors thesis and at least one HON 4200-level seminar.

Admission: Undergraduate

Office of Undergraduate Admissions

Welcome Center
42 W. Warren Avenue
PO Box 02759
Detroit, MI 48202
Telephone: 313-577-2100, Fax: 313-577-7536
https://wayne.edu/admissions

Service Hours: The Office of Undergraduate Admissions assists students by telephone and on a walk-in basis during posted service hours.

The Office of Undergraduate Admissions has the primary function of recruiting, admitting, and enrolling new undergraduate students to the University. This office also helps to coordinate the recruitment activities of individual departments, alumni groups, and students. The office organizes visits and programs at local high schools and community colleges in the State of Michigan and selected regions outside of the state.

Also included in functions of the Office of Undergraduate Admissions are administration of the Presidential and Wayne State merit-based scholarships.

Application for Undergraduate Admission

An official application for Undergraduate Admission (http://www.apply.wayne.edu) should be completed online. There is a $25.00 application fee.

Guidelines for First-Year Admission

Admission to Wayne State University is selective. To be considered for admission, applicants must submit an official high school transcript demonstrating college preparatory coursework and evidence of readiness to undertake a college degree program.

First-year applicants may apply through either the test-considered or test-optional pathway:

- Students applying through the test-considered pathway must submit official ACT or SAT scores as part of their application.
- Students applying through the test-optional pathway are not required to submit standardized test scores. However, official high school transcripts are required, and applicants may be asked to provide additional materials, such as a personal essay, to support a holistic review.

Admission decisions are based on a comprehensive evaluation of each student's academic record and overall preparation for college-level work. Students may apply after completion of their junior year of high school.

Guidelines for International Applicants

A student from another country desiring admission who is not a permanent resident or citizen of the U.S. should complete the International Admissions Application (https://wayne.edu/admissions/international/).

A student from a country in which English is not the native language must demonstrate English language proficiency as part of the admission review. Wayne State University accepts the following examinations:

TOEFL (Test of English as a Foreign Language)

- Exams taken before January 21, 2026: minimum TOEFL iBT total score of 79
- Exams taken on or after January 21, 2026: minimum TOEFL iBT total score of 4.5
  Wayne State University does not accept the TOEFL SuperScore.

Michigan English Test (MET)

- Minimum score of 64 on the four-skill MET

Duolingo English Test

- Minimum score of 110

Official test scores must be submitted directly from the testing agency. Additional documentation may be required as part of the admissions process.

Guidelines for Canadian Applicants

The Office of Admissions website includes information specific to Canadian students (https://wayne.edu/admissions/canadian) applying to Wayne State University.

Recommended High School Preparation

1. **English (four years recommended)**: Effective use of the English language is central to one's ability to succeed at the University and in the professions and occupations for which our students are preparing. Students entering the University should be able to:
   a. comprehend the main and subordinate ideas in written works, lectures, and discussions; and
   b. conceive ideas about a topic and be able to organize them for presentation in both verbal and written forms.
2. **Mathematics (four years recommended)**: While most careers for which University students are preparing require mathematical competency, an increasing number of careers in science and technical curricula require advanced preparation in mathematics. Entering students should be able to:
   a. understand ratios, proportions, percentages, roots and powers; and
   b. perform the mathematical operations of algebra and geometry.
3. **Biological and Physical Sciences (three years recommended)**: A basic understanding of the physical and biological sciences is essential for many fields of college-level study and is necessary if one is to comprehend our world and the impact of science and technology on it. Students should be acquainted with:
   a. concepts of matter, energy, motion and force and the natural laws and processes of the physical sciences in general;
   b. the science of life and living matter with special reference to growth, reproduction and structure; and
   c. laboratory methods.
4. **Social Sciences/History (three years recommended)**: Students should study different cultures and societies — their social systems, customs, communities, values, economies, governments, and politics. A knowledge of the main events and ideas that have shaped our nation and its place in the world should also be possessed by entering students. They should understand how the past bears upon the present condition and future course of mankind. As the social sciences improve one's appreciation of the scientific method and other approaches to critical analysis, an understanding of history is required for an informed exercise of citizenship in a free society.
5. **Foreign Languages (two years recommended):** Proficiency in a foreign language not only introduces students to non-English speaking cultures but also heightens awareness and comprehension of one's native tongue. Language is the basic instrument of thought, and the ability to read, speak and write in a foreign language permits one to understand another culture in a more fundamental way. Foreign

language competency will open up career opportunities denied to those without it.

6. **Fine Arts (two years recommended)**: Students entering the University should be acquainted with the visual and performing arts, through study and/or participation. Several academic disciplines at the University require high levels of skill in the arts. Study in this area enriches life and heightens one's sense of beauty and aesthetic perception.
7. **Computer Literacy:** Some formal instruction in the logic and use of computers in problem solving and data retrieval is increasingly important in all fields of study.

Special Requirements and Professional Admission

The following Schools, Colleges and programs have requirements beyond those of regular undergraduate admission:

- Business (p. 78)
- Engineering (p. 139)
- Engineering Technology (p. 170)
- Fine, Performing and Communication Arts (p. 183)
- Nursing (p. 357)
- Pharmacy and Health Sciences (p. 365)
- Social Work (p. 386)

Transfer Admission

Transfer students are considered for admission if they meet the following minimum requirements:

> A transfer applicant may be admitted, without consideration of high school work, upon completion of at least twenty-four semester credits of transferable college-level coursework from an accredited college or university with an overall grade point average of 2.5 and with no courses below a C grade for transferable credit. If the applicant has fewer than twenty-four semester credits of transferable college-level coursework, the applicant may be admitted provided freshmen admissions guidelines are met, subject to a holistic evaluation of each student's record. Students who have attended unaccredited institutions should consult with an admission counselor to determine admissibility.

Michigan Transfer Agreement (MTA)

One main area of focus for transfer students is General Education Requirements. These are classes in addition to courses within your major that are required to ensure fundamental skills and a well-rounded education. The Michigan Transfer Agreement (MTA) was designed to facilitate the transfer of general education requirements from one institution to another. Students may complete the MTA as part of an associate's degree or as a stand-alone package at a Michigan community college.

MTA Requirements

Students must successfully complete at least 30 credits at a Michigan community college in six defined areas with at least a grade of 2.0 (or C) in each course in order to be MTA satisfied. These areas are:

- One course in English Composition
- A second course in English Composition or one course in Communication
- One course in Mathematics
- Two courses in Social Sciences from different disciplines
- Two courses in Humanities and Fine Arts from different disciplines
- Two courses in Natural Sciences (one lab science required) from two disciplines

Starting Fall 2018: The additional course stated above is no longer required. Students transferring to WSU with MTA in fall 2018 and beyond will have satisfied all of Wayne State General Education requirements.

All college, program, major and minor requirements must also be completed (at least 120 credits) for students who fulfill the MTA requirements.

Your community college will provide detailed information, including approved courses, for completing the MTA. We recommend that you review our transfer plans (https://wayne.edu/transfer/community-college/plans) and consult your community college advisor about fulfilling MTA requirements and request your community college to review your record to add the MTA endorsement to your transcript.

Non-Matriculated Status

Non-matriculated status enables students to take undergraduate courses for which the prerequisites are met. Courses, credits and grades will be posted to the University's transcript. However, these will be used toward fulfillment of a degree only after formal admissions is granted through the Office of Undergraduate Admissions. Students are encouraged to meet with an academic advisor prior to registering for courses. The non-matriculated application (https://wayne.edu/admissions/non-matriculate/) should be completed online. There is a $25.00 non-refundable application fee. The holder of non-matriculated status is ineligible for any type of loan, grant or scholarship that is administered by Wayne State University.

Post-Bachelor Admission

Post-bachelor admission is an optimal choice for students who have already completed a bachelor's degree and are interested in either earning college credit without intending to use it toward another degree, and those students needing to complete prerequisite course work to gain admission to a graduate program.

Undergraduate Guest Admission

Students currently attending an accredited institution of higher education who are interested in taking undergraduate courses at Wayne State for one semester, or who wish to register for courses concurrently, are eligible to apply for Guest Admission (https://wayne.edu/admissions/guest/). Requirements include the completion of twelve semester credits at the home institution and a minimum cumulative 'C' grade point average (equivalent to a 2.0 grade point average at Wayne State).

Re-Entry Following an Interruption in Attendance

Undergraduate students who were previously admitted and registered at Wayne State University and whose attendance has been interrupted need not reapply at the Office of Undergraduate Admissions. It is expected that students who left in good standing report to the College of their choice for any special instructions regarding their return to classes.

Phoenix Program (Second Start)

The Phoenix Program (https://wayne.edu/advising/adult-learners/phoenix) provides undergraduate students who left Wayne State University on probation or dismissal with the opportunity to petition for return under a second-start policy. To be eligible, the student must not have enrolled at Wayne State University for at least three consecutive years immediately prior to petition for the Phoenix Program. Applications are submitted based on the School or College in which the student

is matriculated or seeks to enter. Decisions are made either by the Phoenix Committee for the department or by the dean of the school or college. With the approval, the student and a phoenix advisor develop an academic contract, and the phoenix advisor closely monitors the student through the first twelve credits of course work.

To return to regular status, students must complete twelve semester credits with a grade of C or better within two years under the Phoenix Program (NOTE: a grade of C-minus is considered to be lower than a C). Students will be expected to complete both the general education and degree requirements in effect at the time of their return to the University. In addition to earn a Wayne State degree, the student must have thirty graded credits of which five courses or fifteen credits must be in the major and/or core. The thirty credits may include credits taken prior to admission to the Phoenix Program in consultation with the phoenix advisor. Should students earn any grade below C in their first twelve credits in the Phoenix Program, they will be excluded from the University. To maintain the integrity of students' academic records, previous course work will remain on the transcripts; however, grade point average (g.p.a.) and the g.p.a credits will be adjusted to reflect the g.p.a. earned since the start of the Phoenix Program.

Please note that this program is currently offered to the following departments: College of Liberal Arts and Sciences, School of Business, College of Education and College of Fine, Performing, and Communication Arts. If your college is not included in this list, we encourage you to reach out to us for more information. We're happy to discuss potential opportunities and explore alternative options with you.

For information about the Phoenix Program, students can review the Phoenix Program website (https://wayne.edu/advising/adult-learners/phoenix).

Admission: Graduate School

OFFICE OF GRADUATE ADMISSIONS
5057 Woodward, Suite 6305
Detroit MI 48202
Telephone: 313-577-4723; Fax: 313-577-0131
https://gradschool.wayne.edu/admissions

Admission: Graduate

To be considered for graduate admission, an applicant must hold or be completing an earned baccalaureate degree or its equivalent from a college or university of recognized standing and have adequate preparation with discernible ability to pursue graduate studies in the major field elected. These criteria are subject to standards set by the individual Colleges and Schools, which reserve the right to revise or amend their entrance requirements beyond the minimal requirements of the University. Note: Proof of the earned bachelor's degree must be submitted before regular admission will be granted.

Before any student can be considered for admission to graduate study, the following must be submitted to the Office of Graduate Admissions or an approved Centralized Application Service: a completed online application and an official transcript from any college or university at which a bachelor's degree was earned. A transcript is considered official only if it is sent directly from the institution where the course work was completed and bears an official seal. International applicants are expected to submit additional documentation for regular admission. Note: The applicant is also responsible for arranging to take any examinations that may be specified by the Office of Graduate Admissions, the College, or the Department in which the student intends matriculation.

Some academic programs may require an additional departmental application for admission. Students are advised to contact the department to which they are applying and request full particulars on admission procedures.

In most departments (see the departmental sections of this bulletin for variants), a regular admission may be authorized for the domestic master's degree applicant upon the department's recommendation, if the applicant's grade point average is 2.75 ('C'=2.00) or above for the upper division (approximately the last sixty semester credits) of his/ her undergraduate course work and if he/she holds a bachelor's degree from a regionally accredited institution.

All baccalaureate graduates of unaccredited institutions must present a 3.00 ('B') or better upper-division grade point average to be considered for graduate admission. Course work completed after the baccalaureate which is presented as the qualifying basis for graduate admission cannot be applied toward a graduate degree at Wayne State University.

Doctoral applicants must present higher entrance qualifications than those required of master's degree applicants. A doctoral applicant is required to have an undergraduate grade point average of 3.0 ('B'=3) or above for the upper division of the undergraduate, bachelor's degree course work and must have completed an undergraduate major or substantial specialized work in his/her proposed doctoral major field. Certain departments require the completion of a master's degree with superior scholarship before considering acceptance of a student as a doctoral applicant. Applicants with less than a 3.0 grade point average in undergraduate course work may be eligible for admission to doctoral study if they have subsequently achieved a grade point average of 3.0 or better in substantial graduate course work in the proposed doctoral field.

The individual colleges reserve the right to refuse a non-resident admission if such admission prevents registration of a qualified Michigan

resident. This ruling may not be invoked to secure admission to a Michigan resident if his/her grade point average entitles him/her to qualified status only.

Admission: Qualified Graduate

In most Departments, qualified admission to a master's or certificate program may be authorized if an applicant's grade point average is between 2.50 and 2.74 or if his/her degree is from a non-accredited institution, provided the major Department and the Graduate Officer of the appropriate School or College have reviewed the applicant's academic experience, extra-scholastic qualifications and reasons for pursuing graduate study and have recommended his/her admission to the Graduate School.

Upon recommendation of the Department and the Graduate Officer of the appropriate College or School, qualified status may be granted to an applicant whose grade point average is below 2.5, if, since the time his/her baccalaureate degree was conferred, he/she has shown substantial evidence of academic or extra-scholastic qualifications of such merit as to warrant special consideration.

Applications from students who have completed substantial course work at, and/or graduated from, institutions which were not accredited by one of the six regional U. S. accrediting institutions (MSCHE, NEASC, HLC, NWCCU, SACS, or WSCUC) at the time studies were undertaken, will have a special review. If requested, the applicant will be required to furnish documentation of the nature and level of the credit obtained, the bases on which the credit was awarded, institutional operating practices, library holdings, physical facilities, faculty qualifications, and any other matters that may be relevant to an evaluation of credit.

All graduate admission procedures and regulations are subject to revision by the University's Graduate Council, the President, or the President's Designee at any time.

Graduate Application Dates

The Office of Graduate Admission will make every effort to process applications in time for the semester of the student's choice. However, only complete applications received by the last recommended dates shown below are ensured academic review before the semester starts. Unless an application and all supporting materials are received by the date indicated, there may not be adequate time for the desired program to review the application and make the admission decision.

Fall Term — Classes begin Late August: **apply by June 1**
Winter Term — Classes begin Early January: **apply by October 1**
Spring Term — Classes begin Early May: **apply by February 1**

For international students, the application form and all transcripts and documents must be on file in the Office of Graduate Admission at least four months prior to the start of the term in which the applicant plans to begin graduate studies.

Several Colleges and Departments have earlier deadlines. Doctoral programs also have earlier application deadlines. Students should consult the School/College and Department sections of this bulletin, the program's website, or the Office of Graduate Admissions for complete information.

Change of Graduate Status

A Change of Graduate Status is a type of admission only for those students who have previously been admitted to and registered as regular graduate students at WSU. For such students, a Change of Graduate Status is used to request:

1. to change from one graduate program or level to another graduate program or level; or
2. to add a second graduate program to the one in which the student is already enrolled.

A department's normal admission criteria apply to Change of Graduate Status applicants. The application form (http://gradschool.wayne.edu/current/forms.php) is downloadable from the Graduate School.

Students should submit the form and transcripts, if needed, to the Graduate Office of the School/College of the new program. Other admission documents required by the department should be submitted directly to the department. The School/College Graduate Office prepares and sends the application and documents to the department for decision. The Graduate Office notifies the student of the admission decision, and, if admission was approved, notifies the Records Office of the change to be made to the student's record. The department's regular admission deadlines apply. No fees are charged for a Change of Status application.

The Change of Graduate Status application should NOT be used by the following students: those who have never been admitted through the Office of Graduate Admissions, those who were admitted but did not register, those who were admitted on a Permit to Register or as Guest students, and those who have been registered in graduate classes only as Non-Matriculated students through the College of Liberal Arts and Sciences.

Graduate Non-Degree Admission

An applicant who wishes to take graduate courses but does not wish to be in a degree program may request admission on a non-degree basis. The eligible applicant will be admitted to a particular College but not to an individual major program. In most instances, a non-degree student may, with the Department's approval, register for any courses for which he/she has the necessary preparation.

The applicant for a non-degree graduate classification is cautioned that *only one semester of full-time graduate study, or part-time registrations not to exceed nine credits, is normally permitted in this classification*. Beyond these limits, registration as a non-degree student requires the approval of the Graduate Officer of the student's College. Not more than nine credits, subject to the approval of the Graduate Officer, may be applied at a later date toward the residency and credit requirements for either the master's or Ph.D. degree. For the Ed.D. degree, credit earned beyond the nine-credit limitation will be reviewed by the appropriate Division and the Education Graduate Officer for possible application toward the degree.

If a student in non-degree status decides to seek admission to a graduate degree program, he/she should apply to the appropriate College Graduate Office for a Change of Status *before* completing nine credits. There is no assurance that credits earned while holding a non-degree classification will be acceptable in a degree program, or that prerequisites may not have to be specified if the student later becomes a degree applicant. Also, financial aid is not available to students in Non-Degree status.

Graduate Guest Admission

Graduate students actively pursuing degrees and who are in good standing at other accredited colleges and universities may be admitted to elect a limited number of credits at Wayne State University. Interested students may obtain a Graduate Guest Application (http://wayne.edu/admissions/graduate/applying/app-instructions/) from the Office of Graduate Admissions. This must be signed by their home institution before it can be accepted for consideration. **A guest admission is valid for only one semester and must be renewed with each subsequent registration.** A maximum of twelve semester credits may be earned as a

Graduate Guest Student. Admission as a Graduate Guest student does not constitute permission to register as a degree applicant.

Senior Rule

In their last undergraduate semester, Wayne State students with a 3.0 (or above) upper division grade point average have the option of taking a limited number of graduate credits. Graduate credit is awarded only for those courses taken in excess of baccalaureate degree requirements. Undergraduate and graduate courses combined may not exceed sixteen credits for the final semester of baccalaureate degree course work. A Senior Rule student must register for at least one credit which is required for the undergraduate degree in order to be eligible for this status. Students who have completed all required registrations for the baccalaureate may not obtain Senior Rule status. Completion of the *Application for Graduate Admission* is required, and students are advised to consult their advisors and the Office of Graduate Admissions. Application deadlines for Senior Rule admission are the same as for regular graduate admission. Students who qualify and are recommended by the Department or College will be admitted for one semester. Graduate admission will be regularized upon evidence that the student has completed all requirements for the bachelor's degree; it is the student's responsibility to provide this transcript.

As a courtesy, the University permits a student to pay undergraduate fees for the graduate courses elected in a Senior Rule status. It is recommended that students elect only courses numbered 5000-6999 in their Senior Rule semester. Senior Rule may not be used in conjunction with AGRADE.

AGRADE: Accelerated Graduate Enrollment

Several Colleges have established an accelerated combined undergraduate and graduate program (AGRADE) in which highly qualified seniors in the college may enroll simultaneously in some undergraduate and graduate programs of the College. A maximum of sixteen credits may be applied towards both undergraduate and graduate degrees in a student's major field if that program is an AGRADE participant. Those who elect the AGRADE program may expect to complete the Bachelor's and Master's degrees in five years of full-time study. AGRADE may not be used in conjunction with Senior Rule.

AGRADE Credits: Students may elect a minimum of three and a maximum of sixteen AGRADE credits. These will be used to complete the baccalaureate degree as well as to serve as the beginning of graduate study. Upon formal admission to a master's program, AGRADE credits are transferred as if they were graduate credits transferred from a graduate program at another university. The remaining graduate credits required for the master's degree will be earned in the conventional manner following formal admission to the graduate program.

Eligibility: AGRADE applicants must have an outstanding overall g.p.a. and have performed at a superior level in their major, as determined by the major department. The earliest date by which a student may apply for the AGRADE program is during the semester in which he/she completes ninety credits toward the undergraduate degree.

Application: A student seeking AGRADE status should present to the Graduate Admissions Committee of his/her major department all of the materials which that department requires for normal admission (except the GRE; where required, the GRE scores should be forwarded at the normal point in the formal graduate admission process).

Admission and program requirements are described in the respective School and College sections of this bulletin, the Undergraduate Bulletin, and department advising offices.

Permit to Register Status

This is a one-term-only admission status which may be granted to applicants with incomplete applications for graduate admission, at the discretion of the academic department, and upon presentation of evidence of an earned baccalaureate degree with an acceptable grade point average and the application fee. Registration beyond the initial semester requires the submission of a regular graduate admission application, official transcripts and other required documentation as determined by the university and department. Admission as a graduate Permit-to-Register student does not obligate Wayne State University to accept the applicant in the future for a graduate degree, nor is there any assurance that credit earned in this status will be accepted toward a graduate degree.

This option is not available in all University Schools and Colleges. Applicants are encouraged to discuss admission options with the staff of the Office of Graduate Admissions. In addition, financial aid is not available to students in Permit to Register status.

Michigan Intercollegiate Graduate Studies (MIGS) Program

The Michigan Intercollegiate Graduate Studies (MIGS) Program enables graduate students of Michigan public institutions to take advantage of educational opportunities at other Michigan public institutions offering graduate degrees. Any graduate student in good standing in a master's, specialist, or doctoral program at a member institution is eligible to participate with approval of the appropriate academic unit. Students on a MIGS enrollment pay tuition and other fees at the host institution. All credits earned under a MIGS enrollment are accepted by a student's home institution as if offered by that institution. *This type of enrollment is limited to one term for master's or specialist degree students, or two terms for doctoral degree students.* Students interested in this program should contact the Office of Graduate Admissions (https://wayne.edu/admissions/graduate/application-types/) for further information.

University of Windsor — WSU Exchange Program Agreement

Wayne State University and the University of Windsor have entered into an exchange agreement whereby students from each institution may enroll in selected courses at the other institution. Courses available are limited to those not offered at the student's home institution. Limitations also apply to the number of courses and credits a student may take under this agreement. Wayne State University and the University of Windsor students who wish to participate in the program must be in good standing at their home institution and must have prior approval of the appropriate academic unit that the course(s) will be accepted as part of the student's course of study. Students who participate in the Wayne State University/University of Windsor program pay tuition and fees at the home institution and receive credit for the course(s) only at the home institution. Students should consult the Director of the Office of Study Abroad for further information.

Post-Bachelor Admission

The Post-Bachelor status is granted to college/university graduates who wish to take Wayne State University courses through the 6000 level *for undergraduate credit only*. The status serves two groups of students:

1. Those who wish to pursue vocational or avocational interests without intending to use Wayne State University credit to earn another degree at Wayne State University;
2. Those who seek admission to a graduate program but need to raise their undergraduate grade point average and/or fulfill specific undergraduate course requirements for graduate admission consideration.

The following special rules apply to Post-Bachelor Admission:

1. **Under no circumstances will credit earned in this status apply toward a graduate degree program.**
2. The applicant must present evidence of a degree earned from an accredited institution (official transcript or diploma).
3. Post-Bachelor status students are not eligible for financial aid from Wayne State University, except in certain circumstances depending on the program; students should consult the Office of Student Financial Aid (http://www.finaid.wayne.edu) for a list of eligible programs.
4. Applications for Post-Bachelor status from students new to Wayne State University should be made to the Office of Undergraduate Admissions, Welcome Center, 42 W. Warren, Wayne State University.
5. An applicant who earned an undergraduate degree from Wayne State University, or who was previously admitted and registered in a Wayne State graduate program, should contact the Records Office to be re-admitted to the University as a Post-Bachelor student. Post-Bachelor applicants in the Colleges of Education and Nursing must obtain authorization directly from the College.

International Graduate Students

To be considered for graduate admission, international applicants must have completed an appropriate university-level program comparable in subject matter and credits to a program for which a bachelor's degree is awarded at Wayne State University.

The fact that a degree in another country may have a similar name to a degree offered in the United States does not mean the two degrees require similar lengths and content of study or that they should be accepted as equivalents. *All graduate applicants must:*

1. present an excellent scholastic record;
2. have sufficient financial resources for minimum tuition, supplies and living expenses; and
3. have a sufficient proficiency in English (see the section on English Proficiency Requirement — International Students, below).

FINANCIAL AID: University-sponsored financial assistance for international students is extremely limited and unconfirmed awards should not be included in financial projections.

English Proficiency Requirements

Graduate applicants who graduated from colleges/universities in other countries must demonstrate proficiency in English. To fulfill this requirement an applicant must satisfy one of the following criteria:

1. Complete baccalaureate degree requirements at an accredited U.S. institution or in a country where English is the native language.
2. Present an acceptable score on the Michigan English Language Assessment Battery (MELAB).
3. Present an acceptable score on the Test of English as a Foreign Language (TOEFL) or equivalent tests such as the IELTS or PTE.

Some units may elect to grant qualified graduate admission to academically-talented International Students whose TOEFL scores fall slightly below the University minimum score. Interested students should contact the chairperson or director of their prospective program, to determine whether the program offers such qualified admission. For further information on the English Proficiency policy, please consult the Office of Graduate Admissions.

Faculty Admission

Tenured Wayne State University faculty members holding the rank of Assistant Professor or above may be admitted to Wayne State graduate degree programs outside the faculty member's school/college, under certain specified conditions. Untenured tenure-track faculty members are not eligible to pursue a graduate or professional degree at Wayne State while in University employment. Faculty members who are not tenured and not on the tenure track may enroll in degree programs outside their own unit with the approval of the dean of their college. For further information, contact the Dean of the Graduate School.

Special Status Students

Visiting Doctoral Guest

The Graduate School may issue a Visiting Doctoral Guest certificate to persons with an earned doctorate who come to Wayne State for scholarly study under the sponsorship of a department. Such Guests may obtain University library privileges and attend classes upon invitation of the department. No official record of attendance is kept on such Guests. For further information, contact the Graduate School.

Visiting Scholar

The Graduate School may issue a Visiting Scholar certificate to persons who have an advanced degree, such as an M.D., or are earning a doctoral degree, and who have come to Wayne State for scholarly study under the sponsorship of a department. Scholars may obtain University library privileges and attend classes upon invitation of the department. No official record of attendance is kept on such Scholars. For further information, contact the Graduate School.

Academic Regulations

Class Ranking

Ranks are determined according to the number of degree credits which the student has satisfactorily completed. The classifications are:

FRESHMAN	0 to 28.99 credits, inclusive
SOPHOMORE	29 to 55.99 credits, inclusive
JUNIOR	56 to 87.99 credits, inclusive
SENIOR	88 credits or above

Undergraduate Course Numbering Systems

For the College of Education

0000-4999 —Undergraduate credit only.
5000-6999 —Undergraduate or graduate credit.

For Pharmacy Departments

0000-2999 — Preprofessional Courses.
3000-3999 — First Professional Year Courses.
4000-4999 — Second Professional Year Courses.
5000-5999 — Third Professional Year Courses.
6000-6999 — Undergraduate/Graduate Courses.

For All Other Schools and Colleges

0000-0999 — No degree credit; graded S and U.
— *Mike Ilitch School of Business:* Elementary courses auxiliary to the usual academic program.
—*James and Patricia Anderson College of Engineering:* Orientation courses.

1000-1999 — Primarily freshman courses; open to all undergraduates.
2000-2999 — Primarily freshman and sophomore courses; open to all undergraduates who have completed course prerequisites.
—*Mike Ilitch School of Business:* Primarily junior college courses.
—*James and Patricia Anderson College of Engineering:* Lower division courses; open to all undergraduates.
3000-4999 — Junior and senior courses; undergraduate credit. (Ordinarily freshmen and sophomores will not be permitted to register for these courses.)
—*James and Patricia Anderson College of Engineering:* Upper division courses.
5000-6999 — Junior and senior courses; undergraduate and graduate credit.

Definition of Credits

A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates not less than:

1. one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester hour of credit, or the equivalent amount of work over a different amount of time; or
2. at least an equivalent amount of work for other activities, including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

Normal Program Load

A full-time undergraduate student is one who is enrolled for twelve or more credits during a semester. The definition of a normal course load will vary depending upon the requirements of each program. In general, for completion of undergraduate degree requirements in four years, full-time students should average fifteen to eighteen credits each semester during the academic year. Undergraduate students may not elect more than eighteen credits per semester except by written consent of the Dean or advisor. Individual Schools and Colleges may set credit restrictions below those specified here; for details see their respective sections of this bulletin.

Dual Enrollment

Undergraduate Election of a Graduate Course

Highly qualified undergraduate students may, under special circumstances, take a 7000-level course for undergraduate credit only. A written petition initiated by the student's advisor must be approved by the graduate officer of the School or College, the professor teaching the course, and the Dean of the Graduate School. The petition, with all required signatures, must be turned in at the time of registration.

Graduate Election of an Undergraduate Course

Graduate students may register for undergraduate courses, however these courses will be recorded on the undergraduate transcript. All courses elected under this status will be assessed at the graduate rate. These courses cannot be used as graduate credit nor to meet requirements for any graduate degree.

Accelerated Graduate Enrollment Program (AGRADE)

Several Colleges have established an accelerated combined undergraduate and graduate program (AGRADE) in which highly qualified seniors in the college may enroll simultaneously in some undergraduate and graduate programs of the College. A maximum of sixteen credits may be applied towards both undergraduate and graduate degrees in a student's major field if that program is an AGRADE participant. Those who elect the AGRADE program may expect to complete the Bachelor's and Master's degrees in five years of full-time study. AGRADE may not be used in conjunction with Senior Rule.

AGRADE Credits: Students may elect a minimum of three and a maximum of sixteen AGRADE credits. These will be used to complete the baccalaureate degree as well as to serve as the beginning of graduate study. Upon formal admission to a master's program, AGRADE credits are transferred as if they were graduate credits transferred from a graduate program at another university. The remaining graduate credits required for the master's degree will be earned in the conventional manner following formal admission to the graduate program.

Eligibility: AGRADE applicants must have an outstanding overall g.p.a. and have performed at a superior level in their major, as determined by the major department. The earliest date by which a student may apply for the AGRADE program is during the semester in which he/she completes ninety credits toward the undergraduate degree.

Application: A student seeking AGRADE status should present to the Graduate Admissions Committee of his/her major department all of the materials which that department requires for normal admission (except the GRE; where required, the GRE scores should be forwarded at the normal point in the formal graduate admission process).

Admission and program requirements are described in the respective School and College sections of this bulletin, the Undergraduate Bulletin, and department advising offices.

Senior Rule Graduate School Admission

In their last undergraduate semester, Wayne State students with a 3.0 (or above) upper division grade point average have the option of taking a limited number of graduate credits. Graduate credit is awarded only for those courses taken in excess of baccalaureate degree requirements.

Undergraduate and graduate courses combined may not exceed sixteen credits for the final semester of baccalaureate degree course work. A Senior Rule student must register for at least one credit which is required for the undergraduate degree in order to be eligible for this status. Students who have completed all required registrations for the baccalaureate may not obtain Senior Rule status. Completion of the *Application for Graduate Admission* is required, and students are advised to consult their advisors and the Office of Graduate Admissions. Application deadlines for Senior Rule admission are the same as for regular graduate admission. Students who qualify and are recommended by the Department or College will be admitted for one semester. Graduate admission will be regularized upon evidence that the student has completed all requirements for the bachelor's degree; it is the student's responsibility to provide this transcript.

As a courtesy, the University permits a student to pay undergraduate fees for the graduate courses elected in a Senior Rule status. It is recommended that students elect only courses numbered 5000-6999 in their Senior Rule semester. Senior Rule may not be used in conjunction with AGRADE.

Enrollment in Online Programs

A select number of programs have received authorization from the university to be offered in a fully online format. All students who are eligible to enroll in a fully online major will be assessed regular Michigan resident tuition rates. Students enrolled in a fully online major are limited to registering for courses listed in the Schedule of Classes with the Instructional Methods: Online — No Scheduled Meetings or Online — Scheduled Meetings. The limits on course registration apply to both Michigan residents and non-residents.

International students residing outside of the United States can enroll in and complete online programs, and these students would qualify regular Michigan resident tuition rates. International students on F-1 or J-1 visas are ineligible for fully online programs

A list of the university's approved fully online programs is available in the annual Statement on Tuition and Fee Regulations (https://wayne.edu/registrar/tuition/tuition-and-fee-regulations).

Undergraduate Grading System

Final grades are available on Academica (http://academica.wayne.edu/). Grades are not mailed to students. Final grades are recorded under the following system.

Undergraduate Grades

A	Excellent	4.00 grade points per credit
A -	Excellent	3.67 grade points per credit
ANC	Excellent	no credit
B +	Good	3.33 grade points per credit
B	Good	3.00 grade points per credit
B -	Good	2.67 grade points per credit
BNC	Good	no credit
C +	Fair	2.33 grade points per credit
C	Fair	2.00 grade points per credit
C -	Fair	1.67 grade points per credit
CNC	Fair	no credit
D +	Poor	1.33 grade points per credit
D	Poor	1.00 grade points per credit
D -	Poor	0.67 grade points per credit
F	Failure	0.00 grade points per credit
P	Passed	
PNC	Pass	no credit
N	Not passed	
NNC	Not passed	no credit
S	Satisfactory	
SNC	Satisfactory	no credit
U	Unsatisfactory	
UNC	Unsatisfactory	no credit
M	Marginal pass	

* P, N, S, U, M, ANC, BNC, CNC, UNC, SNC, PNC, MNC, and NNC grades are not reflected in the grade point average. NR — No grade reported by the instructor

Passed — Not Passed Program

The University has a program whereby undergraduate students may elect to take courses in which they will be marked as *Passed* (P) or *Not Passed* (N) in place of a letter grade. The following regulations apply:

1. The student may elect one P-N course per semester with the consent of an advisor, but he/she may not elect more than six courses in all.
2. After classes have begun, a student may not change from Passed/Not Passed to a letter grade election or vice versa.
3. Courses taken for P-N may be used to satisfy competency requirements; however, no course taken on this basis may be used to fulfill specific group or major requirements.
4. Credits for a P-N course may be used to fulfill graduation requirements but will not count in the grade point average. In the event the student enrolls in more than six P-N courses, those beyond the permissible maximum will be designated on the permanent record as not applicable toward graduation.

Mike Ilitch School of Business: Students in the School of Business may *not* take courses offered by the School of Business on a passed / not passed basis.

Incomplete - The mark of I

The mark of I is given to a student when he/she has not completed all of the course work as planned for the term and when there is, in the judgment of the instructor, a reasonable probability that the student will complete the course successfully without again attending regular class sessions. The student should be passing at the time the grade of I is given. A written contract specifying the work to be completed should be signed by the student and instructor. Responsibility for completing all course work rests with the student.

The mark of I will be changed to a letter grade when the student completes the course work as arranged with the instructor or, if the instructor has left the University, with the Chairperson of the department

or other instructional unit. Work must be completed within one calendar year. There are NO extensions.

The mark of I will not be awarded if, in the instructor's judgment, it is necessary for the student to attend subsequent sessions of the class. If regular attendance is necessary to complete coursework, the student must register for the class for the semester in which attendance is planned. The student will be assessed tuition and applicable fees for the second registration. If the student decides to register for the course, subsequent to the assignment of an I, then the mark of I for the original election will be changed to a Withdrawal (W), and the student will be responsible for tuition and applicable fees for the second registration. Students are responsible for notifying their department and the department offering the course that they have re-registered for the course so that the I is not changed to an F.

Any unchanged mark of I will, within one calendar year from the time it was received, be changed to a grade of F or failure. This will not be changed after the I is replaced.

Withdrawals - The mark of W

The mark of W is given when a student voluntarily withdraws from a class during the official withdrawal period for that class as denoted in the Schedule of Classes. The mark of W is not used in the calculation of grade point average.

Deferred - The mark of Y

The mark of Y is given when the student is up-to-date in the work of a course planned to continue beyond the semester (i.e., essay, thesis, dissertation and certain courses taken in sequence).

Auditor - The mark of Z

The mark of Z is given when the student has formally registered for the course for audit. The student's Academic Dean or his/ her designee must provide written audit authorization to the student at the time of registration.

Repeating Courses — The mark of R

COURSES REPEATED PRIOR TO WINTER TERM 1998:

If an undergraduate student repeats a course and completes it with a grade of A, B, C, D, or E, the following rules will apply in posting the students cumulative record:

1. The grade, grade points and credits for an earlier attempt will be eliminated from the student's grade point average computation.
2. The grade, grade points and credits of only the latest repetition will be included in the student's grade point average computation.
3. An R on the student's academic record will replace the original grade in the course repeated under this rule. Thus, the indicator R will appear for all attempts in a course except the last.

COURSES REPEATED WINTER TERM 1998 TO SPRING/SUMMER TERM 2006:

If an undergraduate student repeats a course and completes it with a grade of A, A-minus, ANC, B-plus, B, B-minus, BNC, C-plus, C, C- minus, CNC, D-plus, D, D-minus, or E, the following rules will apply in posting the student's cumulative record:

1. The grade, grade points and credits for an earlier attempt will be eliminated from the student's grade point average computation.
2. The grade, grade points and credits of only the latest retake will be included in the student's grade point average computation.
3. The original grade in the course repeated under this rule will remain on the student's academic record. Earlier attempts will be flagged for exclusion in the g.p.a. calculation and the latest attempt will be flagged for inclusion in the g.p.a. calculation.

COURSES REPEATED FROM FALL TERM 2006 TO THE PRESENT:

If an undergraduate student repeats a course and completes it with a grade of A, A-minus, ANC, B-plus, B, B-minus, BNC, C-plus, C, C- minus, CNC, D-plus, D, D-minus, or F, the following rules will apply in posting the student's cumulative record:

1. No student shall attempt to take a class more than four (4) times (for a definition of "attempt," see 5, below).
2. If a student anticipates an attempt to take a class for the third (3rd) time, he/she must meet with an academic advisor to receive permission for this attempt.
3. If a student anticipates an attempt to take a class for the fourth (4th) time, he/she must obtain written permission from the chair (or his/ her designee) of the department offering the course and the chair (or his/her designee) of the student's home department.
4. When a course is repeated, credit is only granted once. The last grade and credit hours for a repeated course are used in computing a student's grade point average and for awarding credit hours applicable for a degree even if lower than the previous grade. However, a grade of W (Withdrawal) will not replace a previous grade or credit hours for a course. All attempts to take a course will be recorded on a student's transcript, whatever the last grade and credit hours awarded may be.
5. Withdrawals, incompletes, as well as courses repeated in an effort to earn higher grades will count as attempts. If a student drops the class before a W would appear on the transcript, this is not counted as an attempt, i.e. the student does a drop or a drop/add to another course. If tuition has been assessed and the time for refunding tuition has passed but the time for having a W appear on the transcript has not, the tuition will not be refunded, but the registration will not count towards the allowed attempts.
6. Any student who has repeated three different courses must meet with an academic advisor for permission to repeat another course.
7. There shall be an appeals process to the dean's office of the colleges offering the course and the student's home department.

After a degree has been granted, no grade computed in that degree may be changed.

If a post-bachelor status student repeats a course originally taken under regular undergraduate status, the repeat will in no way modify the earlier attempt. The second election, however, will be averaged in the grade point base.

Mike Ilitch School of Business: No course in which a student has received a passing grade or mark may be retaken without the prior written approval of the Director of Student Services of the Mike Ilitch School of Business.

Eugene Applebaum College of Pharmacy and Health Sciences: No course may be retaken without the consent of the advisor(s) delegated for each professional curriculum.

Auditing Courses

To audit a course, a student must indicate that he/she wishes to audit the course rather than receive academic credit, at the time of registration. Registration to audit a course is subject to the following regulations:

1. Students must pay the tuition assessment for the course, which is the same as if it were taken for academic credit;
2. A student is not permitted to take quizzes and examinations in audited courses;
3. A student may not normally change from audit status after registering for the course. In some cases, exceptions may be permitted during the term with the written recommendation of the instructor and the written approval of the Dean of the college/school in which the student is enrolled. The instructor's recommendation and Dean's approval must be included with the student's Drop/Add Form indicating the desired change.

Change of Grades or Marks

Once recorded in the Office of the Registrar, grades/marks will be changed only if the instructor posts the grade change in the online grade/mark change system in Academica. Most changes must be posted within one calendar year. (Deferred (Y) grades are the exception.) Failure grades that are posted as a result of a student not completing an incomplete course may not be changed. After a degree has been awarded, the grades associated with that degree may not be changed. Other change of grades or marks older than a year must be approved by the department chair and the Associate Dean of the school or college that offered the course.

Credit by Special Examination

Upon the recommendation of the Department Chairperson and with the written approval of the appropriate College or School office, a student may earn credit in a course in which he/she has not been regularly enrolled in this University, but which is offered by a Department, by passing a special examination. Credit by a special examination is restricted as follows:

1. Not more than sixteen credits may be earned in any one subject.
2. Credit will be recorded with grade to indicate the level of performance in the examination but will not be considered in computing grade point average.
3. Credit will not be considered residence credit.
4. To be eligible to earn Credit by Special Examination, a student must have been regularly admitted or have attended with guest status, have enrolled for one semester and have completed at least one course.

Students who intend to transfer to other schools are cautioned that Credit by Special Examination at one institution is infrequently accepted for transfer credit by another institution.

Advanced Placement Tests

Superior performance in the College Board Advanced Placement Tests will entitle an entering freshman to consideration for advanced placement and/or advanced standing credit in the areas covered by the examination. These areas include American history, European history, art history, studio art, biology, chemistry, computer science, English, French, German, Latin, Spanish, mathematics, music literature, music theory, and physics. Advanced placement and/or advanced standing credit will be awarded and such credit may satisfy General Education Requirements (see General Education Program (p. 24)) in accordance with policies adopted by the appropriate Department. Interested students should contact the Office of Undergraduate Admissions (https://admissions.wayne.edu).

College-Level Examination Program

The College Board sponsors the College-Level Examination Program (CLEP). This program gives students and prospective students the opportunity to demonstrate their academic proficiency at the freshman-sophomore college level in various areas and in specific subjects whether or not they have had previous formal college instruction in materials covered by the tests. As described by the College Board, the examinations are intended to provide a comprehensive measure of undergraduate achievement in the five basic areas of the liberal arts:

- English composition
- humanities
- mathematics
- natural sciences
- social sciences

They are not intended to measure advanced training in any specific discipline, but rather to assess a student's knowledge of fundamental facts and concepts, his/her ability to perceive relationships and his/her understanding of the basic principles of a subject. The content of the Examinations is similar to the content of those subjects ordinarily included in the program of study required of most general education students in the first two years of college.

The Subject Examinations are essentially end-of-course tests developed for widely taught undergraduate courses. They measure understanding of basic facts and concepts, as well as the ability to apply such understanding to the solution of problems and the interpretation of materials. Questions that require of a student only rote recall are avoided.

Superior performance in these examinations will be considered as a basis for granting advanced placement and/or advanced standing credit as well as for waiving parts of the General Education Requirements of the University (see General Education Program (p. 24)). For further information, please consult advisors, school or college offices, or University Advising Center at 313-577-8889.

Transfer of Undergraduate Credits

Wayne State University policy accepts transfer credit from all accredited institutions of higher education, both community colleges and baccalaureate-granting colleges and universities.

No transfer grades apply in computing Wayne State grade point averages.

Transfer Credit from Regionally Accredited Institutions: Wayne State University will accept equivalent academic credit from regionally accredited baccalaureate-granting institutions and community colleges and other regionally accredited institutions which offer associate degrees. Courses must be completed with a grade of C or higher to transfer in to Wayne State.

Credit from Institutions NOT Regionally Accredited: Wayne State University will accept transfer credit from other accredited institutions, provided that the institution:

1. grants a baccalaureate or associate degree;
2. is fully accredited by an agency recognized by the Council for Higher Education Accreditation (CHEA); and
3. the courses presented for transfer are shown to have equivalency or are determined to be of a traditional academic nature.

Transfer Credit from Institutions in Candidacy Status: Wayne State University will accept for transfer those credits from institutions with candidacy status from a regional accrediting agency.

Technical, Vocational and Applied Credit: To facilitate transfer of students, Wayne State University will accept transfer credits earned in technical, vocational and applied (TVA) courses at two- and four-year

colleges if such courses are determined to be related to a student's intended program.

Transfer of Remedial or Developmental Course Work: Credit earned in courses designated remedial or developmental will not transfer.

Transfer of Redundant or Duplicative Course Work: Transfer credit will not be awarded for redundant course work (i.e., courses with substantially duplicative content). Credit will be awarded for only one course in any set of redundant courses.

Residency and Upper Division Requirements: Transfer students will be required to meet the University and College residency requirements and to obtain the same number of upper division credits in fulfillment of the baccalaureate degree as are required of native students in specific major programs.

Junior Standing: Wayne State University will award junior standing to all transfer students for whom fifty-six or more transferable semester credits have been accumulated, whether they are transferred credits or credit earned at Wayne State University. Junior standing will not guarantee automatic entry to major and professional programs in the Schools and Colleges. Transcripts will be individually evaluated to determine whether all prerequisites for major and professional standing have been met by native and transfer students.

Grade Point Average

The grade point average (g.p.a.) is the numerical index of the student's scholastic average across all transcript credit earned at a given student level (i.e. undergraduate or graduate). Points are assigned to each letter grade (see University Grading System, above) for each hour of credit. To compute your grade point average, multiply the grade points assigned to each course grade by the number of credits for each course; add the results and divide by the total number of credits.

For example, a grade of A in a class carrying 3 credits would be assigned 12 grade points (3 x 4), and a grade of C in a class carrying 4 credits would be assigned 8 grade points (4 x 2). In this example, the grade point average is: 20 (total grade points) divided by 7 (total credits attempted) = 2.85 g.p.a.

Credit for special examinations, transfer credit, and courses in which a mark of I or W or a grade of S, U, M, P, and N, has been earned are excluded from grade point average computation.

Law School: This grade point system does not apply to Law School students.

Undergraduate Academic Probation

An undergraduate student whose cumulative grade point average (g.p.a.) falls below 2.00 will be placed on Academic Probation. An 'Academic Probation' status is placed on the student's record and the student shall be permitted to register only after consultation with, and approval has been granted by, a designated University advisor.

A student shall be given two subsequent terms for enrollment on probationary status. At the conclusion of the two terms, a student who has not achieved a cumulative g.p.a. of at least 2.00 shall be excluded from his/her program. A student excluded from the University may not apply for readmission or reinstatement for one calendar year.

Each School and College may establish more stringent Probation, Exclusion, and Appeal policies, and students should consult the appropriate Dean's Office. Students must consult with an academic advisor regarding appropriate deadlines for academic hold releases and/or reinstatement procedures.

Grade Appeal Procedure

Students should first seek to settle grade disputes informally with the instructor. Each College and School has established formal grade appeal procedures. These procedures are available from the Dean's Office of the College or School. In most instances, formal grade appeals must be filed within thirty days of the time the student has or should have received his/her final grade.

Academic Appeal Procedure

In matters where a College's signed final decision is based upon the evaluation of a student's academic performance, and when review procedures available to him/her within the College have been exhausted, the student may request the Associate Provost for Academic Programs to review that decision on the record. The academic appeal form (https://provost.wayne.edu/academic-policy) must be submitted by the student himself/herself, **within thirty calendar days** of the postmark of the College's final decision, which is to be sent to the address provided by the student in the College's review procedures. The Associate Provost's review of the College's decision will proceed as soon as practicable after submission by the student of his/her wish to seek review.

Classroom Attendance Policy for Undergraduate Students

Whenever attendance forms a basis for a portion or all of a course grade, students must be provided with explicit written information concerning that fact during the first week of classes. Such information shall be specific with regard to the penalty incurred for each absence and the means, if any, to compensate for the absence. It should be recognized that there may be certain situations where the student may not be permitted to make up the absence(s).

It is recognized that students may be required to miss classes on occasion as a result of their participation in approved University activities. Examples of such activities include formal participation on University sports teams, debate teams, and performing arts groups. These activities are generally directed by a University official, such as a coach, and usually have a set schedule of events.

Students participating in approved University activities should consult with instructors prior to registration, but no later than the end of the second week after the start of classes, to determine the class attendance policy. At this time, the student should provide the instructor with a schedule of planned absences, preferably signed by the University official directing the activity (e.g., Athletic or Program Director or his/her designee), in order to allow the instructor to evaluate and advise the student on the possible impact of the planned absences. In this case, the instructor will consider absences due to participation in approved University activities, as outlined above, to be excused absences, on par with those due to other unavoidable circumstances such as illness. For classes requiring mandatory attendance incompatible with the number of planned absences, students will be advised to register, if possible, during a semester in which they will not be participating in the University activity (for example, during the off-season for a sports team or during the summer).

It is the student's responsibility to learn the course material. When classes are missed, for whatever reason, it is the student's obligation to obtain copies of the class materials and students are responsible for all materials covered in the lectures. An excused absence does not excuse the student from completing assigned work, including exams.

This policy shall be applicable to all courses within the University.

Religious Holidays

Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

Responsible Attendance and Performance

Students must show diligence and are normally expected to complete the courses they elect. Irresponsible attendance is wasteful of both student and University resources. Those students who consistently receive excessive marks of I (incomplete) or W (Withdrawal) may be refused the privilege of further registration by the dean or the dean's designee of their school or college.

Student Rights and Responsibilities

Upon the recommendation of the Student-Faculty Council, the University (Faculty) Council, the President-Deans Conference and the President, the Board of Governors, in January, 1967, approved a comprehensive statement of Student Rights and Responsibilities for the University. Copies of this document are available to students and faculty in the offices of the deans of each College and the Dean of Students Office.

Law School: The faculty of the Law School has approved a set of academic regulations specifically applicable to Law School students, copies of which are available to all students enrolled in the Law School.

Student Academic Ethics

Academic Records: The submission of fraudulent academic records for admission or transfer of credit by a student may be cause for the student's dismissal.

Academic Work: Academic work submitted by a student for credit is assumed to be of his/her own creation, and if found not to be, will constitute cause for the student's dismissal.

Student Code of Conduct

High standards of student conduct play a major role in creating an environment of excellence and the Student Code of Conduct is used to maintain these standards. The code:

1. establishes the expectations that students are accountable for their behavior;
2. describes acceptable student conduct, both academic and non-academic;
3. describes disciplinary policies and procedures;
4. specifies the rights of students and other parties; and
5. specifies prohibited conduct and sanctions to be imposed if such conduct occurs.

Examples of prohibited conduct subject to the Student Code of Conduct include, but are not limited to, academic misbehavior, knowingly furnishing false information to the University, disorderly behavior, theft, damage of property, illegal drugs, weapons on campus, physical assault, unauthorized entry, violation of criminal law, etc.

The University Student Conduct Officer, housed in the Dean of Students Office, monitors the student disciplinary process and is responsible for coordinating matters involving student discipline; describing the disciplinary procedures; and informing students and other parties of their rights. The Student Code of Conduct (https://doso.wayne.edu/conduct) is published by the Dean of Students Office.

Obligations to the Instructional Process

Since education is a cooperative effort between teacher and student, both parties must fulfill obligations if the integrity and efficacy of the instructional process are to be preserved.

Responsibilities of Faculty Members

1. To contribute to and remain abreast of the latest developments in their fields;
2. To continually pursue teaching excellence;
3. To treat all students with respect and fairness without regard to ancestry, race, color, religion, political belief, national origin, gender, sexual orientation, age, marital status, disability, or veteran status;
4. To encourage differing viewpoints and demonstrate integrity in evaluating their merit;
5. To attend regularly and punctually, adhere to the scheduled class and final examination times, and arrange for notification of absence and coverage of classes;
6. To establish and maintain appropriate office hours;
7. To present, early in the semester, the following course information:
    a. course objectives and general outline;
    b. classroom procedures to be followed, expectations concerning class attendance, and proposed dates of major evaluations (including examinations, papers, and other projects);
    c. grading policy;
    d. where appropriate, a schedule of class-related activities, including class meetings and laboratory sessions;
    e. lists of texts and/or other materials needed for the course;
    f. late enrollment, withdrawal, and other special policies.
8. To provide and adhere, within reasonable limits, to the written syllabus of the course;
9. To know course matter thoroughly and prepare and present the material conscientiously;
10. To be informed of University services and recommend their use to students when advisable;
11. To follow these policies concerning written work and grades:
    a. grade and return written work promptly;
    b. submit final grades by the scheduled time;
    c. retain written materials not returned within the semester (e.g., final examinations, major term papers) for one academic semester in accordance with unit policy and allow students to examine such materials;
12. To implement unit procedures for student evaluation of faculty teaching, with attention to preserving student anonymity;
13. To behave appropriately in dealing with students so as to maintain a scholarly atmosphere

Responsibilities of Students

1. To inform themselves of and to fulfill all requirements of the University and those of the College and Department from which they expect to receive their degree;
2. To fulfill conscientiously all assignments and requirements of their courses;
3. To attend classes regularly and punctually;
4. To maintain a scholarly, courteous demeanor in class;
5. To uphold academic honesty in all activities;
6. To notify the instructor as early as possible if prevented from keeping an appointment or carrying out an assignment;

7. To discuss with the instructor any class-related problem and follow established procedures in the resolution of these problems;
8. To adhere to the instructor's and general University policies on attendance, withdrawal, or other special procedures.

It is expected that faculty and students will fulfill their obligations to the instructional process. If, however, a complaint does arise, the parties should meet in an effort to resolve the matter. When such a discussion fails to resolve the problem or is inappropriate given the circumstances, the head of the academic unit should be contacted. If this contact fails to satisfy the complaint, the College's published procedures should be followed. Although University Ombuds Services is not a direct part of the appeal process, students and faculty may consult Ombuds Services at any point during such proceedings.

Academic Nepotism Policy

Faculty members are not to place themselves, or allow themselves to be placed, in situations amounting to 'academic nepotism,' i.e., teaching or otherwise directing the credit study or research of a student who is also a close relative. Concomitantly, students are not to take courses from close relatives or engage in research for academic credit under the direction of close relatives. All such credit will be disallowed.

Fraud and Misuse of Documents

Intentionally furnishing false information to the University is explicitly prohibited, as is forgery, alteration, unauthorized possession, or misuse of University documents, records and identification cards. The University reserves the right to rescind degrees if the award of the degree was based in whole or in part on deception, fraud, other unacceptable academic conduct, or misuse of University documents.

Tuition and Fees

Listed below are the Tuition and Fees, as adopted by the Board of Governors, for the 2025-26 Academic Year. These rates are effective, beginning with the Fall 2025 semester. Please see the Graduate Bulletin (https://bulletins.wayne.edu/graduate/) for rates in Graduate and Professional programs. Additional information about current tuition and fees (https://wayne.edu/registrar/tuition) is available via the Office of the Registrar. **Tuition and Fees are subject to change without notice by action of the Board of Governors.**

Flat Rate Tuition

Beginning Fall 2023, Wayne State University will offer a flat rate tuition (https://wayne.edu/registrar/flat-rate-faq) structure for undergraduate students registered for 12-18 credits. Undergraduate students registered for 11 credits or fewer will be assessed per credit hour. Undergraduate students registered for more than 18 credits will be assessed the flat rate plus the per credit rate for each credit exceeding the 18 credits covered by the flat rate.

Undergraduate Tuition and Fees

All Schools (other than listed below)*

Resident Lower Division (Per Credit, 1-11 cr.)	$567.27 per credit
Resident Lower Division (Flat Rate, 12-18 cr.)	$6,821.32
Resident Upper Division (Per Credit, 1-11 cr.)	$673.21 per credit
Resident Upper Division (Flat Rate, 12-18 cr.)	$8,095.27
Non-Resident Lower Division (Per Credit, 1-11 cr.)	$1,299.29 per credit
Non-Resident Lower Division (Flat Rate, 12-18 cr.)	$15,623.91
Non-Resident Upper Division (Per Credit, 1-11 cr.)	$1,548.06 per credit
Non-Resident Upper Division (Flat Rate, 12-18 cr.)	$18,615.34

* Includes: Education (except for Division of Kinesiology), Liberal Arts and Sciences (excluding public health majors and science majors), Pharmacy, and Social Work.

Business; Education (Division of Kinesiology); Fine, Performing and Communication Arts; and Liberal Arts and Sciences (Public Health majors)

Resident Lower Division (Per Credit, 1-11 cr.)	$606.40 per credit
Resident Lower Division (Flat Rate, 12-18 cr.)	$7,291.92
Resident Upper Division (Per Credit, 1-11 cr.)	$733.92 per credit
Resident Upper Division (Flat Rate, 12-18 cr.)	$8,825.36
Non-Resident Lower Division (Per Credit, 1-11 cr.)	$1,338.43 per credit
Non-Resident Lower Division (Flat Rate, 12-18 cr.)	$16,094.49
Non-Resident Upper Division (Per Credit, 1-11 cr.)	$1,608.78 per credit

Non-Resident Upper Division (Flat Rate, 12-18 cr.)	$19,345.42

Engineering

Resident Lower Division (Per Credit, 1-11 cr.)	$606.40 per credit
Resident Lower Division (Flat Rate, 12-18 cr.)	$7,215.47
Resident Upper Division (Per Credit, 1-11 cr.)	$733.92 per credit
Resident Upper Division (Flat Rate, 12-18 cr.)	$8,748.92
Non-Resident Lower Division (Per Credit, 1-11 cr.)	$1,338.43 per credit
Non-Resident Lower Division (Flat Rate, 12-18 cr.)	$16,018.05
Non-Resident Upper Division (Per Credit, 1-11 cr.)	$1,608.78 per credit
Non-Resident Upper Division (Flat Rate, 12-18 cr.)	$19,268.97

Liberal Arts and Sciences (science majors)

Resident Lower Division (Per Credit, 1-11 cr.)	$577.13 per credit
Resident Lower Division (Flat Rate, 12-18 cr.)	$6,940.00
Resident Upper Division (Per Credit, 1-11 cr.)	$683.17 per credit
Resident Upper Division (Flat Rate, 12-18 cr.)	$8,215.05
Non-Resident Lower Division (Per Credit, 1-11 cr.)	$1,309.17 per credit
Non-Resident Lower Division (Flat Rate, 12-18 cr.)	$15,742.59
Non-Resident Upper Division (Per Credit, 1-11 cr.)	$1,558.02 per credit
Non-Resident Upper Division (Flat Rate, 12-18 cr.)	$18,735.10

Nursing

Resident Lower Division (Per Credit, 1-11 cr.)	$606.40 per credit
Resident Lower Division (Flat Rate, 12-18 cr.)	$7,291.92
Resident Upper Division (Per Credit, 1-11 cr.)	$882.68 per credit
Resident Upper Division (Flat Rate, 12-18 cr.)	$10,614.21
Non-Resident Lower Division (Per Credit, 1-11 cr.)	$1,338.43 per credit
Non-Resident Lower Division (Flat Rate, 12-18 cr.)	$16,094.49
Non-Resident Upper Division (Per Credit 1-11 cr.)	$1,757.53 per credit
Non-Resident Upper Division (Flat Rate, 12-18 cr.)	$21,134.27

Junior Year in Munich - Per Semester Rate

WSU Students	$7,350.00
Affiliated Schools	$16,000.00
Non-affiliated Schools	$18,000.00

Registration Fee

There is a $288.58 registration fee for undergraduates. The registration fee is refundable according to the same principles as tuition and other fees.

Late Registration Fee

Any student registering after the priority registration date (https://wayne.edu/registrar/registration) must pay either a non-refundable $35.00 Late Registration Fee if registration is completed before the start of classes, or $70.00 if completed after the start of classes. Late Registration Fees will be waived for new students in their first term of WSU enrollment.

Student Services Fee

Undergraduate students are assessed a $46.41 fee per credit. The Student Services Fee is used primarily to maintain, upgrade and replace student computing and technology resources on campus. A small portion is also used to fund student activities on campus, and to enhance programs directed toward improving on-campus activities, including athletics.

Student Support Fees

Engineering Support Fee - Lower Div. Full-Time	$100.00
Engineering Support Fee - Lower Div. Part-Time	$50.00
Engineering Support Fee - Upper Div. Full-Time	$350.00
Engineering Support Fee - Upper Div. Part-Time	$175.00
Sciences Support Fee - Lower Div. Full-Time**	$50.00
Sciences Support Fee - Lower Div. Part-Time**	$25.00
Sciences Support Fee - Upper Div. Full-Time**	$100.00
Sciences Support Fee - Upper Div. Part-Time**	$50.00
Honors Support Fee - Full-Time	$50.00
Honors Support Fee - Part-Time	$25.00

** The Sciences Support Fee is charged to these majors in the College of Liberal Arts and Sciences: Actuarial Mathematics, Astronomy, Biochemistry and Chemical Biology, Biological Sciences, Biomedical Physics, Chemistry, Computer Science, Communication Sciences and Disorders, Environmental Science, Geology, Information System Technology, Mathematics, Mathematical Economics, Neurosciences, Nutrition and Food Science, Physics, Psychology, Public Health, and Statistics (including those with departmental honors).

Matriculation Fee

New undergraduate freshmen and transfers will pay a $250.00 Matriculation Fee.

Student Exchange and Visitors Information Service (SEVIS) Fee

International students and scholars/visitors who must be reported through the federal SEVIS system shall be charged a $50.00 non-refundable fee for each term of enrollment.

Course Material Fees

These fees are required of some classes in which a relatively large portion of instructional costs is due to the necessary use of consumable resources. The fee is automatically assessed; a fee card is not required. The fee may be canceled when a course is officially dropped within the tuition and fee cancellation period specified in each semester's term calendar. For additional information, contact the Department offering the course. Courses listed as having special fees require payment of the fee in addition to the tuition.

Music Fees

Students registering for music courses taken as private lessons pay an additional fee. In the event of withdrawal, the student will receive a refund of the difference between the fee assessed and the cost to the University of any lessons that were provided.

Examination Fee for Credit by Examination

The fee for an examination taken to establish credit by examination is $10.00 per credit. Such examinations will be approved under provisions established by the Schools and Colleges. Credit allowed on the basis of transcript entries from another institution is not applicable to this provision.

Graduation/Certificate Fee

There shall be a $40.00 fee for students who apply for a degree or certificate/diploma. Graduate applicants for graduate degrees will not be charged the Graduation Fee as they pay a higher Registration Fee. Undergraduates who are new to the university in fall 2014 or after will pay a Matriculation Fee in lieu of a Graduation Fee and in lieu of an Orientation Fee.

Payment of Tuition and Fees

Student Financial Obligation for Payment of Tuition and Fees

When registering for courses each semester students are required to electronically sign a "Financial Responsibility Agreement." This agreement represents a binding contract obligating the student to pay all tuition and fees assessed including any collection, attorney, and/or litigation costs associated with collecting those fees, in the event of non-payment.

Payment Due Dates

- FALL TERM: Payment is due August 15.
- WINTER TERM: Payment is due December 15.
- SPRING/SUMMER TERM: Payment is due April 15.

Students registering on or after these payment dates are expected to pay the balance in full at the time of registration.

Payments not received by the due date(s) are subject to late payment fees. Failure to make payment because a statement of account or invoice is not received does not exempt students from late payment fees. Please refer to the Office of the Bursar's complete eBill Posting Schedule and Payment Due Dates (https://wayne.edu/bursar/ebill/ebill-schedule).

Payment Options

The Office of the Bursar provides complete details for the available tuition and fee payment options (https://wayne.edu/bursar/payment).

Delinquent Prior Term Balances

Personal checks are not accepted as payment for delinquent balances. Payment must be made by cash, certified check, money order or credit card.

IMPORTANT: Students who do not drop their courses during the tuition cancellation period for the term are financially obligated to pay for the courses even if they have not attended any class sessions. Specific dates are available in the Academic Calendar (p. 10).

Students with questions regarding any information presented in Payment of Tuition and Fees section above should contact the Office of the University Bursar at 313-577-3653.

Disclosure Statement

The University reserves the right to update and/or change this information at anytime.

Late Registration

Registration is not permitted beyond the prescribed registration date unless extenuating circumstances beyond the control of the student warrant an exception to University Policy as determined by the University Registrar. In such cases, full tuition, Registration Fee and Late Registration Fee is due on the day of registration.

Short Term Courses

Payment of the full tuition and the non-refundable Registration Fee is required on the date of registration or no later than the first class meeting date. Late Payment Fees are assessed to any student who has not paid his/her tuition and fee assessment by the eBill due date.

Special Adjustments

The University Registrar is authorized to make adjustments in the application of the policies stated in this section when unusual circumstances warrant. Examples of circumstances which may warrant special consideration include: serious illness or death of the student or someone closely related, or mis-advisement by a University representative. Tuition cannot be canceled for reasons such as changes in work schedule or other employment demands, claims of lack of information, insufficient funds, unawareness of the difference between tuition and student financial aid, undocumented reasons, or for reasons that are within the control of the student. Non-attendance, except for situations falling under the University non-attendance policy (below), is not in and of itself a reason for tuition and fee cancellation. Students (or an authorized representative in the case of death or serious illness) must submit their applications and supporting documentation to the Office of the Registrar. A medical exception grants 100% tuition and fee cancellation for the course(s) indicated, and it must be supported by medical reports from the attending physician. Requests for exceptions to tuition and fee policies must be submitted within approximately two months of the end of the term, as follows:

- Fall Term - March 1
- Winter Term - July 1
- Spring/Summer Term - November 1

Deadlines falling on weekends will be extended to the next business day.

University Non-Attendance Policy

The University Non-Attendance Policy will allow 100% tuition cancellation only for students in their first term of attendance at Wayne State

University. Instructors for all courses must verify the student did not attend classes after the tuition cancellation deadline. This policy is designed to provide relief to those students who in their first semester at Wayne State may not be familiar with the University's Tuition Cancellation Policy.

Where the student has otherwise proceeded properly, (s)he may be granted full cancellation of tuition and fees assessed for the class(es) involved:

- If the University cancels the class(es), or
- If the University re-schedules the class(es) after the student has registered and (s)he is now unable to attend, or
- If an authorized University representative has taken action which causes financial loss related to tuition, e.g., authorizing a student's schedule when the student does not have the necessary prerequisite(s).

Appeal Procedures: If a student (or an authorized representative in the case of death or serious illness) is dissatisfied with the Registrar's decision with reference to this policy, the student (or an authorized representative) may appeal to the Tuition and Fee Appeals Board through the University Ombudsperson.

Tuition Cancellation

Tuition may be canceled in accordance with the following schedule when students officially drop classes using the Academica on-line portal, by submitting a properly completed Register/Drop/Add form, or by sending a certified letter to the Office of the Registrar. A certified letter requesting to drop classes sent through the U.S. Postal Service shall be considered effective on the date it is received in the Office of the Registrar.

Students who officially drop classes before the conclusion of the first two weeks of classes (for the Fall and Winter full-term courses) are entitled to 100% tuition cancellation, and the dropped classes do not appear on the academic record.

Students are contractually liable for tuition unless they take official action during the tuition cancellation period to drop classes.

Students who officially withdraw from fifteen-week classes after the second week of classes (for the Fall and Winter terms) are not entitled to any tuition cancellation.

The tuition cancellation schedule shown below applies to courses that start in accordance with the Official University Academic Calendar. The tuition cancellation schedule for courses with specially approved starting dates is dependent upon the starting date of the course. Questions about the tuition cancellation schedule should be referred to the University Registrar.

Classes meeting fewer than four weeks: Students who officially drop scheduled classes before the first day of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Classes meeting four to eight weeks: Students who officially drop scheduled classes before the second week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Classes meeting nine to fifteen weeks: Students who officially drop scheduled classes before the third week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Classes meeting sixteen to twenty-seven weeks: Students who officially drop scheduled classes before the fourth week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

Classes meeting twenty-eight or more weeks: Students who officially drop scheduled classes before the seventh week of classes are entitled to a 100% tuition cancellation and 0% thereafter.

University policy allows for requests for medical exception. For approved requests, the university medical exception policy will grant 100% tuition and fee cancellation. Courses granted a medical exception will not display on the transcript, although any attempted hours associated with that course will be reflected in transcript totals. While a request is under review tuition payments should be made as scheduled.

Residency Regulations and Review Procedures: In-State Tuition

The following regulations and review procedures are established by Wayne State University for tuition and fee purposes. Wayne State University recognizes three means by which an individual may establish eligibility for in-state tuition and fees:

- By establishing residence by presence in the State of Michigan;
- By establishing attendance at Michigan high schools; or
- By establishing military service status.

Establishing Residence by Presence in Michigan

Generally, in order to establish residence by presence in the State of Michigan, an individual must document at least six months of continuous physical presence in the State. The six months continuous residence must be completed before the first day of classes for the semester in which in-state tuition is sought. Even if someone is present in Michigan for six months, the person may not qualify for in-state tuition; it depends on whether the person is in Michigan for educational purposes or some other reason. Under limited circumstances which clearly demonstrate that a student's presence in the State of Michigan is not primarily for educational purposes, the student may be eligible for in-state tuition prior to the passage of the six-month presence requirement.

Temporary Absences

In general, a person's residence is the place where he or she actually lives with the intention of making it the person's permanent home and to which he or she intends to return from temporary absences. A person may be temporarily absent from Michigan without affecting his or her previously established residence. Full-time attendance at a school outside Michigan or enlistment in a military service are examples of temporary absences. Other types of absences for more than six months will be presumed not to be temporary.

Presence for Educational Purposes

Coming to Michigan from another state or country in order to attend Wayne State University or another school does not establish residence. A non-resident at the time of his or her enrollment remains a non-resident throughout his or her presence as a student, except where it can be established that presence in the State of Michigan is primarily for purposes that are not educational, with enrollment only incidental to the primary purpose of being in Michigan. If a student enrolls in undergraduate school for more than eight credits, or in graduate school for more than six credits, or in Law School for more than ten credits in any one full length semester, within six months after arrival in Michigan, Wayne State University normally presumes that the student is in Michigan for the purpose of attending school. Applicants must demonstrate that their presence in Michigan is primarily for purposes that are not related to enrollment.

Factors Considered in a Residence Classification

The following circumstances, although not conclusive, support a claim for in-state tuition on the basis of residence:

1. The student is employed in Michigan on a permanent, full-time basis or has accepted an offer of permanent employment in Michigan.
2. The student's parents (or in the case of divorce, one parent) are legal residents of Michigan as shown by their permanent employment in Michigan and/or their establishment of a primary household in Michigan, and the applicant previously was a resident of Michigan and has maintained significant connections to Michigan.
3. The student's spouse or partner is employed in Michigan on a permanent, full-time basis and the applicant moved to Michigan as a consequence of that employment; and
4. The student has severed ties to his or her previous state of residence so that he or she no longer can reasonably be considered to be a resident of another state.

Factors Typically Not Supporting Residence Classification

The following circumstances, standing alone, do not typically support residence, inasmuch as they may be common to a temporary or short-term presence in Michigan:

1. Employment by the University as a fellow, scholar, assistant, or in any position normally filled by students;
2. A statement of intention to establish residence in this state;
3. Payment of local and state taxes; or
4. Automobile registration, driver's license, continued presence in Michigan during vacation periods.

Although insufficient to establish residence, certain of these factors may be taken into consideration in determining whether a student has severed ties to the student's previous state of residence.

For purposes of these regulations, the age of majority is eighteen years. Except as provided in paragraph 7 of this section, a minor does not have the capacity to establish his or her own legal residence. Normally, the legal residence of a minor follows:

1. That of the parents or surviving parent; or
2. That of the parent to whom custody of the minor has been awarded by a divorce or other judicial decree; or
3. That of the parent with whom the minor in fact makes his or her home, if there has been a separation without a judicial award of custody; or
4. That of an adoptive parent, where there has been a legal adoption, even though the natural parents or parent may be living; or
5. That of a "natural" guardian, such as grandparent with whom the minor in fact makes his or her home, where the minor has permanently left his or her parental home and reasonable expectation of substantial financial support from the parents has been dissolved. A natural guardian is someone who, although not legally the minor's parent or guardian, performs the same sort of parental duties.
6. If a Michigan resident parent or guardian of a minor moves his or her residence to another state, the minor shall remain eligible for resident tuition status as long as he or she continues to attend school regularly in this state.
7. A minor who has permanently left his or her parental home, and who has no reasonable expectation of significant financial support from his or her parents or legal guardian, etc., may qualify for resident status even if under eighteen years of age.

Non-U.S. Citizen

A non-U.S. citizen may apply for resident status in the same manner as a citizen, if he or she is in the United States for other than a temporary educational purpose. In order to demonstrate this, applicants must provide evidence from the U.S. Department of Citizenship and Immigration Services of one of the following:

1. A U.S. permanent resident alien with a green card.
2. An applicant for U.S. permanent residence whose Petition for Alien Relative, or Employment-based Immigration Petition for Alien Worker has been approved, or who has been issued an Employment Authorization document pending adjustment of status. These individuals will have documentation of this status such as an I-130 (Petition for Alien Relative) or I-140 (Immigration Petition for Alien Working) Approval Notice, or an I-151 or I-551 Notice of Action indicating approval of petition to become an immigrant.
3. An alien with a current valid visa type issued for purposes of working in the United States, and currently working in the State of Michigan. These currently include visa types of A, E, G, H, I, L, R, and TN.
4. An Alien granted asylum or refugee status.

Attendance of Michigan High Schools

An individual may be eligible for in-state tuition on the basis of high school attendance if he or she demonstrates that he or she:

1. Attended an accredited Michigan high school for at least three years and thereafter graduated from an accredited Michigan high school or obtained his or her GED in Michigan; and
2. Enrolls at Wayne State University within twenty-eight months of graduating from high school or obtaining a GED.

An individual does not need to be a legal resident of Michigan or a citizen of the United States to qualify for in-state tuition on the basis of attendance at Michigan schools.

Military Service

Individuals on active duty in the U.S. Military who are stationed in Michigan and their dependents are eligible for Michigan in-state tuition. Stationing orders and proof of relationship (for dependents) must be provided with the application.

Veterans and their dependents are eligible for Michigan in-state tuition. The term "veteran" means a citizen of the United States or a resident alien whose most recent separation from any branch of the armed forces of the United States was under conditions other than dishonorable after having served on active duty for 90 consecutive days or more or by reason of disability incurred while serving on active duty.

Individuals who are members of the National Guard of any state, or who were separated from the National Guard of any state under conditions other than dishonorable, and their dependents are eligible for Michigan in-state tuition.

Without regard to the foregoing, any individual using educational assistance under either Chapter 30 (Montgomery GI Bill® – Active Duty Program), Chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, and/or the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the State of Michigan while attending Wayne State University (regardless of his/her formal state of residence) is eligible for Michigan in-state tuition.

Good Neighbor Policy (Graduate Students Only)

Residents of Fulton, Lucas, Ottawa, and Williams counties in Ohio, or residents of Ontario, Canada, who are enrolled in eligible graduate programs will pay in-state tuition. This tuition benefit

does not apply to certain academic programs, including School of Medicine MD program and the Doctor of Pharmacy program. Please refer to the Tuition and Fee Regulations (http://reg.wayne.edu/students/tuition_and_fee_regulations.php) for additional details.

Great Lakes Policy (Undergraduate Students Only)

Residents of the states of Indiana, Illinois, Wisconsin, Minnesota, New York, Ohio, or Pennsylvania, or the province of Ontario, Canada, who are enrolled in eligible undergraduate programs and who are not eligible for the Good Neighbor Policy may pay Michigan resident tuition rate plus 10 percent.

Online Programs

Students enrolled in programs which are offered online in their entirety will have the out-state portion of their tuition waived. WSU Tuition and Fee Regulations published each academic year will identify the specific academic programs eligible for this provision.

Review Procedures

Initial Classification and Appeal

1. The student is responsible for registering under proper residence or tuition status and advising the University of changes in circumstances, which might affect tuition status. Questions concerning a student's residence or tuition status prior to enrollment should be raised with the Office of Admissions. Questions arising after enrollment should be raised with the Registrar's Office.
2. After enrolling, a student may challenge the initial classification made by the Office of Admissions by filing an Application for Residence Classification or Change in Tuition Status with the Registrar's Office.
3. Except for documented delays caused by University personnel, such applications must be filed by:
   a. September 30 for the Fall semester and the Medical Year semester
   b. January 31 for the Winter semester
   c. July 31 for the Spring/Summer semester

Deadlines falling on weekends or on days when the University is closed will be extended to the next business day. Applications received after these dates will be processed for the following semester.

Further Appeal

A student may appeal the initial tuition decision as follows:

1. By filing a written notice of appeal with the Registrar within thirty (30) days after the student is notified of the classification decision. The notice of appeal shall include reasons for the appeal, the period for which resident status is claimed, and a complete statement of the facts on which the appeal is based, together with supporting affidavits or other documentary evidence. Failure to file notice within thirty (30) days shall constitute a waiver of any right to further appeal. The student has the right to consult the University Ombuds Office at any time, and the student may particularly want to utilize the Ombuds' services at this point in the review procedures.
2. A student may appeal the Registrar's decision by filing a written notice of appeal with the Office of the General Counsel within fifteen (15) days from the date of the Registrar's decision. Failure to file written notice of appeal of the Registrar's decision with the Office of the General Counsel within fifteen (15) days shall constitute a waiver of any right to further appeal.
3. A student may appeal the decision of the Office of the General Counsel within fifteen (15) days with the Office of the President. Failure to file written notice of appeal of the General Counsel's decision with the Office of the President within fifteen (15) days shall constitute a waiver of any right to further appeal. After the notice of appeal, the President or his designee shall review the student's appeal and render a final decision.

Erroneous Classification

1. If an erroneous classification of non-residence occurs, an adjustment for the appropriate period and amount will be made.
2. If an erroneous classification of residence occurs, the student shall be reclassified as a non-resident student. If the cause of his or her incorrect classification shall be found to be due to any material concealment of facts or false statement made by the student before the time of the original classification, the student will be required to pay all tuition and fees which would have been charged to him or her and also will be subject also to appropriate discipline in accordance with University Student Code of Conduct. If it is determined that there is no such concealment of facts by the student, fees shall be adjusted only for current and future semesters.

Effective Dates of Residence Regulations

Amended statute as adopted on September 20, 2013, will be effective for the Winter Semester 2014.

Financial Aid

Office of Student Financial Aid (OSFA)

Welcome Center, 42 W. Warren Avenue
P.O. Box 2340, Detroit, MI 48202

Email: OneStop@wayne.edu
Telephone: 313-577-2100, Fax: 313-577-6648
https://wayne.edu/financial-aid

The Office of Student Financial Aid (OSFA) offers both need-based and non-need-based financial assistance to help eligible students with their educational expenses. Financial aid is intended to supplement, not to replace, a student's financial resources. Eligibility for need-based aid is determined by the information provided on the Free Application for Federal Student Aid (FAFSA).

Information concerning merit scholarships is available on our website at **wayne.edu/scholarships (https://wayne.edu/scholarships/).** Wayne State University offers a variety of university-wide scholarships that are awarded based on financial need, scholastic achievement, and/or leadership qualities. To apply for university-wide scholarships, current and admitted students can login to search and **apply for scholarships (https://wayne.scholarshipuniverse.com/public)**. WSU Scholarship Universe connects Wayne State University students to internal and vetted external scholarship opportunities. Note: Scholarships that have need as a criterion require submission of the annual FAFSA.

Service Hours: Walk-in financial aid assistance is provided in the lobby of the Welcome Center Monday through Friday, 9:00 a.m. to 5:00 p.m. You also may email OneStop@wayne.edu or call 313-577-2100.

The Office of Student Financial Aid will send email and notices to your WSU email account (https://tech.wayne.edu/kb/communication-collaboration/wayne-connect). Information about your award and award requirements is available in the **Financial Aid Portal (http://studentss.prod.wayne.edu/StudentSelfService/ssb/financialAid)** in Academica. More information about using the Financial Aid Portal is available on our website (https://wayne.edu/financial-aid/receiving/pipeline/).

Financial Aid Types

Financial aid at Wayne State University is awarded in the form of a 'package,' or combination of aid sources, and generally consists of four types: grants, scholarships, loans, and employment. The amount of aid a student can receive cannot exceed the estimated cost of attendance. The amount of need-based financial aid that a student may receive cannot exceed their financial need, which is based on the information provided on the FAFSA. Students may be eligible for non-need-based aid in the form of scholarships or unsubsidized federal loans.

Grants

Grants are gift assistance awarded on the basis of financial need and do not require repayment. The Free Application for Federal Student Aid (FAFSA) is required. Federal grants include the Federal Pell Grant, the Supplemental Educational Opportunity Grant (SEOG) and the Federal TEACH Grant.

Scholarships

Scholarships are gift assistance awarded based on academic achievement or other special ability and do not require repayment. For some awards, financial need is a factor and a FAFSA is required. A descriptive listing of all institutional and departmental awards that are available to students is available on our website at https://wayne.scholarshipuniverse.com/public.

Loans

Loans are money that must be repaid at a future date, usually following graduation or when the student ceases to be enrolled on at least a half-time basis. Federal loans require submission of the FAFSA. Need- and non-need-based loans are available. Need-based loans for undergraduates include the Federal Direct Subsidized loan. Non-need-based loans include the Federal Direct Unsubsidized loan. Parents of dependent undergraduates may apply for a Federal PLUS loan to assist with educational expenses.

Federal Work-Study

Federal work-study is on- or off-campus part-time employment with eligible employers. Work-study is awarded based on financial need. Students interested in work-study should complete the annual FAFSA. The Work-Study Request Form available on our website. The Student Guide to On-Campus Employment, which explains the hiring process and the terms and conditions of employment is available from the **Office of Career Services (http://careerservices.wayne.edu/student-employment.php)**.

Free Application for Federal Student Aid (FAFSA)

How and When to Apply for Financial Aid: Each academic year, submit the **Free Application for Federal Student Aid (FAFSA) (https://studentaid.gov/h/apply-for-aid/fafsa)** and include the WSU federal code, 002329. The federal processor, the U.S. Department of Education will electronically transmit the FAFSA data to the Office of Student Financial Aid.

Help Completing the FAFSA: The Office of Student Financial Aid provides assistance with completing the FAFSA through annual workshops and individualized support throughout the application process. Additionally, help is available by telephone from the Federal Student Aid Information Center at 1-800-4-FED-AID (1-800-433-3243) during regular business hours (Eastern Time), Monday through Friday.

Application Deadlines

Complete the FAFSA and submit all documents early, to ensure that you are given maximum aid in the upcoming academic year. See our website (https://wayne.edu/financial-aid/resources/dates) for current information.

The 2026-27 aid year includes the fall 2026, winter 2027 and spring/summer 2027 semesters.

- You can file the 2026-27 FAFSA starting, October 1, 2025, through June 30, 2027.
- All students are encouraged to file the FAFSA early to be considered for all available funding options.

Academic Calendar: At WSU, the spring/summer semester is the third term of the school year. For example: The spring/summer semester 2026 is part of the 2025-26 school year; the spring/summer semester 2027 is part of the 2026-27 school year.

Financial Need Determination

FAFSA Submission Summary (FSS): The FAFSA Submission Summary provides a summary of your completed FAFSA information. It either states the student's Student Aid Index (SAI) or instructs the student to take additional action to determine the SAI. The SAI is used in

determining financial need. The FSS also indicates whether the financial aid application has been selected for the verification process.

How Financial Need Is Determined: To determine financial need, the Office of Student Financial Aid (OSFA) subtracts the student's Student Aid Index (SAI) from the average Cost of Attendance (COA) for their program at Wayne State University. A negative SAI is considered as zero in this formula. The formula is COA minus SAI equals financial need.

Verification: Verification is the process by which an educational institution confirms the accuracy of the data reported on an individual student's FAFSA. The federal processor selects FAFSA applications for verification. If a student is selected for verification, they must provide documentation to confirm the information on the FAFSA.

Note: If an application is selected for verification, the student must complete the verification process before eligibility for financial aid can be confirmed, and before financial aid can be disbursed.

The Cost of Attendance (COA):

The Cost of Attendance (COA), also referred to as a budget, comprises various components, including tuition, fees, books and supplies, housing allowance, and miscellaneous expenses. If a loan is awarded, loan fees will be included as a component. Initially, all students are assigned estimated tuition costs and estimated costs for books and supplies based on full-time enrollment status for their academic programs. Financial aid awards are offered based on these estimated budgets. At the time of disbursement, each student's financial aid award is adjusted based on their current enrollment status (full-time, three-quarter time, or half-time).

The COA may be adjusted to include costs for dependent care directly related to attendance at Wayne State University (WSU); costs related to a disability; computer purchases for educational purposes; costs to obtain a first professional license; and an allowance for reasonable costs directly related to one's program of study.

Michigan Resident and Out-of-State Resident Cost of Attendance (http://wayne.edu/financial-aid/resources/cost-of-attendance/): Please access our website for detailed information concerning how student budgets are assigned and cost of attendance component amounts.

Current Tuition and Fees (http://reg.wayne.edu/students/tuition.php): Tuition and fees are subject to change by the WSU Board of Governors without notice.

Special Circumstances (https://wayne.edu/financial-aid/forms/appeal/): The Office of Student Financial Aid acknowledges that students may have extenuating financial circumstances that are not addressed by the standard need analysis form (FAFSA). Applicants may request a review of these circumstances by submitting a Special Circumstances Appeal Form if they believe it affects their financial aid eligibility.

Eligibility and Conditions of Financial Aid

Students must be enrolled in an eligible degree- or certificate-granting program to receive financial aid funds. Enrollment must be at least half-time to qualify for most types of aid. For undergraduates, enrollment in six credits is considered half-time, while twelve or more credits is considered full-time. Some scholarships may require that you earn fifteen credit hours each fall and winter semester.

Non-degree programs have aid limitations, and not all programs are eligible for financial aid. The Office of Student Financial Aid (OSFA) provides additional information on non-degree programs, including a list of specific certificate programs that are ineligible for financial aid, on our website.

Prerequisite coursework aid eligibility is limited. Determination of aid eligibility requires submission of the Prerequisite Coursework Aid Request Form, which is available on our website.

Repeat Coursework

Federal financial aid will pay for only one repeat registration in a course for which the student has previously earned a passing grade. That is, students are only eligible to receive financial aid the first time the course is repeated.

Financial Aid Enrollment Policy and the Census Date

Financial aid recipients are expected to attend all courses throughout the semester. If your participation in class is not confirmed by your instructor, your aid may be reduced or cancelled. The census date is the date on which WSU counts the number of students enrolled at the institution, which is the tenth day of each semester. It is the policy of the Office of Student Financial aid to lock or "freeze" the number of enrollment credits after the census date each semester. After the credits are locked or "frozen," **grants and scholarships** will not be adjusted (increased or decreased) unless a student withdraws from all classes. Therefore, the number of credits for which a student is enrolled on the census date determines the amount of grant funds that they will receive for the semester.

If, after the census date, a student increases enrollment credits, the grant amount(s) will not be increased. If, after the census date, a student decreases their credits of enrollment, the grant amount(s) will not be decreased. However, if a student withdraws from all classes, federal financial aid regulations require OSFA to determine the amount of financial aid the student has "earned" based on the portion of the semester that has been completed. The "unearned" part of the student's award must be returned to the financial aid program(s) from which the award(s) was/were made. As a result, withdrawing from all classes may cause cancellation of a portion or of all financial aid.

Calculating "Earned" versus "Unearned" Financial Aid

The Office of Student Financial Aid must follow federal regulations in determining the amount of "earned" versus "unearned" federal financial aid disbursed to a student who then leaves school without completing the semester. The refund percentage is determined by the student's effective date of withdrawal from all classes, which is the last recorded date of attendance.

A student who completes 60% or less of a semester will be considered to have "earned" the same percentage of financial aid as the percentage of the semester completed. The percentage will be calculated by dividing the completed number of days by the total number of days in the semester. The percentage of "unearned" aid will correspond to the percentage of the semester not completed. A student who completes more than 60% of a semester will be considered to have earned 100% of the financial aid disbursed for that semester and no return of federal financial aid will be calculated.

A student has not "earned" all of the financial aid received may be required to repay those funds. Detailed information is provided in the **WSU Withdrawals and Return of Title IV Policy (https://wayne.edu/financial-aid/receiving/cancellation/).**

Enrollment Requirements for Federal Direct Loans

A student must be enrolled at least half-time to receive a federal loan disbursement. At the undergraduate level, enrollment for six credits is considered half-time.

Satisfactory Academic Progress (SAP)

Federal financial aid regulations require OSFA to apply reasonable standards for measuring whether a student is making progress toward a degree or certificate. The standards, which are called satisfactory academic progress (SAP), must be met for a student to remain eligible to receive financial aid. Academic progress is measured each semester.

WSU Satisfactory Academic Progress Standards are comprised of three components:

1. The cumulative grade point average of at least 2.0 is required at the undergraduate level.
2. The pace of progress toward the degree or certificate must be at least 67%, which is determined by dividing the cumulative number of credits completed by the cumulative number of credits attempted.
3. The maximum time frame for completing the degree or certificate, is 150% of the average published length in credits of the program.

Note: Full-time or part-time enrollment is not a factor in determining the pace of progress or the time frame since only credits are the units of measurement.

Financial aid warning status

If you are failing to make satisfactory academic progress, your financial aid eligibility will be reinstated for one warning semester. No SAP appeal is necessary. During the warning semester, you are expected to improve your academic standing and degree progress, to meet standards of SAP at the end of the semester. If you fail to achieve SAP at the end of the semester, you will be denied financial aid beginning the following semester. You may submit a SAP Appeal to request financial aid consideration.

SAP status notification

Check your SAP status in t (https://academica.aws.wayne.edu)he **Financial Aid Portal (http://studentss.prod.wayne.edu/StudentSelfService/ssb/financialAid)** in Academica. If you are an active student with a FAFSA on file, you will be notified by email if you fail to meet SAP standards.

The WSU Satisfactory Academic Progress Policy is available online (https://wayne.edu/financial-aid/receiving/sap/).

Consequences of Withdrawing from Courses

A student's satisfactory academic progress (https://wayne.edu/financial-aid/receiving/sap/) may be affected if the student withdraws from courses during a semester. A student who does not comply with SAP standards may be denied financial aid for subsequent semesters. The university has specific instructions for SAP appeals (https://wayne.edu/financial-aid/receiving/sap/sapappeal/).

A student who withdraws from all courses may be required to repay a portion of the financial aid received. Please see the section above titled Calculating "Earned" versus "Unearned" Financial Aid. If a student's withdrawal from one or more courses results in less-than-half-time enrollment status, the student will not be eligible for new federal loan funds. At the end of the grace period on the loans received, repayment will begin.

The U.S. Department of Education's Office of Federal Student Aid (https://studentaid.gov/) governs the policies and procedures for loan repayments, deferment, forbearance, and limits. Detailed information about grace periods and loan repayment is available on the Federal Student Aid website. Students should contact their loan servicer to make repayment arrangements or request a loan deferment or forbearance.

The amount in federal student loans that a student can receive has annual and aggregate limits. Students are strongly encouraged to consider these limits in developing their education plan.

Financial Aid Disbursement

Financial Aid Disbursement: Financial aid (except work-study) is paid in two disbursements if the award is for the academic year (fall and winter semesters). Half of the award is paid in the fall semester, and half is paid in the winter semester.

Financial aid recipients are expected to attend courses throughout the semester. Aid will not disburse after courses begin unless the instructor confirms participation in courses. If participation in class is not confirmed, the amount of financial aid may be affected.

Financial aid funds are applied directly to institutional charges (tuition, fees, room and board). Any excess funds will be available within 14 days of the date the credit balance occurs or within 14 days of the first day of classes — whichever is later.

Federal Work-Study Payments: Work-study earnings are paid biweekly in the form of a paycheck. The department in which the student is employed submits a record of the hours worked to the Payroll Office, and the Payroll Office authorizes payments.

Note: Students cannot earn more than the amount of their work-study award. Spring/summer semester is separate from the fall and winter semesters. Unused funds from a fall and/or winter work-study award cannot be earned in the spring/summer semester.

Enrollment Requirements for Federal Direct Loans: A student must be enrolled at least half-time to receive a federal loan disbursement. At the undergraduate level, enrollment for six credits is considered half-time.

Records and Registration

Office of the Registrar

In Person Services: Warrior One-Stop, Welcome Center, 42 West Warren
Mailing Address: 5057 Woodward; Suite 5101, Detroit, MI 48202
Telephone: 313-577-3550, Fax: 313-577-7870
wayne.edu/registrar (https://wayne.edu/registrar)

The Office of the Registrar supports the instructional, research and service missions of the University by providing a wide variety of academic services to students, faculty and staff. The Office of the Registrar prepares academic calendars, assesses tuition and fees, determines residency, and reviews all appeals for exceptions to University enrollment policies. Student and Faculty Services oversees registration, adds, drops, course withdrawals, grading, student personal and academic data, transcripts/academic records, graduation applications, and diplomas. Academic and Curricular Services oversees the preparation of each term's Schedule of Classes, degree audit tools, and the University Bulletins.

Registration

Registration (https://wayne.edu/registrar/registration) is the process of officially enrolling in classes for a particular term. Students can view the Class Schedule (https://registration.wayne.edu/StudentRegistrationSsb/ssb/registration) online, plan courses to add to their schedule, and complete registration. Most classes have a waitlist option if the class is filled. If a student's position on the waitlist opens up, they will be notified by email and have 24 hours to add the class. If this time limit passes, students will forfeit their place on the waitlist.

A student *may not* attend any class for which they are not officially registered.

POST-BACHELOR STATUS: Students wanting graduate credit should NOT register 'post-bachelor.' This status allows students holding bachelor's degrees from accredited institutions to elect only courses open to undergraduate students (numbered below 7000), which may be used to fulfill prerequisite requirements for graduate admission. Credits for courses elected as a post-bachelor student do *not* count toward graduate credit.

Academica

Academica (https://academica.aws.wayne.edu/) is Wayne State University's single sign-on portal, providing secure access to most WSU systems and services. This comprehensive environment is a one-stop location where WSU students, faculty, and staff can conveniently use online self-service functions and easily access many computing systems, such as the Wayne Connect email system and the Canvas learning management system. Using Academica, students also have continual access to specific information and helpful tools needed for communication, collaboration, teaching and learning, and University administration. Current students can use secure self-services to check financial aid, register for and drop/add classes, pay tuition and fees, check holds midterm and final grades, obtain enrollment verifications and transcripts, self-register for training programs/workshops, and more.

Accessing Academica requires a valid WSU Access ID (https://tech.wayne.edu/kb/accessid-accounts/accessid) (e.g., xy6789) and password. As soon as a student applies for admission or an employee is hired, a unique Access ID is automatically created. The university's Help Desk (https://tech.wayne.edu/helpdesk) services can provide technical assistance if necessary.

Degree Works

Degree Works (http://wayne.edu/degreeworks) is a degree tracking tool that allows you to see your progress toward graduation and help you and your advisor determine which courses you still need to take. Along with your advisor, you can also map out which courses you will take in future semesters, putting you on the right path for graduation.

Drop/Add — Adjusting Your Schedule

Registered students may drop and/or add classes on the date(s) indicated on the academic calendar. Note the following requirements:

1. The regulations pertaining to dropping and adding courses are stated as they pertain to regular courses fifteen weeks or more in duration. These regulations are applied proportionately to courses that are offered for less than fifteen weeks. Students can click on the Course Reference Number (CRN) on the class schedule website to view specific deadline dates for each course(s). Students can also contact the Registration Office for any questions regarding these regulations.
2. Students who do not officially drop their courses within the first two weeks of classes are financially obligated to pay for the courses even if they have not attended any class sessions.
3. Students who officially drop full term courses before the conclusion of the first two weeks of classes (for the Fall and Winter terms) are entitled to 100% tuition cancellation, and the courses do not appear on the students' academic records.
4. Students are not permitted to add courses after the first week of the term without instructor and departmental permission. Departments are required to enter a late add permit/override for students if exceptions are made to permit adding of classes during the second week.
5. Students are not permitted to withdraw from courses after the end of the tenth week of class for full term classes. The withdrawal deadlines are published in each term's academic and registration calendar. Withdrawal dates for less than full term courses are adjusted proportionally. Late withdrawal requests will not be approved. Medical exception requests have separate deadlines.
6. Effective Fall 2022, all withdrawals will show as a W on the transcript. W marks are not calculated in your g.p.a, and there is no tuition cancellation for withdrawn courses. The request to withdraw can be made on Academica in the Student Resource area of the Registration menu.
7. Classes for which a grade has been earned cannot be withdrawn.

James and Patricia Anderson College of Engineering: Students are not permitted to withdraw from courses after the fifth week of classes without written approval of their advisor. Some departments have more stringent restrictions on withdrawing from courses.

Transcript Request Policy

Official transcripts bear the seal of the University and the signature of the Registrar. Students can retrieve unofficial transcripts in Academica.

Wayne State University has partnered with the National Student Clearinghouse (NSC) to provide online ordering of WSU official transcripts. Ordering a transcript from NSC is easy, secure, and a more convenient way to order online at any time. Once a transcript is ordered it can be tracked through text message and email.

The National Student Clearinghouse transcript request is the only method in which official transcripts may be requested. Wayne State University does not accept transcript requests over the phone.

- **Electronic transcript:** A transcript requested electronically is typically received the same day it is ordered.
- **Mail transcript:** A transcript being mailed through the United States Postal Service could take up to 2-3 days processing time before mailing. Additional delivery options are available on the NSC site.
- **Students who attended prior to 1998:** There may be a 3-5 day delay in processing your order.
- **Transcript Attachment Options:** You may include up to three documents to be sent with your Wayne State University transcripts, such as application forms required by recipient graduate/scholarship programs or for licensing. These documents must be in pdf, doc, docx, or jpg formats. Upon review, we reserve the right not to include certain documents with your transcripts. We do not assume responsibility regarding the legibility of your document.

Visit the Office of the Registrar's transcript webpage (https://wayne.edu/registrar/records/transcript-requests) to submit a request for an official transcript.

Release of Student Records

The University recognizes the educational records of students as being privileged and has a policy designed to ensure that this information is not improperly divulged without the consent of the student. The University is subject to the Family Education Rights and Privacy Act (https://wayne.edu/registrar/faculty/privacy) (FERPA) and has promulgated regulations pursuant thereto. The University reserves the right to provide anonymous academic information to other schools and colleges when it is to be used for curriculum evaluation purposes.

Michigan's Freedom of Information Act

The Freedom of Information Act (PA 242) provides that a member of the public, in accordance with certain guidelines, has a right to inspect and receive copies of public records maintained by the University. A public record is broadly defined and includes written documents, pictures, recordings, punch cards, magnetic cards, etc., which are maintained by the University in the course of official responsibilities. However, certain records are exempt from disclosure.

The Office of the General Counsel coordinates all requests under the Freedom of Information Act. Under statute, a fee can be charged for records released and is based on the cost of labor involved in the search, examination and duplication of records, as well as the mailing costs. Only the Office of General Counsel may authorize the denial of a FOIA request.

Student Directory Information

Under the Family Education Rights and Privacy Act (FERPA), the university can designate information as directory information, which may be released to third parties. Wayne State University considers the following information to be directory information: name, university-provided e-mail address, major, classification (freshman, sophomore, etc.), enrollment status (full-time, three-quarters-time, half-time, less-than-half-time, withdrawn), dates of attendance, participation in officially recognized university activities (including sports), height and weight of members of athletic teams, degree(s) received from Wayne State, and Honors and/or academic awards received.

Wayne State does not release directory information to third parties for commercial or non-educational purposes. Requesters are expected to explain the benefit to our students.

You may opt in or opt out of the release of directory information by filing a Request to Restrict Release of Directory Information Form (https://wayne.edu/registrar/faculty/forms) with the Records and Registration Office.

The University will release student information made under the Solomon Amendment (10 USC Section 983) by Department of Defense recruiters. Accordingly, students may **not** opt out of this type of release.

WSU OneCard

The WSU OneCard is a multi-purpose identification and debit card all in one. It is a convenient, easy-to-use card designed to provide students with access to a wide variety of campus services including. parking, door access, copying and printing services food and book-store purchases, and more, all without having to use cash. The OneCard is needed to access the fitness center, the complimentary campus shuttle and serves as the Library Card for the WSU Libraries. Students should contact the OneCard Office (http://www.onecard.wayne.edu/) for complete details.

Retention and Graduation Data

The Office of Institutional Research and Data Analysis (IRDA) submits the following retention and graduation rates to the Integrated Postsecondary Education Data System (IPEDS) on behalf of the university. More information on the university's retention and graduation rates can be found on the IRDA website (https://irda.wayne.edu/).

2nd Year Retention Rates for First-time Students Pursuing Bachelor Degrees (fall 2024 students returning in fall 2025)*

Full Time: 82%

Part Time: 47%

* Source: IPEDS Fall Enrollment 2025-2026 submission.

Graduation Rates for First-time Full-time Students Pursuing Bachelor Degrees (Fall 2019 cohort)*

Description	At the End of 4-years	At the End of 6-years
Overall Graduation Rate	38%	60%
Overall Transfer-out Rate		21%
Graduation Rate by Sex		
Male	34%	55%
Female	41%	63%
Graduation Rate by Race		
U.S. Nonresident	59%	81%
Hispanic/Latino	25%	52%
American Indian or Alaskan Native	25%	50%
Asian	52%	73%
Black or African American	18%	36%
Native Hawaiian or Other Pacific Islander	40%	40%
White	41%	63%
Two or more races	37%	49%
Race and ethnicity unknown	33%	56%

* Source: IPEDS Graduation Rates 2025-2026 submission.

Student Academic Success Services

University Advising Center

1600 David Adamany Undergraduate Library; 313-577-2680
https://wayne.edu/advising/center

The mission of the University Advising Center is to help all undergraduate students reach their educational goals, with high academic achievement, and to graduate.

The University Advising Center provides academic advising to all undergraduate students with undeclared majors and to preprofessional students in the College of Liberal Arts and Sciences and the School of Social Work. The Center is staffed by professional advisors whose major responsibilities include the following.

Exploratory Student Advising

Advisors provide specialized advising support to students entering WSU still deciding on a major/program of study. With their advisor, students will have an opportunity to explore majors and careers through exploratory activities.

Pre-Medicine/Pre-Dental/Pre-PA/Pre-Veterinary Advising

Students in pre-medical, pre-dental, pre-physical therapy, and pre-veterinary medicine are advised on specific curricula, co-curricular activities, preparation for admission exams and procedures for applying to the professional school.

Pre-professional Advising

Advisors assist students in planning programs which will fulfill requirements for admission to the various professional programs offered by Wayne State University, including those of the School of Social Work, the College of Nursing, and the Eugene Applebaum College of Pharmacy and Health Sciences.

Academic Deficiency Advising

Students whose grade point averages fall below 2.0 are placed on academic probation and are required to discuss their progress with an academic advisor. Advisors help probationary students consider ways to overcome academic deficiencies. Referrals may be made to other University services where students can find assistance for specific problems or difficulties.

Early Academic Assessment

Academic progress for undergraduate students is assessed by faculty from the beginning of the third week to the end of the sixth week of classes. If a student's performance is assessed below the C level, the student receives an alert notification referring them to appropriate campus resources.

Strategic Advising Initiatives

The unit provides academic advising and administrative support for multiple campus-wide programs including Warrior Way Back, Phoenix Reentry Program, Returning Warriors advising for adult learners, and the Wayne Advantage Macomb program.

Academic Success Center

1600 David Adamany Undergraduate Library

https://success.wayne.edu/

The mission of the Academic Success Center (ASC) is to ensure that all Wayne State University undergraduate students become self-disciplined,

motivated and independent learners. The ASC accomplishes this through instruction and services that support students in the development of skills to promote academic excellence and enhance success. The following services are available:

Academic Persistence: (https://success.wayne.edu/academic-persistence) Learning Specialists at Wayne State University play a crucial role in supporting student success and retention. These dedicated professionals are committed to helping students navigate academic challenges, build resilience, and stay on track to achieve their educational goals. You can expect the following when working with a Learning Specialist:

- Personalized guidance - helping students develop effective study habits, time management skills, and a strong sense of self-efficacy.
- Success strategies - Helping students identify and overcome obstacles—whether academic, personal, or financial—that could impact their ability to continue their studies.
- Campus referrals - connecting students with resources across campus, including tutoring, advising, and financial aid services.

Course Study Group: *(*https://success.wayne.edu/pal/csg*)* Course Study Group is a weekly commitment for students to discuss class material and/or practice exercise to make connections of the new material with previous knowledge. Students are expected to attend the study group meetings weekly and actively participate in discussions among their peers and/or the facilitator. The study groups Course study group is on a request basis. Every group is assigned to a trained facilitator who is knowledgeable about the course content as well as effective learning strategies and study skills. A minimum of 3 students to start a group.

Student Success Workshop Series: *(*https://success.wayne.edu/workshops/listing*)* The Academic Success Center offers a series of student success workshops for all students each semester. Sessions provide strategies and techniques to help students effectively manage their time, prepare for exams, reduce test anxiety, improve memory and concentration, understand the relationships between wellness and academic performance and strengthen other skills. Additionally, workshops may be requested for groups, student organizations and academic departments to address specific needs.

Study Skills Coaching: *(*https://tutoring.wayne.edu/login/?path=/student/appointment/ASC/SSASC_SSC/*)* Trained study skills coaches are available to support students' academic success. Any undergraduate Wayne State student may work with a study skills coach to identify specific study skill difficulties and formulate personalized strategies for success. Each plan identifies the student's strengths, opportunities for development and action steps necessary to help the student become a more effective learner. Programs are designed to improve students' study skills including reading comprehension, memory improvement and test preparation.

Supplemental Instruction (SI) *(*https://success.wayne.edu/pal/si/si-schedule*)*: *(SI)* supports many 1000- and 2000-level courses by offering collaborative learning sessions facilitated by an SI leader. Sessions are designed to help students understand the course's key concepts, organize the material and develop strategies to effectively learn and prepare for exams. Research indicated that students who consistently participate in SI sessions typically earn a half to a full letter grade better than the class average. SI leaders have received faculty recommendation, maintain at least a 3.5 GPA and are required to attend the lecture.

Tutoring: *(*https://success.wayne.edu/pal/tutoring*)* The Academic Success Center offers tutoring by appointment for a variety of undergraduate courses. In addition to subject material, tutoring sessions address study skill areas such as note-taking and reading comprehension when necessary. All tutors have received faculty recommendation and passing their courses with a minimum of B+ to continue working as a tutor.

Warrior 360

Warrior 360 (https://wayne.edu/warrior360) (W360) is an academic community that supports students have a successful college journey. W360 provides college guidance through connecting students to a College Success Coach, a Peer Success Partner (peer mentor), academic/social events and Momentum Week: College 101 (a college preparation program). W360 welcomes 150 incoming new students to the community every academic year.

Students who join the Warrior 360 community are provided with:

- Consistent guidance on their transitional journey from high school to college.
- Membership in a student community to build friendships and peer network.
- A dedicated Peer Success Partner (https://wayne.edu/warrior360/success-partners) who will be a student role model for WSU success.
- A committed College Success Coach (https://wayne.edu/warrior360/success-coaching) who is an expert in navigating the college experience.
- 1-on-1 individualized support to develop goals and strategies to achieve college milestones.
- Momentum Week: College 101 (https://wayne.edu/warrior360/momentum-week); **a free** 7-day campus experience to kickstart the college journey in every way. Includes on-campus housing, meals, WSU swag, and academic and social activities with up to 150 other First-Year students!

Learning Community

A Learning Community (LC) gives you the advantages of a small college learning environment with the resources of a major research university. In Learning Communities, small groups of students with similar interests work closely together in a "community of learners." Students, along with advanced student mentors and a faculty advisor, study, socialize and problem-solve together.

Not only will your LC engage in academic-related topics of discussion, but you will also learn more about campus, Detroit, and the world by participating in activities outside of regularly scheduled sessions. When you join a Learning Community, you'll be part of an innovative program that integrates courses with the campus experience. With your student peer mentors and faculty advisor, you'll:

- Develop leadership skills through your interaction with your team
- More easily explore your academic interests whether you're sure of your major or are still deciding, you'll have the opportunity within your peer network to explore your options
- Form new friendships, which will give you support in your new environment

To join a Learning Community, please visit the list of current Learning Communities (https://wayne.edu/learning-communities/listing).

Learning Communities are either embedded in General Education courses and/or major-required courses, or you might all live on the same floor of a residence hall. You can join a learning community by registering for the class, or by choosing the residence hall floor associated with that LC.

College Transitions

First-Year Seminar (FYS 1010) Introduction to University Life and College Success: This one-credit foundational course supports new Wayne State

University students in making a successful transition to college. Through interactive lessons, activities, and discussions, students build the skills and confidence needed to excel both academically and personally. The course focuses on four key areas: **academic skill development, personal and professional growth, navigating the academic environment, and fostering community and engagement**.

Counseling and Psychological Services (CAPS)

552 Student Center Building; 313-577-3398
https://caps.wayne.edu/

Counseling and Psychological Services (CAPS) provides free and confidential mental health assessment, counseling, case management, and referrals to currently-registered Wayne State students. The center provides a comprehensive range of inclusive psychological services and outreach programs that emphasize understanding, positive change, and collaborative problem#solving, all grounded in a commitment to resilience, hope, and meaningful life fulfillment. Staffed by licensed professional counselors, social workers, and psychologists, CAPS is fully accredited by the International Association of Counseling Services, and the psychology internship is accredited by the American Psychological Association.

Service hours: Monday - Friday 8:30 am to 5:00 pm. Visit the CAPS website for details, or to make an appointment.

Eligibility: All currently enrolled students are eligible for an initial consultation to assess whether their needs can be addressed effectively via short-term counseling at CAPS, or require more specialized or longer-term counseling at another agency. Case management is offered to provide referrals. Faculty, staff, alumni, children, or spouses are not eligible for clinical services.

Crisis Services

- Non-life-threatening crises (business hours): Call CAPS at 313#577#3398 and request immediate assistance for a student.
- Evenings, weekends, holidays, and university closures: Call the Warrior Mental Health Urgent Services Line at **313#577#2277.**
- Life#threatening emergencies (any time): Contact WSU Police at **313#577#2222.**

Career Services

Career Services - Wayne State University (https://careerservices.wayne.edu/)

Students - Career Services - Wayne State University (https://careerservices.wayne.edu/students)

Career advising - Career Services - Wayne State University (https://careerservices.wayne.edu/career-advising)

Career Services offers a holistic approach to achieving College-to-Career (https://president.wayne.edu/college-to-career) (C2C) success. We promote the exploration of career pathways through internships, micro-internships, networking and opportunities that challenge your career assumptions and ideas.

We stress the importance of adaptability, self-reflection and continuous learning, providing guidance, resources, and tools to enhance students' professional growth. Our career advisors (https://careerservices.wayne.edu/about/staff) are available to assist you in creating an action plan, setting goals and finding resources for a smooth C2C transition.

Start here – go anywhere

Wherever you go, you'll find a Warrior nearby. Our alumni are leaders at renowned businesses, hospitals and nonprofits. They're revolutionizing the automotive industry and conducting life-saving research. They're stars on the stage and screen, and the innovators behind world-changing startups. Below, learn how a Wayne State education helped them discover their passion and prepare for career success.

Testing, Evaluation, and Research Services

385 Manoogian Hall; 313-577-3400
https://testing.wayne.edu/

Testing

We provide:

- A secure, standardized, testing environment where students can demonstrate their academic skills for placement, course credit, or high stakes decisions.
- The opportunity for students to earn course credit in courses accepted by the transfer credit office through the College Level Examination Program (CLEP).
- Placement testing for students interested in meeting general education and other requirements targeted toward their personal skill level in Biology, Chemistry, and Mathematics.
- Outside exams: Graduate Record Exam (GRE), Test of English as a Foreign Language (TOEFL), and Written and Oral exams for the American Council on the Teaching of Foreign Languages (ACTFL).

Evaluation

We collect student opinions about faculty teaching through Student Evaluation of Teaching (SET). We share SET reports with students, administrators and faculty members toward the goal of improving quality of teaching at the University.

Research Services

We offer consulting on best practice in testing for faculty and academic staff. We offer machine scoring of exams, including tabulation of test scores and statistical output to help faculty improve their tests.

Student Disability Services (SDS)

1600 David Adamany Undergraduate Library; 313-577-1851
https://studentdisability.wayne.edu/

Student Disability Services is the office at Wayne State University that determines eligibility and implements academic accommodations, services and support for students with disabilities pursuant to the Americans with Disabilities Act (ADA), the ADA Amendments Act of 2008, and Section 504 of the Vocational Rehabilitation Act of 1973. SDS is committed to teaching students to advocate for themselves in order to fulfill their academic goals. SDS also provides training and outreach throughout the university to ensure equal access to all university programs.

Disability Determination: In order to register for SDS services, students must self-identify by providing documentation of their disability. Students will meet with disability specialists to discuss appropriate and reasonable accommodations. Once accommodations are determined, students are guided through the process of providing faculty with their accommodation letters and securing appropriate services. Students

receiving accommodations are held to the same academic standards as all other WSU students and are responsible for requesting services and following procedures in a timely manner.

Academic Accommodations: Accommodations and services are individualized and based upon the student's documentation. It is for this reason that students should ensure that they have sufficient documentation that supports the need for appropriate and reasonable accommodations. Some of the accommodations and services provided by SDS might include alternative testing, interpreter and CART reporting services, alternative text format, note-taking assistance, furniture requests, use of assistive technology, and use of SDS exam/study rooms. Students registered with SDS are also eligible for pre-priority registration for classes. Through the SDS liaison program with University departments and programs, SDS ensures that members of the University community understand the types of support offered to enhance collaboration in providing accommodations.

Assistive Technology: SDS will work to secure alternative text formats and similar technologies for students and teaches students how to use the various assistive technologies. SDS exam/study rooms house CCTV magnification equipment, computers with software such as Zoomtext, JAWS, Kurzweil Educational Systems, Dragon Naturally Speaking and Inspiration. Students are also informed about free downloadable software programs for reading and recording.

Community Resources: SDS collaborates with various community agencies that assist students with disabilities at the university. Students are connected to agencies such as Michigan Rehabilitation Services and the Bureau of Services for Blind Persons.

Federal TRIO Office

5700 Cass Ave, Suite 1330; 313-577-5050
https://federaltrio.wayne.edu/

The Office of Federal TRIO provides academic assistance and support services to promising youth and adults who have been historically under-represented in higher education due to their economic condition, first generation status, or educational preparation. This office provides academic support services, instruction, and college preparation workshops for pre-college students in the metropolitan Detroit area and students enrolled at WSU. Federal TRIO serves an extremely diverse student population that ranges from twelve to nineteen years of age, veterans of the armed services, and other adult learners. Federal TRIO Programs serve over 6,000 students residing in Wayne, Oakland, and Macomb Counties or enrolled at Wayne State University.

Federal TRIO is comprised of six state and federally funded programs designed to increase the post-secondary admission rates of the diverse populations it serves, and to increase the graduation rates of these students in the University. Through continuous improvement of services, the department aims to maximize the academic achievement of its participants and to promote equity and excellence at Wayne State University.

The Educational Opportunity Center (EOC)

5700 Cass Avenue, Suite 2701, Academic/Administrative Bldg., 313-577-5050, provides a comprehensive career counseling program that offers free academic, vocational career and financial aid information to eligible applicants nineteen years of age and older, who wish to pursue a postsecondary education.

Michigan Gaining Early Awareness and Readiness for Undergraduate Programs (MI-GEARUP)

5700 Cass Ave., Suite 1330, Academic/Administrative Bldg., 313-577-5050, offers life skills programs, career counseling services and college visitations designed to educate parents and encourage seventh- through twelfth-grade students in targeted schools to complete high school and enroll in higher education.

Upward Bound Program

5425 Woodward, 313-577-1943, provides services for low income and first generation college students in grades nine to twelve with the potential and motivation to be successful in higher education. The students must attend target area high schools. Upward Bound provides students with a head start on improving the skills required to succeed in college, through academic instruction, tutoring, academic and career guidance, personal counseling, and a six week summer residential program.

Veterans' Educational Opportunity Program (VEOP)

5425 Woodward, 313-577-9710, provides a program of instruction, academic and career guidance, personal counseling, tutoring, and post-secondary placement to veterans who have served in the U.S. Armed Forces from December 31, 1955 to present.

McNair Scholars Post-baccalaureate Achievement Program

5700 Cass Avenue, Suite 1330, 313-577-5050, provides faculty mentors, student-faculty research projects, GRE preparation services, stipend support and travel funds to present research for WSU junior and senior students. The goal of the McNair Scholars Program is to prepare low-income, first generation and underrepresented students to successfully complete doctoral studies. in the areas of science, technology, engineering and mathematics.

Colonel Gregory Gadson Office of Military and Veterans Academic Excellence (Gadson OMVAE)

Suite 687 Student Center Building
313-577-9180
https://omvae.wayne.edu/

Veterans, Service Members, and Dependents Education Benefits

The Colonel Gregory Gadson Office of Military and Veterans Academic Excellence (Gadson OMVAE) assists veterans, active-duty service members, reservists, National Guard members, and eligible dependents and survivors in understanding and using their education benefits at Wayne State University.

Students may receive assistance with federal education benefits authorized under **Title 38** and **Title 10, U.S. Code**, including but not limited to:

- Montgomery GI Bill® – Active Duty (Chapter 30)
- Veteran Readiness & Employment (VR&E / Chapter 31)
- Post#9/11 GI Bill® (Chapter 33)
- Reserve GI Bill® (Chapter 1606)
- Survivors' and Dependents' Educational Assistance (DEA – Chapter 35)
- Marine Gunnery Sergeant John David Fry Scholarship

All eligible students must **officially request the use of VA education benefits each semester**.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA).

Overview of Post#9/11 GI Bill® Benefits (Chapter 33)

Depending on eligibility percentage, the Post#9/11 GI Bill may provide:

- Tuition and mandatory fees (paid directly to the University)
- Monthly Housing Allowance (MHA)
- Annual books and supplies stipend
- Yellow Ribbon Program participation (if applicable)

Students discharged from active duty **on or after January 1, 2013**, generally have **no expiration date** to use Post#9/11 GI Bill benefits under the Forever GI Bill provisions.

Non#Degree Status

Students must be admitted to a **degree#seeking program** to receive VA education benefits. Students enrolled in coursework prior to degree admission must provide verification from an academic advisor explaining the academic purpose of enrollment (e.g., prerequisite or foundational coursework for a graduate program).

Transfer Credit for Military Service

Wayne State University awards military transfer credit as follows:

- **Four (4) credits** for verified U.S. military service (DD Form 214 required), and
- **Up to twelve (12) credits** upon receipt of a **Joint Services Transcript (JST)**.

Military training credits are evaluated using the *American Council on Education (ACE) Guide to the Evaluation of Educational Experiences in the Armed Services*.

This policy applies to all veterans, reservists, National Guard members, and active#duty service members enrolled **Fall 2005 and thereafter**.

Vet Success Services (VSS)

The Vet Success Services (VSS) program at Wayne State University provides academic support and coaching to help veteran students improve retention and graduation rates. Funded through a competitive grant, VSS serves over 120 student veterans each year and offers services such as one-on-one success coaching, tutoring, career planning, workshops, and graduate school assistance. Eligible students may apply to participate.

VSS Eligibility

You may qualify for the Vet Success Services program if you are a prior-service veteran, a first-generation college student, meet income eligibility guidelines, have a documented military disability, or are pursuing a bachelor's degree (excluding medical and law programs).

Tuition, Fees, and Deferments

Late Fee Waivers

Late tuition, partial payment, and late registration fees **may be waived** for students receiving VA education benefits. Contact Gadson OMVAE for assistance.

Tuition and Fee Deferments

Students using **Chapter 31 (VR&E)** or **Chapter 33 (Post#9/11 GI Bill)** benefits may receive a tuition and fee deferment upon submission of a valid Certificate of Eligibility (COE) or comparable documentation. Deferments are applied proportionally based on the student's eligibility percentage.

Active Military Tuition Discount (50%)

Wayne State University offers a **50% tuition discount for currently serving active-duty military, including Reserves and National Guard**, effective Fall 2018. The discount applies to **tuition only** for undergraduate and graduate degree and certificate programs (excluding Law and Medicine). To qualify, service status must be valid on the **first day of classes**, and eligibility must be verified each semester with a current **Leave and Earnings Statement (LES)**. Requests must be submitted by the **semester's withdrawal deadline**, and the discount cannot be combined with other tuition discounts.

Licensing, Certification, and Tutorial Assistance

Licensing and Certification Test Reimbursement

Students using VA education benefits may be reimbursed for **approved licensing or certification examinations**, up to **$2,000 per test**, provided sufficient entitlement remains. Reimbursements are charged against GI Bill entitlement based on current VA formulas.

Tutorial Assistance

Students who require tutoring to successfully complete a required course may be eligible for **tutorial assistance** of up to **$100 per month**, with a **lifetime maximum of $1,200**.

- For **Post#9/11 GI Bill (Chapter 33)** and **DEA (Chapter 35)** beneficiaries, tutorial assistance generally **does not reduce entitlement**.
- For **Montgomery GI Bill (Chapter 30)** beneficiaries, reimbursement of up to **$600** may be provided before entitlement charges apply.

Michigan In#State Tuition Eligibility

The following individuals may qualify for **Michigan in#state tuition** at Wayne State University:

- Active#duty service members stationed in Michigan and their dependents
- Veterans and their dependents (as defined under applicable state and federal law)

- Members of the National Guard (current or separated under conditions other than dishonorable) and their dependents
- Individuals using Chapter 30, Chapter 33, or the Fry Scholarship who reside in Michigan while attending Wayne State University, regardless of formal state of residence

Required documentation (e.g., military orders, proof of relationship) must be submitted with the application.

VA Work#Study Program

The VA Work#Study Program allows eligible students to earn income while attending school. Students must generally be enrolled at least **three-quarter-time** to participate.

Work#study pay is equal to the **higher of the federal or applicable state minimum wage**. Duties must be related to VA#approved work, including:

- Processing VA paperwork at approved schools
- Outreach services under VA supervision
- VA medical facilities or National Cemetery System offices
- Department of Defense education#related offices

National Guard and ROTC Programs

National Guard Tuition Assistance

Wayne State University does not currently participate in the Michigan National Guard Tuition Grant Program. However, Gadson OMVAE can assist students whose units provide Tuition Assistance or Tuition Reimbursement with required certifications.

Students should contact their respective **Education Services Officer (ESO)** or unit counselor for approval prior to registration.

Army ROTC

Students interested in participating should contact:

SSG Quinton Howard
Phone: 313#310#0780
Email: quinton.j.howard.mil@army.mil

Activation, Withdrawals, and Enrollment Verification

Recalled to Active Duty

Reservists or National Guard members called to active duty during a semester may request **full reimbursement of tuition and fees**. Students must submit an **Exception to Enrollment Policy** form along with a copy of military orders. Students activated near the end of a term are encouraged to consider requesting **Incomplete (I) grades**.

Early#Out Requests

Active#duty personnel requesting enrollment verification for early separation must be admitted to Wayne State University and registered for courses. Once these conditions are met, the VA Certifying Official may complete enrollment verification without requiring hard#copy documentation.

Training Time Equivalencies

For GI Bill® purposes, training#time equivalency tables apply to both standard and non#standard enrollment periods. These tables determine full#time, three#quarter#time, half#time, and less#than#half#time enrollment status for benefit payment purposes.

Fall or Winter Semester

Enrollment Status	Undergraduate	Graduate	Pharm.D.	J.D.
Full Time	12+ Credits	8+ Credits	8+ Credits	10+ Credits

Spring/ Summer Semester

Enrollment Status	Undergraduate	Graduate	Pharm.D.	J.D.
Full Time	9+ Credits	2+ Credits	2+ Credits	5+ Credits

Spring Semester

Enrollment Status	Undergraduate	Graduate	Pharm.D.	J.D.
Full Time	6+ Credits	2+ Credits	2+ Credits	5+ Credits

Summer Semester

Enrollment Status	Undergraduate	Graduate	Pharm.D.	J.D.
Full Time	6+ Credits	2+ Credits	2+ Credits	5+ Credits

School of Medicine

Enrollment Status	M.D. Program
Full Time	24+ Credits

Non-standard Fall or Winter Graduate Terms

Term Length	13-14 Weeks	11-12 Weeks	9-10 Weeks	7-8 Weeks	5-6 Weeks	3-4 Weeks	1-2 Weeks
Full Time	7+ Cr.	6+ Cr.	5+ Cr.	4 Cr.	3 Cr.	2 Cr.	1 Cr.

Students with questions regarding any of the above benefits or policies are encouraged to contact the **Gadson OMVAE** for individualized assistance.

Campus Life

Dean of Students Office

301 Student Center; 313-577-1010
https://doso.wayne.edu/

The Dean of Students Office provides services and affords opportunities to enhance student life and campus activities. The Office coordinates major campus student activities and events, including campus traditions

like Festifall, Winterfest, Finals Week Late Night Breakfast, Campus Activities Team Week, and Alternative Spring Break Detroit.

The office coordinates the campus calendar of student activities, community service programs; civic involvement include the Warriors Vote program, advises fraternities and sororities; and promotes student involvement in co-curricular life at Wayne State and Detroit, including the Campus Activities Team program board and the Student Senate.. The office also coordinates the Warrior Pride program focused on school spirit and engagement in the student fan experience at Warrior athletics events. The University Student Conduct Officer is housed in the Dean of Students Office and the office also coordinates the Student Care Report process. The Dean of Students Office also operates the W Food Pantry and Warrior Thrift, where students can obtain at no charge food and hygiene products as well as clothing and household items.

Student Organizations

There are over 500 recognized student organizations including such diverse categories as academic/professional, social action, political, sororities/fraternities, honoraries, ethnic and religious groups, as well as student governments. Student organizations use the Dean of Students Office to process their event planning and all students use the Dean of Students Office to learn about getting involved in campus life. The Office staff also assists students who want to organize new student groups. The staff also coordinates various campus publications including the online newsletter Get Involved at Wayne. Student organizations can apply to the Student Activities Funding Board for funds to present events, programs, and activities on-campus.

The official student newspaper is the South End (http://www.thesouthend.wayne.edu).

Student Senate

382 Student Center
https://studentsenate.wayne.edu/

The Student Senate is the recognized student government of Wayne State University. It consists of twenty-eight members, fourteen members at large elected in a University-wide election, and fourteen appointed members, one student representative appointed by the Office of Housing and Residential Life, and one representative appointed by the Associate Vice President for Educational Outreach to represent the extension centers. The Student Senate has an official advisory responsibility in policy formation for the governing of student activities at Wayne State. The Student Senate is advised by the Dean of Students Office.

Office of Housing and Residential Life

582 Student Center; 313-577-2116
https://housing.wayne.edu/

Housing and Residential Life at Wayne State fosters student learning and success through engaging residents in an intentional living-learning community. Supported by safe, comfortable and convenient residence hall, apartment and dining environments, residents grow in self-awareness and cross-cultural understanding as they practice social and group development as members of a diverse group of Wayne State learners.

Facilities and programs administered by this office are located just steps away from classrooms, libraries, the Student Center, and the Recreation and Fitness Center and combine the convenience and activity of the campus with the energy and pace of downtown urban living.

Parking: Faculty, Staff, and Visitor

42 W. Warren, Suite 257, Welcome Center; 313-577-2273
https://parking.wayne.edu

The Parking and Transportation Services department has the responsibility to provide well-maintained, safe parking facilities and transportation for employees, students and visitors. The present parking system is comprised of 8 structures and 25 surface lots. Parking and Transportation Services provides parking services to students, staff, and visitors of Wayne State University. Parking Services is a self-supporting auxiliary that is not funded by state taxes or student tuition. Parking operations, maintenance, and development expenses are funded by revenue generated from the sale of parking services.

Campus Health Center

5285 Anthony Wayne Drive; 313-577-5041
https://health.wayne.edu/

The Campus Health Center provides comprehensive health care services for students, including physical examinations, family planning, illness visits, and immunizations (including flu, meningitis, hepatitis B, etc.). Visits are by appointment, but walk-ins are accepted for students experiencing an illness. Counseling referral services are also available. All currently enrolled students receive one free office visit per semester. Additional visits are billed to student's health insurance with most health care plans accepted. Students without insurance have reduced fees based on a sliding scale and ability to pay for additional office visits per semester.

Police and Public Safety Services

6050 Cass; 313-577-2222
https://police.wayne.edu/

The Wayne State University Police Department patrols and services the University including the city streets, businesses, and private residences within and between the various campus areas. The Department, to the extent that resources allow, also patrols and provides other police services to the neighborhoods and businesses in the area surrounding the University.

Police service is provided twenty-four hours a day, seven days a week. All officers have, at minimum, a bachelor's degree. They are commissioned as Detroit Police Officers, with full police authority on and off campus, after training at a State-certified Police Academy. Any matter requiring the services of a police officer can be reported at any hour of the day or night.

- Blue Light System — Emergency Telephones (7-2222): The University has installed outdoor emergency telephones throughout the campus. These emergency telephones are identified by bright blue lights.
- Emergencies (313-577-2222): All emergencies should be reported immediately, i.e.: all crimes, missing/stolen property, automobile accidents, suspicious persons, injured persons, vandalism, break-ins or burglaries.
- Accidents (313-577-2222): Ambulatory patients will be transported, by officers, to either Detroit Receiving Hospital or the University Health Center. The Police Department does not provide ambulance service but utilizes the Detroit Fire Department Emergency Medical Service to handle other than minor injuries.
- Fire or Other Extreme Hazards (313-577-2222): Emergencies such as fire, smoke, explosions, broken gas or water mains, severe electrical hazards, etc., should be reported.
- Crime Prevention Section (313-577-6064): The Police Department's Crime Prevention Section provides a number of crime prevention

services, including personal safety seminars, crime prevention programs, and services. Examples of services provided include:
  - Security Services
  - Street Smarts seminars
  - Operation Identification
  - Alcohol Awareness
  - Rape Aggression Defense Training
- The Crime Prevention Section also publishes monthly 'CampusWatch' articles. Email inquiries may be made to: campuswatch@wayne.edu.

Athletics, Intramurals and Recreation

Matthaei Facility: 126 Matthaei Building; 313-577-4295
Intramural Sports: Mort Harris Recreation and Fitness Center; 313-577-2348
Intercollegiate Athletics: 101 Matthaei Building; 313-577-4280
http://wsuathletics.com. (http://wsuathletics.com/)

Wayne State University has a rich athletic tradition dating back to the fall of 1917 and has nearly 110 years of competitive success, community outreach and academic success. The first Detroit Junior College athletic event (precursor of Wayne State University) was a basketball game against the Detroit College of Law on January 19, 1918. Since then, WSU student-athletes have captured numerous honors, including national championships awarded by the NCAA and conference championships. In the past 25 years, 548 WSU student-athletes have been recognized as All-American. In the 108-year history, 805 students have been so recognized. Over seventy-nine percent (79.11%) of the 420-plus student-athletes currently involved in competitive athletics have a 3.00 or better cumulative grade point average with every team having a GPA of at least 3.05 or better. According to the latest federally mandated report, WSU student-athletes Academic Success Rate is eighty-one percent (81%). The athletic department provides competitive opportunities in the following sports: baseball, men's and women's basketball, men's and women's cross country, men's and women's fencing, football, men's and women's golf, softball, men's and women's swimming/diving, men's and women's tennis, volleyball, and women's indoor/outdoor track, with women's soccer being added in the fall of 2026. During the 2024-25 academic year, 11 out of 18 programs competed in NCAA championships. In 2012, women's swimming and diving won the NCAA National Championship joining 10 other programs to be so honored. WSU Athletics has finished in the top 15% nationally each of the last five years in the annual NACDA Cup in Division II, which ranks schools based on competitive success.

The University competes at the NCAA Division II level, while the men's and women's fencing programs participate in the NCAA (Division 1) Collegiate National Championship. WSU student-athletes have served nearly 120,000 community service hours over the last 14 years.

Many new facilities adorn the WSU athletic campus, including the 3,000-seat Wayne State Fieldhouse (shared with the Detroit Pistons G-League franchise Motor City Cruise).

The Harwell Museum which contains numerous exhibits which pay tribute to Ernie's marriage to Lulu, audio and video of Harwell's signature calls and moments. Harwell Field has a replica Fenway Park outfield fence, Major League size dugouts and through an arrangement with the Detroit Historical Society, the left field scoreboard from the former Tiger Stadium is attached to the base of the left field wall.

The Doris J. & Donald L. Duchene, Sr. Athletic Facility has 35,000 square feet of space with a maximum ceiling height of 35 feet. Enclosed are four tennis courts, a sprint track (60 yards), locker rooms for the men's and women's tennis, and baseball squads along with six offices for coaches and staff.

The nearly 12,000 square foot, state-of-the-art Athletic Performance Center opened in May of 2018 and gives student-athletes access to 24 work stations.

The softball facility was completed in three phases with the complex paid entirely by private revenue sources. On Nov. 12, 2016, the field was named Gary L. Bryce Field in honor of the long-time head coach with the installation of a new scoreboard. Previous upgrades included a locker room, offices, training room, batting and pitching cages, and outdoor bullpens.

The University offers a wide and varied program of recreational and intramural activities. The Matthaei Complex, and the surrounding athletic campus on 43 acres of land, located on the west end of campus, offers areas that include courts and fields for basketball, football, jogging, racquetball, soccer, squash, tennis, and volleyball, a weight training/exercise room, and swimming facilities. Use of these facilities is free with a current University ID or with a membership through the Mort Harris Recreation and Fitness Center and based on availability around WSU varsity sports schedules and outside rental activity. The Doris J. & Donald L. Duchene, Sr. Athletic Facility features 35,000 square feet of usable space, four tennis courts and a sprint track. Rental information (http://rfc.wayne.edu/multipurpose/) for this facility is available online.

Ticket and schedule information are available on the Athletics website (https://wsuathletics.com/) or by calling 313-577-4069. All men's and women's basketball and football games are broadcast on the Warrior Sports Network. All home athletic contests for football, volleyball, both basketballs, baseball and softball are streamed online through an agreement with FloSports.

Students are admitted free to all University-controlled WSU athletic events by using their Event Pass, which can be accessed through the Get Involved/Corq platform. Students must log in with their Wayne State credentials and present their Event Pass at the entrance for admission.

For any questions, please email Kyle Lewis, Ticket and Merchandise Supervisor, directly at kyle.lewis3@wayne.edu.

Matthaei Building

Matthaei is normally open from 8:00 a.m. to 8:00 p.m., Monday through Friday; and is closed to recreation on Saturday and Sunday, during the fall and winter semesters. During the spring/summer semester the building is open from 8:00 a.m. to 7:00 p.m., Monday through Friday. Outdoor tennis courts and track are available by calling the main athletic office (313-577-4280). A facility schedule is published monthly. Operational hours are subject to change, and not all areas of the complex will be always available, due to scheduled classes, intramural activities, and varsity athletics. All lap swim updates will be added to the monthly recreation schedule, available online or hard copy at the Matthaei. For charges and additional facility information call 313-577-4295.

Mort Harris Recreation and Fitness Center

The Mort Harris Recreation and Fitness Center is open from 5:30 a.m. to 11:00 p.m., Monday through Friday; and 8:00 a.m. to 5:00 p.m. on Saturday and Sunday, during the fall, winter and spring/summer semesters. Operational hours are subject to change, and not all areas of the complex will be available for open recreation at all times, due to scheduled group fitness classes, intramural activities, club sport activities, and varsity athletics. Locker and towel services are available for all students and members with a current OneCard. For charges and additional facility information, please visit the Mort Harris Recreation and Fitness Center (http://rfc.wayne.edu/) website or call 313-577-2348.

Group Fitness Classes (non-credit)

These classes include a variety of programming, conducted by trained, certified and experienced instructors. Class options include yoga, cycling, Zumba, High Intensity, and more. Classes are in person and virtual. Checkout a full class schedule and our virtual options (https://rfc.wayne.edu/fitness/group-classes).

Open Recreation: The fitness areas, multi-purpose courts, walking track and climbing wall offer opportunities for unstructured play and participation. Basketball, volleyball, and a variety of equipment and areas for working out, stretching, and socializing are also available.

Intramural Sports Programs: Open intramural sports leagues are available for all currently enrolled WSU students as well as WSU faculty and staff members of the facility. Leagues and tournaments are available in a variety of sports, including basketball, volleyball, dodgeball, flag football, soccer, cricket and more.

Club Sports: The Mort Harris RFC is also the home for all Club Sports. Students interested in starting a particular club sport or joining a current team, are invited to consult our website to view the registration process and to become familiar with GPA, credit load, and insurance guidelines. All WSU Club Sports are fully funded by the participating students themselves. The MHRFC oversees over 15 club. A full list can be accessed at rfc.wayne.edu/intramural/club-teams.

Fitness and Wellness Programs: Fitness assessments, personal training, and group fitness programs for every level of fitness are available to all students and members. All students and members have a free consultation included with their membership every year.

Climbing Wall: The Mort Harris RFC climbing wall features both bouldering and ropes routes to climb. Our routes are changed weekly and are graded on difficulty. We have all the equipment you need to climb or you can bring your own. Our wall is designed to accommodate climbers of all skill level even if you have never climbed before. Our staff is ready to get you going. Day, semester and year passes are available.

Team Building: The team building program is designed to foster interpersonal and intra-personal growth in a fun and challenging environment. Your student organization, department, corporation or group will participate through different elements that focus on teamwork and interdependency. Groups will learn to communicate effectively, listen to each member, recognize individual strengths and utilize collaborative efforts.

Student Center Administration: Student Center Administration (313-577-4585) is located in the lower level of the Student Center. This office schedules rooms and audio-visual equipment available for meetings, seminars, conferences and special programs. Bake sale, literature and vendor tables as well as Community Arts and St. Andrews reservations are also provided.

Student Center Administration provides the following services for a fee: duplicating service, SMART and DDOT bus passes, fax service, and State Hall locker rentals. In addition, Student Center Graphics, University Lost and Found, and the campus bulletin board posting service are located here.

Student Center Graphics: (313-577-3730): Student Center Graphics is a student operated design and print shop. They provide design services and large format printing for the campus community and outside clients. SCG also provides items such as banners, posters, logo designs and consultations for a fee.

Religious Organizations: Various religious denominations have offices on the sixth and seventh floors of the Student Center. Programs and personal and spiritual counseling are available from various denominations. A reflection room is available on the 3rd floor of the Student Center.

Office of International Programs

Vice Provost for Partnerships and Workforce: Dr. Christine Jackson
Executive Director, Strategic Global Engagement and Operations: Fareed Y. Shalhout
Marketing Coordinator: Carol Baldwin
Project Coordinators: Jessica Hoffmeyer, Catherine Franklin, Zane Harvey
Peace Corps Prep Coordinator: Nicole Coleman

http://www.oip.wayne.edu (http://www.oip.wayne.edu/)

Email: oip@wayne.edu

The Office of International Programs (OIP) is responsible for coordinating the University's resources and expertise to support international education on and off campus, to expand the university's global presence, and to facilitate the engagement of students, faculty, and staff with its global agenda. It also connects the metropolitan Detroit community with other university constituencies, locally and abroad. OIP encompasses the followings programs and activities:

- Office of International Students and Scholars
- Study Abroad and Global Programs
- English Language Institute

Fellowships Initiative
The Fellowships Initiative offers services to help students gain a competitive edge in the application process and grow personally from the experience of applying to a nationally competitive fellowship. Typically, fellowships fund study, research, or teaching in the U.S. or abroad. These awards are competitive and are awarded to students who are energetic and high achieving, with the potential to make significant contributions for the public good. More information is available on the Office of International Programs website (https://oip.wayne.edu/fellowships).

Office of International Students and Scholars (OISS)

416 Welcome Center; 313-577-3422; Fax: 313-577-2962
Director: Kelli Dixon
http://www.oiss.wayne.edu (http://www.oiss.wayne.edu/)

The mission of OISS is to support and enhance the educational, cultural, and social experiences of the more than 1200 international students and scholars at Wayne State University. OISS is the University's main point of contact for issues related to international students and scholars' immigration regulation compliance.

OISS staff advise students and scholars on immigration regulations and issues of cross-cultural adjustment; provide educational, cultural and social programs and activities, including a comprehensive orientation program and written materials designed to help arriving students and scholars achieve their educational and personal goals; assist University departments in the hiring of foreign national employees, consult and interact with University units, governmental organizations and other agencies.

Academic Progress for International Students

Department of Homeland Security regulations require:

1. That F-1 and J-1 students maintain a full course of study and make normal academic progress toward program completion at the institution they have been authorized to attend.
2. Graduate students must successfully complete at least eight credits each semester (excluding continuing students who qualify for an annual vacation semester during Spring/Summer or have been granted an exception to full-time enrollment). Undergraduate students must successfully complete at least twelve credits each semester (excluding continuing students who qualify for an annual vacation semester during Spring/Summer or have been granted an exception for full-time enrollment).
3. Graduate Teaching Assistants and Graduate Research Assistants must successfully complete at least eight credits each semester (excluding students who qualify for a vacation semester during Spring/Summer or an approved annual vacation). If GTAs/GRAs need to take less than eight credits, they must complete the OISS Request for Exception to Full Time Enrollment form and obtain approval from OISS. Students should consult an OISS advisor for details on compliance with this and other requirements.

New International Students and Scholars

New International Students and Scholars receive the OISS welcome booklet with their visa document (Form I-20 or DS 2019) before they leave their home country. The booklet provides information on a wide variety of important topics such as housing, health insurance, expenses, immigration status, local climate, and air transportation. New students and scholars from abroad must report to OISS as soon as they arrive and must participate in a comprehensive orientation program. This program is designed to meet immediate needs in terms of housing information and University registration procedures; introduce them to U.S. culture and the University's educational system; and provide information on banking, health insurance, safety, and immigration regulations. In addition, a number of social and recreational programs and activities are planned to assist students and scholars in making a smooth transition to their new environment

Non-Immigrant International Students

Upon arrival to campus when entering the US on an initial I-20, all non-immigrant international students must all non-immigrant international students must report to OISS to complete check-in procedures and have immigration documents reviewed, purchase mandatory health insurance (see below), and obtain an orientation schedule. Transferring F-1 students from other U.S. institutions must have their previous school release their Student and Exchange Visitor Information System (SEVIS) record to Wayne State University and must complete transfer procedures as provided in the federal regulations within fifteen days of the first day of class. F-1 students must notify the OISS of any change in name, address, program (including changes in level and field of study), and full-time enrollment. OISS must provide this information to Immigration and Customs Enforcement (ICE) through the Student and Exchange Visitor Information System (SEVIS). J-1 exchange visitors, including students, may not make a change in level, field, or category without the advance approval of the Department of State, and may be precluded from change of visa status until a two-year home country residency requirement is met.

Commuting Canadian Students

Canadian students (commuters) enrolled less than full time must obtain a part-time I-20 from OISS each semester they are enrolled and should consult with an OISS advisor to determine the impact of their status on future immigration benefits including the availability of practical training.

International Faculty and Research Scholars

The University provides foreign professors and research scholars with opportunities to engage in research, teaching, consulting, and lecturing with colleagues at Wayne State; to participate actively in cross-cultural activities; and to share their experience as well as increase their knowledge about the United States, Wayne State University, and the metropolitan Detroit community. OISS provides centralized support services necessary to enable and assure the employability of such non-U.S. citizens within government regulations. Offers of employment to foreign nationals must be authorized by OISS, and only this Office may sign immigration forms and petitions related to employment on behalf of the University. All foreign national employees must complete USCIS Form I-9, 'Employment Eligibility Verification' and present evidence of their identity and employment eligibility at OISS before commencing employment at Wayne State University.

Health Insurance (International Students and Scholars)

416 Welcome Center; 313-577-3422; Fax: 577-2962
Health Insurance Advocate: 313-577-0724

International students and scholars, and their dependents holding F1/F-2 status and J-1 exchange visitors and their dependents holding J-1/J-2 status are required to comply with the health insurance requirements of the University. Commuting Canadian students may waive the health insurance requirement by providing proof of OHIP coverage prior to each semester of enrollment. The mandatory international insurance program is designed to provide international students, exchange visitors, and their eligible dependents with continuous insurance protection and access to quality affordable health care services. The University is mandated by federal law to terminate from its program all exchange visitors and their dependents who do not meet minimum insurance requirements. For additional information or to purchase health insurance please access the OISS website (http://www.oiss.wayne.edu) or contact the Health Insurance Advocate in OISS; telephone: 577-0724 or e-mail oissmail@wayne.edu

Cross-Cultural Activities

The OISS provides cross-cultural activities in order to provide exposure to American society, culture, and institutions. Activities include: International Education Week, new international student welcome events, and international coffee hours. Coffee hour provides opportunity for dialogue with and among international students and scholars, American students, and the WSU community. Other activities include monthly sessions on employment options, internships, cross cultural adjustment and more.

Study Abroad and Global Programs Office

906 W. Warren Avenue; 131 Manoogian Hall; 313-577-3207
Director: Kelli Dixon
http://www.Studyabroad.wayne.edu (http://www.studyabroad.wayne.edu/)

Study Abroad and Global Programs coordinates international educational activities at Wayne State University. Key activities include:

1. the management of WSU faculty-led study abroad programs and exchange agreements;
2. the administration of the Hostelling International Travel Award for students to encourage international study, research and internship abroad initiatives;
3. the administration for the NSEP - David Boren Scholarship;
4. the administration of the U.S. Student Fulbright Program;
5. the coordination and support of internationally-themed events; and
6. the development and management of international outreach activities and off-campus programs including agreements between Wayne State University and universities outside the United States.

Study Abroad programs are offered in collaboration between academic departments and faculty of both U.S. and foreign institutions, in order to combine academic study with a cross-cultural learning experience in a foreign environment. A variety of program options have been developed to address the diverse needs of students. Programs vary in length, level, academic focus, teaching format, language requirements, cost, and degree of independence demanded of the participant.

The office provides a full range of support services to students on such issues as program selection, academic planning, registration, credit, financial aid, and cultural adjustment. In addition, program materials have been designed specifically to assist students in preparing for their study abroad experience. Books, brochures, catalogs on academic and travel/study programs in foreign countries are available at the Study Abroad Resource Center, including information on Wayne State's thirty-three study abroad programs and other programs sponsored by American and foreign institutions.

For a complete and current list of WSU Study Abroad programs, learning experiences, and services, please contact the Study Abroad and Global Programs Office (http://studyabroad.wayne.edu).

Arabic Language and Culture at the Lebanese American University, Beirut

This program provides opportunities for WSU students to study Arabic language and culture abroad. During the summer, WSU students may take a variety of language and culture classes while living abroad in Lebanon.

Japan Center for Michigan Universities

The Japan Center for Michigan Universities (JCMU) is a consortium consisting of the fifteen State-supported Michigan public universities, the Michigan Japan Foundation, and Shiga Prefecture. JCMU offers semester- and year-long study opportunities in Hikone, Japan.

The Center's academic program is designed for students interested in acquiring knowledge about Japanese language and culture, including those not majoring in Japanese studies. It provides semi-intensive Japanese language courses and several core courses on Japanese culture to Michigan and other American university students. Academic credit may be granted by a student's home institution upon successful completion of JCMU courses; independent study is also available. The program also features home-stays in a Japanese community, field trips, and participation in cultural events.

Other International Opportunities: Numerous short-term special international study programs for credit are available to Wayne State students.

International Students requiring information on study at Wayne State University should contact the Office of International Students and Scholars (http://www.oiss.wayne.edu).

Resource Center

Books, brochures, catalogs and advising on travel/study programs in foreign countries are available at the Resource Center, including information on Wayne State sponsored study abroad programs and programs sponsored by U.S. and foreign institutions. Course credit is

available on approval for many study abroad programs; credit approval usually must be obtained prior to entering a study abroad program.

Honors College
The Irvin D. Reid Honors College has study abroad experiences; for information, see the Honors College section in the WSU Undergraduate Bulletin.

Fulbright Grants and other grants for graduate study abroad

The U.S. Fulbright student program (http://us.fulbrightonline.org/) is designed to give recent B.S and B.A. graduates, masters and doctoral candidates, and young professionals and artists opportunities for personal growth and international experience. Each year the Fulbright Program allows Americans to study or conduct research in over 100 nations. Application deadline depends on the specific program but generally it must be submitted to the campus Fulbright advisor by September of the year prior to the foreign study experience.

Fulbright-Hays Doctoral Dissertation Research Abroad Program (http://eca.state.gov/fulbright/fulbright-programs/program-summaries/fulbright-hays-program): Provides grants to colleges and universities to fund individual doctoral students to conduct research in other countries in modern foreign languages and area studies for periods of 6 to 12 months. Proposals focusing on Western Europe are not eligible.

Information about other national fellowships and scholarships may be found here: https://oip.wayne.edu/fellowships

English Language Institute (ELI)

351 Manoogian Hall, 313-577-2729
http://www.Eli.wayne.edu (http://www.eli.wayne.edu/)

As the only intensive English language program in the metropolitan Detroit area, the English Language Institute (ELI) has specialized in teaching academic preparation skills, English communication, and cultural orientation to non-native speakers of English from all over the world for more than forty years. The ELI is committed to assisting individuals at all levels to develop their communication skills in the shortest possible time by using the newest language-teaching methodology and the most up-to-date audio, video, and computer technology available. Small classes and highly trained instructors make it possible for students to improve their English rapidly and effectively.

Programs

Intensive Program: For students interested in improving their academic skills in a relatively short period of time, the ELI offers up to twenty hours per week of instruction at varying levels from beginning to advanced. While beginning levels focus on basic communicative skills, advanced classes emphasize mastery of the academic skills needed to succeed in the university such as essay writing, note-taking, and presenting information to an audience.

In addition to attending class, ELI students are encouraged to participate in weekly extracurricular activities in order to become integrated into the English-speaking community. Each semester the ELI offers field trips around the metro-Detroit area, conversation partner practice with native speakers, and socio-cultural activities while at the same time encouraging students to take advantage of all university facilities and services.

Graduate Teaching Assistant (GTA) Training and Testing: All prospective GTAs whose native language is not English must pass the SPEAK® test, rated by ELI faculty, with a score of at least fifty (out of sixty) to be cleared for teaching. A score of forty-five allows a person to teach while enrolling in ELI 0520, a course taught by two ELI faculty members. The final exam, also rated by ELI faculty as well as a faculty member from the academic department, is a teaching demonstration in the GTA's field of study. The SPEAK® test is offered at various times throughout the academic year. ELI 0520 is offered fall and winter semesters.

ENG 5850 is a course supported by the Graduate School and taught by ELI faculty each semester.

English Language Institute Courses (ELI)

The following courses, numbered 0100-0999, are not offered for degree credit. For registration in any of these courses students should contact the English Language Institute.

ELI 0300 Intermediate Speaking and Listening Cr. 2
The focus of this course is to develop students' emerging academic listening and speaking skills. Students will apply listening and speaking strategies. They will also give short presentations. Emphasis will be on generating compound and complex sentences using simple academic vocabulary. Students will pronounce English sounds accurately and follow intonation and stress patterns appropriately. Offered Every Term.
Restriction(s): Enrollment is limited to English Language Institute level students.

ELI 0310 Intermediate Writing and Grammar Cr. 2
The focus of this course is to produce well-developed paragraphs in a variety of rhetorical modes on academic topics. This course will culminate in an introduction to essay writing. Intermediate grammatical structures, such as complex sentences, adjective clauses, and the present perfect, will be introduced. Error-correction tasks, peer evaluations, and self-evaluations will develop self-editing skills. Offered Every Term.
Restriction(s): Enrollment is limited to English Language Institute level students.

ELI 0325 Intermediate Reading and Vocabulary Cr. 2
The focus of this course is to increase students' vocabulary and comprehension of longer and more varied reading passages and to increase students' reading fluency and speed by reading multiple books from ELI library. In intensive reading activities, students will be to identify the topic, main ideas, and details in a passage as well as recognize the writers' point of view, purpose, and tone in simple academic texts when guided by questions. Students will also be able to understand the structure of a text with transition words and the relationship between the main points and the supporting details. The focus of the extensive reading activities will be on identifying overall meaning of texts and increasing reading speed. Class Readers will give the teacher the opportunity to help students acquire the art of extensive reading, to improve their skills, and to monitor their progress closely. Offered Every Term.
Restriction(s): Enrollment is limited to English Language Institute level students.

ELI 0400 High-Intermediate Speaking and Listening Cr. 2
The focus of this course is to develop students' academic listening and speaking skills needed for successful extended academic discourse. Students will demonstrate detailed understanding of academic listening passages. Students will use speaking strategies for academic discussions and to summarize information. They will give speeches using visuals, transitions, and grammatically-correct sentences with academic vocabulary. Not awarded for degree credit. Offered Every Term.

ELI 0410 High-Intermediate Reading and Writing Cr. 2
The focus of this course is to develop students' critical thinking skills through reading, writing, and classroom discussion. Assigned readings will be used to check comprehension, analyze and synthesize information, write summaries, cite sources, and increase students' vocabulary. Students will write on a variety of topics using a range of rhetorical modes and include introductions, thesis statements, topic sentences, supporting details, conclusions, appropriate transitions, and academic vocabulary in their essays. Students will use a variety of sentence types and develop self-editing strategies to identify and correct errors. NOTE: Out-of-class work time (or homework) can be equivalent to or even more than in-class work time. Not awarded for degree credit. Offered Every Term.

ELI 0425 High-Intermediate Grammar Cr. 2
The focus of this course is to develop students' communicative competence, or their ability to communicate effectively and appropriately, in writing and speaking. Advanced grammar points will be studied and practiced in ways that simulate academic discussions, scenarios, and assignments. Students will engage in a variety of communicative activities that demand grammatical accuracy. NOTE: Out-of-class work time (or homework) can be equivalent to or even more than in-class work time. Not awarded for degree credit. Offered Every Term.

ELI 0500 Advanced Speaking and Listening Cr. 2
The focus of this course is to develop students' academic listening and speaking skills needed for successful extended academic discourse. Students will use listening strategies to show detailed understanding of lengthy academic listening passages. They will apply speaking strategies to share information and communicate with automaticity. Concentration will be on consistently speaking intelligibly and fluently. Not awarded for degree credit. Offered Every Term.

ELI 0510 Advanced Reading and Writing Cr. 2
Students will develop critical thinking skills through reading, writing, and classroom discussion. Students will write well-developed five- to eight-paragraph essays and relate assigned readings to their own experience. Students will learn how to incorporate outside sources into their essays and use appropriate citations. Advanced grammatical structures will be reviewed and expanded as necessary Offered Every Term.

ELI 0515 Research Skills Cr. 1
The focus of this course is to introduce skills essential to conduct academic research at the university level. Students will learn how to search for and evaluate academic sources in the library and online databases as well as how to read, analyze, and use the information gathered. The course also focuses on paraphrasing and summarizing. Offered Every Term.
Restriction(s): Enrollment is limited to English Language Institute level students.

ELI 0520 English for Teaching Assistants Cr. 1
American English language skills to improve teaching effectiveness of non-native speakers of English. Pronunciation, stress, intonation, speaking rate; oral presentation practice; cultural factors in U.S. university classroom. Not offered for degree credit. Offered Every Term.
Repeatable for 4 Credits

ELI 0535 Advanced Grammar Cr. 2
The focus of this course is to master students' communicative competence, or their ability to communicate effectively and appropriately, in writing and speaking. Advanced grammar points will be studied and practiced in ways that simulate academic discussions, scenarios, and assignments. Students will engage in a variety of communicative activities that demand grammatical accuracy. Note: out-of-class work time (or homework) can be equivalent to or even more than in-class work time. Not awarded for degree credit. Offered Every Term.

ELI 0699 Directed Study Cr. 1-4
Meets the needs of English as a Second Language (ESL) students in their last stages of preparation for matriculation. Based on students' particular needs, instruction will be provided to strengthen various academic preparation skills, including listening and note-taking practice in an academic context, extensive and intensive reading, and expository and research paper writing. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in English Language Institute; enrollment is limited to English Language Institute level students.
Repeatable for 8 Credits

Educational Outreach

5150 Anthony Wayne Drive, 1643 UGL, Detroit MI 48202
Email: educationaloutreach@wayne.edu
http://www.educationaloutreach.wayne.edu (http://www.educationaloutreach.wayne.edu/)

Vice Provost of Enrollment Management: Charles Cotton III, Ed.D.
Director, Business Affairs: Heather Howell
Director, Educational Outreach and Transfer Initiatives: Michael Quattro
Associate Director, Educational Outreach: Stacy Jackson
Program Manager, Schoolcraft Center: Gail Stanford
Program Coordinator: Lindsay Taipala
Marketing Coordinator: Claire Simpson

Educational Outreach is principally responsible for Wayne State University's off-campus offerings including online programs and courses. This division administers academic off-campus course offerings and programs for most Schools and Colleges of the University; the University Summer Session; and the partnership degree programs at University centers located on community college campuses. Educational Outreach staff coordinate relationships with community colleges partners and oversee transfer student recruitment and retention via the Transfer Student Success Center.

The Division operates several instructional centers in the Detroit metropolitan area as well as in other selected locations in Michigan and delivers distance learning and online instructional programs. Through these outreach efforts, WSU is able to serve and meet the educational needs of a diverse student audience: working adults who are unable to pursue traditional on-campus programs of study; persons who desire courses of instruction at or near their place of employment; and others who are simply taking courses to enrich their educational background or improve their technical skills.

Dual Enrollment Cohort Programs

Educational Outreach coordinates dual enrollment cohort programs for eligible high school students in interested school districts. Dual enrollment cohort programs may be offered on site within the school district or at any of the Wayne State University campuses. For information regarding Dual Enrollment Cohort Programs, telephone: 313-577-1430.

Visitor Program (Non-Credit)

Educational Outreach also administers the University's Visitor Program. Under this program, adults can attend a wide range of selected University courses, both on and off campus, provided classroom space is available. No grade or academic credit may be earned, and students may not be registered for courses taken for credit simultaneously with courses taken under the Visitor Program.

The Visitor Program allows any adult who is not currently enrolled in credit courses at Wayne State University to attend a wide range of

University courses in a noncredit status. Visitor status students do not receive academic credit and do not receive acknowledgement on transcripts. Provided space is available and permission has been granted, adults may enroll as visitors in most of the courses listed in the Schedule of Classes.

It is not necessary to be formally admitted to the University to take advantage of the Visitor Program. Visitor status students do not submit written work or take examinations. Registration for both on-campus and off-campus classes takes place the first two weeks of classes and is processed by the Division of Educational Outreach, located on the main campus.

Students enrolled in the Visitor Program are assessed one-half of the undergraduate resident lower division credit hour rate for each credit hour plus a non-refundable Registration Fee equal to one-half of the regular Registration fee and the full per credit hour undergraduate Student Service Credit Hour Fee. Payment of tuition and fees are due at the time of registration. Tuition must be paid in full at the time of registration. Payment is accepted by money order, check, Discover, Master or Visa Card. Money orders or checks must be drawn from a United States bank and cannot be starter checks. Students may register in person or by calling: 313-577-4682.

Extension Centers

Director, Educational Outreach and Transfer Initiatives: Michael Quattro
Associate Director, Educational Outreach: Stacy Jackson
Program Manager, Schoolcraft Center: Gail Stanford

The Division of Educational Outreach operates several instructional centers in the Detroit metropolitan area as well as in other selected locations in Michigan. Through these outreach locations, the University is able to serve and meet the educational needs of a diverse student audience. The locations of the centers are listed below.

SCHOOLCRAFT COLLEGE
39201 W. Seven Mile Road
Jeffress Center, Suite 320
Livonia, MI 48152
Telephone: 734-853-3450
Fax: 734-853-3446
Email: schoolcraft@wayne.edu

UNIVERSITY CENTER AT MACOMB
44575 Garfield Road
Clinton Township, MI 48038
Telephone: 586-263-6700; 313-577-6261
Fax: 586-263-6120
Email: macomb@wayne.edu

ADVANCED TECHNOLOGY EDUCATION CENTER
14601 East 12 Mile Road
Warren, MI 48088
Telephone: 586-447-3905; Fax: 586-447-3907
Email: atec@wayne.edu

Registration for Off-Campus Courses

Registration for off-campus academic courses is held during the regular registration periods for each semester. For specific registration information, telephone: 313-577-3541 or 313-577-4682.

Fees for credit classes are the regularly established fees of Wayne State University, which are published each semester in the University Schedule of Classes (http://classschedule.wayne.edu/). All fees are subject to change at any time without notice by action of the Board of Governors of the University.

Non-Matriculant Advising

Persons who wish to enroll in credit courses offered through this division and who have NOT been formally admitted to the University are registered as non-matriculated students in the College of Liberal Arts and Sciences. Students are advised to consult the non-matriculant advisor as well as the specific degree program requirements cited in this bulletin, and are urged to process formal application and admission documents as soon as possible. Upon admission to a Wayne State school or college, credits earned in non-matriculant status may be applied toward degrees subject to the approval of the admitting school or college.

Admission Requirements

Most credit courses offered through Educational Outreach are open to all students who are qualified by virtue of meeting the prerequisites for individual courses or, in cases where there are no prerequisites, on the basis of their own assessment of their aptitudes. Those individuals who have been formally admitted to Wayne State University for a degree or certificate program, or post-baccalaureate study, and who are in good academic standing, will have course credits and grades earned through extension recorded on their transcripts in the same manner as credits earned on campus. Guest students should consult with their home institution when formulating their registration plans and submit an application for guest admission (http://admissions.wayne.edu/guest/requirements.php).

Programs Offered Through Educational Outreach

Educational Outreach offers entire curricula or selected courses applicable to many Wayne State University degrees and certificates at convenient times and places. Students should visit the Educational Outreach (https://wayne.edu/educationaloutreach/programs/) website for more details about complete degree programs offered at various extension centers.

Transfer Student Success Center

Director, Educational Outreach and Transfer Initiatives: Michael Quattro
Associate Director: Ranae Hamama
Manager, Transfer Credit: Colleen Mcilwain
Transfer Credit Coordinator: Zoe Makhool
Advisors: Nicole Saez and Kaleigh Webber
Telephone: 313-577-2487
Email: transfer@wayne.edu

The Transfer Student Success Center (TSSC) is a hub for transfer students to obtain the help they need to successfully complete their degree at Wayne State University. The TSSC is designed to help those transferring from a community college or other four-year institution navigate the administrative and academic units of the university and ensure a timely and successful completion of their degree.

The TSSC provides direct service to students, community college staff, and WSU departments.

Direct service to students includes support with:

- Transfer credit evaluation
- Academic advising
- Student organizations
- Engaging students with the larger Wayne State community
- Providing opportunities for prospective students to visit campus

Direct service to community college staff includes:

- Information about Transfer Plans and transferring of credit
- Development of articulation agreements
- Hosting/coordinating staff and faculty visits to WSU
- Providing counselors/advisors and other staff with current/updated WSU information

Direct service to WSU departments includes:

- Facilitating and coordinating the development of articulation agreements
- Acting as a resource and clearinghouse for information on transfer students
- Participating in and leading development of events and activities for transfer students

Executive and Professional Development Programs (Non-Credit)

Interim Associate Director: Kim White-Jenkins
Project Manager: Abby Cheatham
Telephone: 313-577-4665
http://www.ExecEd.wayne.edu (http://www.ExecEd.wayne.edu/)

Executive and Professional Development (EPD) provides proven practical solutions to business challenges through executive education, business training and consulting. Offering a unique blend of expertise and flexible design, EPD moves beyond off-the-shelf, pre-packaged education, training and consulting 'services' by applying problem-solving strategies to assess and meet the needs of its clients. EPD is committed to providing customized, fully integrated, in-depth programs to address specific organizational needs and improve individual and organizational capabilities and performance. The EPD portfolio includes:

Business Training and Executive Education

EPD offers programs that respond to problems currently facing business, government and industry. Programs are offered in a variety of formats and deliver the strategies, tools, and knowledge needed to succeed in today's changing business environment. EPD mobilizes the resources of WSU to serve the specific and unique needs of the community by offering customized degree and non-degree programs, be they an onsite MBA program offered for a specific company, an Engineering Management Master program offered for a group of engineering executives, or a master of social work offered at one of the university's extension sites.

EPD provides a blended training approach by using a variety of alternative delivery methods including on-site facilitated sessions, video-conferencing, online training and computer-based programs.

Certificate Programs

EPD responds to industry's demand for a more comprehensive approach to continuing education by offering certificate programs that encompass several current management and business issues. These multiple-session programs offer participants the opportunity for higher mastery and competency in a particular subject area and can be customized to meet each organization's specific needs.

On-Site Consulting Services

In conjunction with training, EPD's expert staff provides consulting services in a variety of areas including training and design development, leadership and organizational development, succession planning, business process improvement, strategic planning, and executive coaching.

Procurement Technical Assistance Center

The Procurement Technical Assistance Center (PTAC) works with qualified businesses in the Detroit area to prepare them to bid for government contracts. PTAC's goal is to provide small business owners with a competitive edge in selling to the public sector by educating them about opportunities, and offering marketing and technical assistance. Recently, PTAC services resulted in awarded contracts totaling more than $5 million.

For further information on any Executive and Professional Development services or activities, call: 313-577-4665.

Computing and Information Technology Division (C&IT)

Help Desk: 005 Student Center, Gullen Mall
Tel.: 313-577-4357, Email: helpdesk@wayne.edu

Administrative Offices: Computing Services Center, 5925 Woodward Ave.
Tel.: 313-577-4722, Fax: 313-577-5500

Chief Information Officer and Associate Vice President of C&IT: Rob Thompson

https://tech.wayne.edu/

C&IT provides services and resources that support and enhance WSU's learning and research. C&IT's primary goal is to provide technology services that enable our students to be successful. C&IT strives to provide excellent customer service, respond to the changing needs of the university community and make it easy and convenient for everyone to use technology at Wayne State.

Services

Help Desk: The C&IT Help Desk is your main contact for technology support. Their services include first-contact resolution and professional escalation, computer diagnostics and repairs, free and discounted software, and more.

Service Portal and Knowledge Base: The Wayne State Service Portal is an all-in-one and easy-to-use tool that allows you to request support from different campus service providers. Use the portal to view your open tickets, submit a new ticket, view the entire catalog of available university services and search the C&IT Knowledge Base for FAQ and step-by-step instructions for popular IT systems and services.

AccessID: Everyone at Wayne State receives an AccessID, or a unique identifier made up of two letters and four numbers, e.g. zz0000. Your AccessID and password are your account credentials for most Wayne State websites and online tools, including Academica, Canvas, email and more.

Your AccessID can be found on your OneCard and a temporary password is assigned via email during the admissions application process. If you forget your password, call the Help Desk to verify your identity and reset it.

Academica is Wayne State's user portal, providing single sign-on access to a wide variety of services and tools, including email, course registration, financial aid, grades, Canvas and more. The tool also includes a newsfeed that can be used to interact with your fellow students and your favorite university groups.

Canvas is Wayne State's online learning management system and the website where you can contact your instructors and access virtual class resources like assignments, discussion boards, quizzes and more. Use the Canvas Student mobile app to access your classes on the go.

Wayne State email and Office 365: Wayne State email is powered by Outlook and includes access to a free and full copy of Microsoft Office 365. Students registered for the current semester can download desktop apps like Word, Excel, PowerPoint and more for no cost.

Wayne State Alerts (emergency messaging): All university members automatically receive emergency messaging via their Wayne State email and can opt in to receive text messages, including severe weather, closures and other campus updates. You can also sign up for non-emergency messages from your favorite schools, colleges and departments.

Information Security: Wayne State's Information Security Office (ISO) works hard to protect the confidentiality, integrity and availability of information on university computer systems, but they need your help. Security is a shared responsibility, and the most important action you can take is reporting phishing emails.

Be on the lookout for emails that come from obviously compromised or spoofed accounts, request personal information, use pressure or urgency to intimidate you, offer jobs that are too good to be true, link to websites that do not have a wayne.edu URL, or include obvious errors. Use the reporting tool in Outlook to notify both Microsoft and Wayne State ISO.

Never share your password or multifactor authentication number with anyone, and never input a MFA number that you did not request. Wayne State will never ask you to verify your account via text or email. Always report suspicious activities.

Internet and Wi-Fi: Wayne State offers high-speed wired and wireless internet access in buildings across campus, including residence halls.

Students should always connect to campus Wi-Fi via the network called WSU-SECURE. This secure network encrypts your data and requires your AccessID and password to connect. WSU-SECURE is compatible with most modern phones, tablets and computers, including devices running Windows, macOS, iOS and Android.

Computer Labs: The Library System provides both open and restricted access to computer areas for the entire campus community, with a variety of applications in support of student learning. Open computing areas in Neef, Purdy, Shiffman and UGL are accessible with an AccessID and password. Some schools and colleges provide their own labs with hardware and software specific to program needs.

Laptop Rentals: Laptops are available for students to check out for free for up to five hours from laptop lockers in the STEM Innovation Center and the Undergraduate Library.

Free and Discounted Software: All students have access to free and discounted software for academic or personal use via the C&IT Help Desk Software Webstore.

WarriorGPT is a standalone generative AI chatbot tool designed specifically for use at Wayne State and to mitigate the challenges posed by using institutional data with external platforms. It works just like ChatGPT and other chatbots, and WSU users are encouraged to use it instead of such tools because they may store and train off of user-inputted information.

Research Technology: All researchers have access to technology that assists with creating, managing and analyzing data. Services include the Google Cloud Platform (GCP), high performance computing, data storage and management, server support and administrative support. The research support team collaborates with researchers on solution development, training, grant support and new tool development.

Wayne State's membership in the Internet2 advanced networking consortium offers researchers countless opportunities for participation and collaboration. The Internet2 Network addresses researchers' bandwidth-intensive requirements, such as collaborative applications, distributed research experiments and grid-based data analysis.

Wayne State Mobile App: The Wayne State mobile app is an easy way to access university information like email, calendar, parking availability,

class schedules, campus maps, OneCard balances and more. Download it for free on Google Play or the App Store.

University Libraries and Archives

Office: 3100 David Adamany Undergraduate Library
Tel.: 313-577-4023; Fax: 313-577-5525
library.wayne.edu (https://library.wayne.edu/)

Led by Dean Paul Bracke, the University Libraries support the education, research and service missions of the University and its communities through comprehensive, high-quality resources, services and programs. The libraries are leaders in providing accurate and timely information to Wayne State University as well as the metropolitan Detroit area and Michigan. Scholarly materials in the University Libraries offer total more than three million volumes, over 56,000 journal titles and a broad range of electronic resources, including electronic journals and over 800,000 e-books, all available through the Libraries' website.

The Library System includes the David Adamany Undergraduate Library, the Arthur Neef Law Library, the Purdy/Kresge Library, the Vera P. Shiffman Medical Library and its Learning Resource Center at the Eugene Applebaum College of Pharmacy and Health Sciences, and the Walter P. Reuther Library of Labor and Urban Affairs and University Archives. The School of Information Sciences and the Detroit Area Library Network (DALNET) are also under the Library System's charge.

The University Libraries offer in-person reference consultations, research support, interlibrary loan, circulation and course reserve services, document delivery and 24/7 online research support from live librarians. The latest information technologies provide state-of-the-art access to instructional and research materials. The libraries provide silent, collaborative and late night study spaces.

David Adamany Undergraduate Library

The David Adamany Undergraduate Library (https://library.wayne.edu/) (UGL) is designed to enhance the learning experience of undergraduate students by offering open spaces for collaboration and silent study as well as hundreds of computers for student use. The library features instructional labs, open spaces with flexible furniture and technology, collaborative study rooms that can be reserved online, course reserves and the Tech Bunker, a technologically-rich immersive learning space that invites users to develop, design, dream and discover. The UGL also houses the Writing Center, Academic Success Services, the Irvin D. Reid Honors College, the Humanities Commons and other student-facing services throughout the building.

Purdy/Kresge Library

The Purdy/Kresge Library (https://library.wayne.edu/) supports the research and instructional needs of faculty, graduate students and upper-level undergraduates. The library provides access to over sixty 60 computers as well as ample study space in a traditional library atmosphere. The Kresge side of the Purdy/Kresge Library is open for extended study Sunday through Thursday.

The Purdy/Kresge Library houses a book collection of over 1.5 million volumes, an extensive microform collection, a large document collection and a number of special collections including the Leonard Simons Collection of rare Michigan history texts, the Arthur L. Johnson Endowment collection, and the Ramsey Collection of Children's Literature. This library is also the home of the Teaching Commons, a collaborative effort of the Libraries, the Office for Teaching and Learning and Computing & Information Technology, which assists faculty and instructors in designing and developing instructional experiences for the classroom and online teaching environments.

Arthur Neef Law Library

Located at the north end of the University's main campus, Wayne State University's Arthur Neef Law Library (https://library.wayne.edu/neef/) offers researchers a comprehensive legal research center. Its collection of more than 620,000 print and microform equivalent volumes, plus an expansive collection of e-books, databases and other digital resources makes it a leading legal research facility in the State of Michigan. The Law Library is also a depository for U.S. government publications and for the records and briefs filed with the Michigan Supreme Court.

Shiffman Medical Library and Learning Resources Centers

The Shiffman Medical Library (https://library.wayne.edu/shiffman/) supports the research, education and clinical and public health care information needs for the University, major hospitals within the Detroit Medical Center, and unaffiliated health care providers and trainees throughout Michigan. The library maintains access to all the major health sciences, bio-scientific and consumer health databases; a core collection of journals dating to the mid-19th century; and books in print and electronically reproduced. Health information learning programs and informatics workshops, listed on the Shiffman website, are open to all members of the University community. The Learning Resources Center focuses on the daily information and computing needs of students of the Applebaum College.

Walter P. Reuther Library of Labor and Urban Affairs and University Archives

The Walter P. Reuther Library (https://www.reuther.wayne.edu) has an international reputation as the largest labor archives in the world and additionally holds significant collections relating to social and urban affairs in the metro Detroit area. It collects and preserves records of the American labor movement, related social, economic, and political reform groups, and twentieth century urban America. The archival collections held in the Reuther Library cover a variety of topics, organizations and individuals. In all, the Reuther Library has more than 95 million documents, 20,000 books, monographs, union publications and proceedings, 2 million photographic images; and 20,000 audio and moving image recordings. Due to issues of format, size, and security, the collection stacks are not open to the public and researchers work with these materials in the Reuther reading room during established hours of business.

The Reuther Library has become the official depository for the inactive files of several labor unions and organizations, including the United Auto Workers, the American Federation of Teachers, the National Association of Letter Carriers, The Newspaper Guild, the United Farm Workers, the Service Employees International Union, the American Federation of State, County and Municipal Employees, the Air Line Pilots Association, the Association of Flight Attendants, the Industrial Workers of the World, the Society of Women Engineers, and many state and local organizations. Records have also been received from urban and civil rights groups as the Citizens Crusade Against Poverty, the Michigan Chapter of the American Civil Liberties Union, the Detroit Branch of the National Association for the Advancement of Colored People, the United Community Services of Detroit, United Way for Southeastern Michigan, and New Detroit, Inc. A unique portion of the holdings is a labor journal and newspaper collection, which has nearly 1,600 current and non-current titles dating from the late 1800s to the present. Many individuals who played leading roles in labor and urban affairs have also placed their papers in the Reuther Library.

The Reuther Library also houses the Wayne State University Archives which provides historical information about WSU and its predecessor institutions that date to 1868. In addition to collecting the University's historical records, the WSU Archives holds the papers of presidents and administrative leaders, the papers of selected faculty members, and the papers of student and professional organizations that document the development of the University and higher education in Michigan. The WSU Archives also collects all publications created by and pertaining to the University, including the student newspaper from 1917 to present, as well as departmental newsletters.

Centers and Institutes (Undergraduate Programs)

Center for Excellence and Equity in Mathematics

Director: Steven Kahn, Ph.D.
*1*309 Faculty Administration Building
313-577-2558
http://clas.wayne.edu/ceem/

The Center for Excellence and Equity in Mathematics, in the College of Liberal Arts and Sciences, is a research and educational center with a two-fold mission: to find ways to significantly improve the quality of K-12 and introductory college-level mathematics instruction across the United States; and, by using mathematics as a tool, to provide students from inner cities and underrepresented minority groups with the kinds of educational and lifetime opportunities that should be available to all students.

The Center currently operates five core programs: the WSU Math Corps, an outreach program serving Detroit middle and high school students; the WSU Middle and High School Math Network, which provides day to day instructional and/or operational resources to Detroit are a middle and high school math departments; the Math Corps Learning Community at WSU, a University support and retention program for Math Corps "kids" now attending WSU; and the Emerging Scholars Program (ESP), a WSU honors-level calculus and pre-calculus program; and the Rising Scholars Program (RSP), serving WSU students at the developmental level.

Center for Latino/a and Latin American Studies

Director: Jorge L. Chinea, Ph.D.
790 Student Center Building
313-577-4378
https://las.wayne.edu/

The Center for Latino/a and Latin American Studies is a multi-service unit engaged in teaching, research, and service. The Center plays an important role in the urban mission of Wayne State University and involves four components:

1. The Center hosts two learning communities: the CBS Scholars Program and the College-to-Career Program. The first one recruits students into the University, facilitates their transition between high school and college, and promotes increased retention. The second program supports students through completion of their degrees and beyond, especially in the areas of career development and graduate school preparedness. It also offers courses and related educational activities for students interested in Latino and Latin American Studies.
2. It promotes research on issues relevant to the Latino/a community, especially in the urban and workplace environment; and Latin American cultural studies and current issues.
3. It creates and fosters the interaction and exchange of personnel and resources between the University and the Latino/a community; and it serves as a source of expertise on Latino issues to the larger metropolitan community.
4. As an advocate for the awareness and advancement of Latino/a issues within the University, the Center contributes to the University's continuing efforts to create a richer multicultural campus environment.

Center for Molecular Medicine and Genetics

Director: Lawrence I. Grossman, Ph.D.
3127 Scott Hall, 540 E. Canfield
313-577-5323
https://genetics.wayne.edu/

The Center for Molecular Medicine and Genetics is the University's premier site for interdisciplinary research and education focused on modern molecular medicine, genetics, and genomics. The Center's strong interdisciplinary environment and highly collaborative faculty include primary and jointly-appointed members with broad expertise in genetics, genomics, computational biology, and molecular biology. Together, they conduct leading-edge research that advances precision medicine to improve the understanding, diagnosis, treatment and prevention of human disease. The Center occupies over 28,000 sq. ft. of state-of-the-art research space in the Medical School, including both open and closed laboratories, faculty and administrative offices, shared equipment and special procedure rooms, conference rooms, and interaction areas. Center faculty labs are also located in key satellite campus locations including the Integrative Biosciences (iBio) Center and the Karmanos Cancer Institute. The Center's dual mission of research and education is realized through its research-intensive graduate programs (PhD and MS) in Molecular Genetics and Genomics (https://bulletins.wayne.edu/graduate/school-medicine/programs/molecular-genetics-genomics/) and an accredited MS program in Genetic Counseling (https://bulletins.wayne.edu/graduate/school-medicine/programs/genetic-counseling-ms/). These programs prepare the next generation of scientists to lead advances in genomics and precision medicine.

Center faculty also train undergraduate students in their laboratories, providing an outstanding opportunity to gain valuable research experience. In addition, the Center hosts a highly selective Summer Undergraduate Research Program (SURP), through which participants engage in immersive research and professional development. Many SURP alumni have gone on to attend prestigious universities and graduate programs to pursue advanced degrees in biomedical science and medicine.

For more information on the Center's research and training opportunities see www.genetics.wayne.edu.

Summer Undergraduate Research Program (SURP)

Opportunities for research in Molecular Medicine and Genetics are available each summer as part of the Center for Molecular Medicine and Genetics SURP. The program provides sophomore and junior undergraduate students with experience in the research laboratories of the Center, located at the Wayne State University School of Medicine. Over the course of the summer students work in the laboratories of Center faculty members and attended weekly research seminars. When the program ends in August the students present their work to their mentors, peers, and the WSU research community at a symposium.

Center for Peace and Conflict Studies

Director: Pontus Leander, Ph.D.
2320 Faculty/Administration Building
313-577-3453
https://cpcs.wayne.edu/

On November 20, 1965, the Center for Teaching about War and Peace opened its doors under the leadership of Director Russell Broadhead and a committee of distinguished faculty members. The mission then was to provide interdisciplinary, University-wide, academic programs in the field

of domestic and international conflict and peace issues. In 1987, the WSU Board of Governors, building upon this rich heritage, created the Center for Peace and Conflict Studies.

The mission of the Center for Peace and Conflict Studies is to develop and implement projects, programs, curricula, research, and publications in areas of scholarship related to international and domestic peace, war, social justice, arms control, globalization, multi-cultural awareness and constructive conflict resolution. The Center addresses this mission in three ways. CPCS supports undergraduate and graduate student excellence through its academic programs. CPCS staff and students engage in scholarly research initiatives on aspects of domestic and international conflict management. CPCS provides community outreach programs that emphasize: conflict resolution, development of inter-cultural understanding, and enhance local knowledge of global affairs.

Center for Urban Studies

Director: Lyke Thompson, Ph.D.
Managing Director: Charo Hulleza, M.P.A.
5700 Cass Avenue, Room 2207 Academic/Administration Building
313-577-2208
http://www.cus.wayne.edu (http://www.cus.wayne.edu/)

The Center for Urban Studies improves understanding of and provides innovative responses to urban challenges and opportunities. The Center conducts and disseminates research, develops policies and programs, and provides training, capacity-building, and technical assistance. The Center participates in defining and influencing local, regional, State, and urban policy. The Center's current initiatives have a real, substantial and lasting impact on Detroit's challenges across a number of areas ranging from crime reduction to healthy homes. Committed to serving Detroit and its metropolitan area, the Center exemplifies Wayne State's urban research and service mission. The Center employs a highly trained multi-disciplinary team consisting of social science Ph.D. and master's-level researchers, as well as WSU graduate and undergraduate students.

Center to Advance Palliative-Care Excellence (CAPEWAYNE)

4201 St. Antoine, Suite 5C-UHC
313-576-3997
http://www.capewayne.med.wayne.edu (http://www.capewayne.med.wayne.edu/)

CAPEWAYNE is an interdisciplinary academic center bringing together scholars, educators, researchers and clinicians dedicated to improving the quality of end-of-life care. The main focus areas of this center are education, research and clinical practice, all of which permeated by the field of humanities.

Education: The Center offers an end-of-life curriculum for students, trainees and clinicians across disciplines and levels of training.

Research: The Center gathers researchers who have a shared interest in the conduct of collaborative, interdisciplinary interdepartmental research. Current research projects include evaluating the impact of a palliative care curriculum, called the Compassionate Allies, sponsored by Seasons Hospice Foundation, on the skills and attitudes of pre-medical students.

Clinical Practice: The Center provides resources to clinicians across disciplines and settings that practice palliative care, through a paradigm of sharing and ensuring optimization of clinical care in our community.

Fraser Center for Workplace Issues and Center for Labor Studies (Labor@Wayne)

Director: Elizabeth Faue, Ph.D.
249 Walter P. Reuther Library, 5401 Cass Ave.
313-577-6601 (main office)
https://labor.wayne.edu

The Fraser Center for Workplace Issues and the Center for Labor Studies are comprehensive labor research and education centers under the leadership of Labor@Wayne. They are committed to strengthening the capacity of organized labor to represent the interests of workers in their relationship to employers, while at the same time strengthening the University's interdisciplinary research and teaching on work, employment, and labor relations issues. The Center's primary areas of research and practice include contemporary workplace and employment conditions and laws; the organization, history, and analysis of the labor movement and labor unions in the United States and globally; labor and working-class culture, politics, and history; training and research assistance to unions on labor relations and workplace issues; student internship opportunities; the promotion of best practices in labor-management relations and human resource management, particularly in the public sector; support for labor-community coalitions; and the impact of new technologies on workers, the workplace, and labor relations.

The Fraser Center for Workplace Issues supports research through research grants for faculty, staff, and graduate students and strengthens academic and non-credit labor education through Labor Education Development grants for full- and part-time faculty. The Centers engage the public through Fraser Center workshops and lectures, the annual Bluestone and Miller memorial lectures, and the Workers in Solidarity and Education (WISE) and the North American Labor History conferences, which are held in alternate years, and bring academics, labor leaders, business and community leaders, and policymakers into conversation on employment and labor policy and practice. The Center also supports undergraduate, graduate, and non-credit students through a range of endowed annual scholarships.

Humanities Center

Director: Jaime Goodrich, Ph.D.
2226 Faculty/Administration Building; 656 W. Kirby; 313-577-5471
https://humanities.wayne.edu/

The Humanities Center serves as a campus-wide hub for Wayne State faculty and students working in the humanities, arts, and related disciplines. Through its events and fellowships, the Center pursues three major goals: 1) to nurture scholarly and creative work in the humanities and allied fields; 2) to promote intellectual exchanges relevant to the humanities; 3) to facilitate multidisciplinary collaboration and community. The Center also aims to encourage public humanities initiatives that will allow Wayne State faculty and students to conduct innovative community-based work, especially in the Detroit metro area and Michigan. With its various programs, the Center brings together humanists of all kinds to showcase the centrality of the humanities to our contemporary moment.

In addition to hosting brown bag talks and other events, the Humanities Center provides funding support to both faculty members and students. Two of the Center's most prominent faculty programs are the Faculty Fellowship Competition (two course releases), the Summer Faculty Fellowship (research funds) and the Marilyn Williamson Endowed Distinguished Faculty Fellowship (two to four course releases plus research funds). Prominent student programs are the Doctoral Dissertation Fellowship ($25,000 plus health care coverage and tuition

remission), the Graduate Summer Grant (research funds), and the Graduate Travel program (travel funds).

Merrill Palmer Skillman Institute

Director: Alissa Huth-Bocks, Ph.D.
71 East Ferry Ave.
313-664-2500
https://mpsi.wayne.edu/

The Merrill-Palmer Skillman Institute is an interdisciplinary research institute focusing on urban children and families. It has a long and distinguished history as a research and educational institution, serving as a pioneer in the field of child development and early education. Since it became a part of Wayne State University in 1982, the Institute has encouraged collaborations among faculty from many departments within the University.

The Institute emphasizes research, research training and community engagement and service in the areas of children's health and development. Current research strengths range from prenatal exposures and child development, infant mental health, cognitive development of high risk infants as well as adolescent health and development. The service programs of the Institute are an outgrowth of its research mission. MPSI operates one of the nation's oldest preschools. Community outreach and engagement through MPSI's Healthier Urban Families Program includes training of mental health workers who serve very young children in the care of public and non-profit agencies; consultation to education and child care organizations; workshops for teachers, parents and the public; and the annual Metropolitan Detroit Teen Conference.

Michigan Developmental Disabilities Institute (MI-DDI)

Director: Sharon Milberger, Sc.D.
Leonard Simons Building
4809 Woodward Avenue, Suite 268
313-577-2654 or middi@wayne.edu
https://ddi.wayne.edu/

The Michigan Developmental Disabilities Institute (MI-DDI) is one of a national network of 68 University Centers for Excellence in Developmental Disabilities (UCEDDs). MI-DDI's mission is to contribute to the development of inclusive communities, which enhance the quality of life of people with disabilities and their families through a culturally-sensitive statewide program of training and education, community support and services, research, and sharing of information.

Staff and faculty engage in technical assistance, training, and research programs throughout Michigan via collaborative efforts with schools, community agencies, community colleges, and other Universities. Over 10,000 individuals with disabilities benefit from these activities annually. MI-DDI offers a wide range of opportunities for students and faculty to engage in state-of-the-art community-based research, education, and technical assistance.

MI-DDI develops activities and projects based on needs of persons with disabilities and the communities in which they live and work. The Community Advisory Council, composed of representatives of twenty-five key statewide organizations, meets bi-annually to provide information and assistance to Institute staff and faculty in establishing priorities and evaluating activities.

Mike Ilitch School of Business

Dean: Virginia Kleist

The Mike Ilitch School of Business is a professional school concerned with the theory and practice of business. The primary objectives of the School are to provide relevant education of high quality for business students, and to develop new knowledge through research and encourage application of its findings. To this end, in addition to their instructional services, the faculty has been a continuing source of notable scholarly publications and it is a special strength of the School that it brings a fine research faculty to the teaching of undergraduate as well as graduate courses.

The School has a tradition of instructional programs exemplifying high standards for both faculty and students as is acknowledged by the accreditation of the AACSB International — The Association to Advance Collegiate Schools of Business, the international association for management education, for all degree programs. The School provides relevant, comprehensive business education through programs that serve recent high school graduates as well as older student populations. The student body is racially and ethnically diverse, residential and commuting, and often working and raising families. To meet the needs of these students, the School schedules classes throughout the metropolitan area, during both day and evening hours. Extension Centers are located in Livonia and Warren.

The undergraduate program begins during the freshman year. Freshmen are admitted directly to the Mike Ilitch School of Business. The first two years of undergraduate work are focused on developing an educational foundation in the basic sciences and arts. During the third and fourth years, the student follows a program of professional education. Students may select majors in accounting, finance, global supply chain management, management, marketing, and technology, information systems and analytics. The degrees of Bachelor of Arts and Bachelor of Science in Business Administration are awarded.

The Law minor in business, created in cooperation with the Law School, develops skills in logical and critical thinking and broadens career opportunities with a legal component in government, human resources, compliance and more in the 18 credit hour program. The Entrepreneurship and Innovation minor, a 15 credit hour program, is open to business and non-business majors, providing students with knowledge, skills and experience to develop and launch startup ventures or social impact ventures. Creation and growth strategies, product and service development, new venture marketing and financing evaluation are introduced. The Business Minor is open to undergraduate non-business majors to develop a working knowledge of business principles and practices from select course work offered in the Ilitch School. Students completing the 18 credit hour minor and planning to get an MBA at WSU, also will have a head start in the graduate program. The Post-bachelor Certificate in Accounting enables students who already hold a bachelor's degree in business or accounting to obtain the required educational background to be licensed as a Certified Public Accountant (CPA) in Michigan.

The graduate program leading to the Master of Business Administration (M.B.A.) degree is dedicated to educating graduate students for professional careers in business. The Master of Science in Accounting (M.S.A.) program prepares individuals for professional careers in public accounting. The Master of Science in Data Science and Business Analytics (M.S.D.S.B.A.) is a novel interdisciplinary degree program that leverages the strengths of Wayne State in statistics, operations research, computing and business by combining the world-class expertise of the James and Patricia Anderson College of Engineering and the Mike Ilitch School of Business. The Master of Science in Finance (M.S.F.) is designed for both recent graduates and working professionals with a bachelor's degree in finance, accounting or another quantitative field who want to advance or shift their careers. The Executive Master of Science in Automotive Supply Chain Management is designed for working professionals with a bachelor's degree who want to progress in the dynamic field of supply chain management in the automotive industry, as well as new graduates who want to immediately pursue advanced studies. The Graduate Certificate in Business is designed to provide non-business undergraduates fundamental knowledge in the basic functional areas of business administration: Accounting, Finance, Management and Marketing. For additional graduate program information, consult the Wayne State University Graduate Bulletin.

The Doctor of Philosophy Program in the Mike Ilitch School of Business prepares students for teaching and research at major universities. The program focuses on quantitative skills, enabling students to engage in research projects with faculty, and places a heavy emphasis on a global perspective.

The Mike Ilitch School of Business also recognizes its obligation to community service. As a central part of an urban university, the School makes a special commitment to foster training, and basic and applied research that will benefit business enterprises. Of primary importance is the dedication to excellence in the instructional programs that prepare the business leadership that is critical to the continuing revitalization of southeastern Michigan.

Mission Statement

Our mission is to prepare our students for challenging and rewarding careers, advance the boundaries of scholarly and practitioner knowledge, and enhance the economic vitality of the city of Detroit, the state of Michigan and beyond through our programs, research and community engagement.

Aspiration and Vision

The Wayne State University Mike Ilitch School of Business aspires to establish itself as one of the leading business schools in the nation as noted in published national rankings (e.g., Business Week, U.S News and World Report, etc.), that reflect favorable student evaluations and recruiter perceptions of both the undergraduate and M.B.A. programs, and the scholarly achievements of the faculty. The School strives to achieve a positive reputation for contributions to knowledge development, for the role it plays in the economic prosperity of the region, and for becoming a school of choice - one which prospective students see as providing a pathway to academic and professional achievement.

Academic Regulations: Mike Ilitch School of Business

For complete information regarding academic rules and regulations of the University, students should consult the Academic Regulations (p. 40) section of this bulletin. The following additions and amendments pertain to the Mike Ilitch School of Business.

All students must fulfill the upper-division requirements of the Mike Ilitch School of Business in effect at the time of admission to the Mike Ilitch School of Business.

Admission to Class

Please consult each term's Schedule of Classes for appropriate dates and deadlines for registration, late registration, and add/drop period. *Students may not attend a class for which they are not officially registered and will not be added retroactively.*

Admission to the School

Students seeking a business degree must be granted regular admission (p. 34) to the University to be eligible for admission to the Mike Ilitch School of Business.

AGRADE - Accelerated Graduate Enrollment

The Mike Ilitch School of Business has established an accelerated combined undergraduate and graduate program ('AGRADE') whereby qualified students in the Mike Ilitch School of Business may enroll simultaneously in undergraduate and graduate courses of the School. A maximum of twelve credits may be applied towards both undergraduate and graduate degrees in a student's major field if the major department is an AGRADE participant. Those who elect the 'AGRADE' program may expect to complete the Bachelor's and Master's degrees in five years of full-time study.

AGRADE accelerated graduate program option

Save money and time toward your graduate business degree with the Accelerated Graduate Enrollment (AGRADE) program.

Highly qualified Wayne State University Mike Ilitch School of Business students are eligible to participate in the AGRADE program. AGRADE students can cut substantial time and as much as one-third off the total cost of a WSU graduate business degree program by applying up to 12 credits toward both their undergraduate and select graduate degrees.

AGRADE benefits

- Start earning your master of business administration (M.B.A.) (https://ilitchbusiness.wayne.edu/mba/), master of science in accounting (M.S.A.) (https://ilitchbusiness.wayne.edu/accounting/ms.php), master of science in finance (https://ilitchbusiness.wayne.edu/finance/masters.php) or executive master of science in automotive supply chain management (https://ilitchbusiness.wayne.edu/supply-chain/masters.php) while completing your bachelor's degree
- Earn graduate credits at undergraduate tuition rates
- Apply up to 12 credits of selected graduate courses (https://ilitchbusiness.wayne.edu/students/agrade.php#agradecourses) as dual credit for undergraduate and eligible graduate programs
- Option to move immediately to the graduate program or rejoin the program later
- Earn both your bachelor's and master's degrees in as little as five years

AGRADE requirements

- Undergraduate major in accounting, finance, global supply chain management, technology information systems & analytics, management or marketing
- Senior standing (~90 credits earned)
- Overall GPA of 3.3 or higher at WSU
- Major GPA of 3.4 or higher at WSU
- Meet with undergraduate and graduate advisors to discuss program requirements
- Complete the Dual Credit Enrollment Form
- Courses apply to M.B.A., M.S.A., master of science in finance or executive master of science in automotive supply chain management degrees only

Transfer of courses

Only those AGRADE-approved courses in which the student has earned a B or higher will transfer to the graduate transcript. Once in the master's program, students may be required to repeat an AGRADE course in which they earn less than a B grade. AGRADE courses will not be transferred to the student's graduate transcript until one semester of graduate course work has been successfully completed.

Approved AGRADE courses

For students approved to participate in the AGRADE program, four of the following courses from any one of the program areas listed below may be counted toward both their bachelor's degree and M.B.A. All courses are three credits.

Take no more than four courses or 12 credits from any one of the following program areas.

Code	Title	Credits
Accounting		
ACC 7120	Introduction to Taxation: Individuals	3
ACC 7122	Advanced Accounting I	3
ACC 7130	Intermediate Managerial Accounting	3
ACC 7145	Accounting Systems: Design and Controls	3
ACC 7148	ERP Systems and Business Integration	3
ACC 7165	Internal Audit I	3
ACC 7180	Auditing	3
ACC 7188	Governmental and Not-for-Profit Accounting	3
ACC 7320	Introduction to Taxation: Business Entities	3
Finance		
FIN 7000	Applied Financial Analysis	3
FIN 7025	Quantitative Methods in Finance	3
FIN 7030	Fixed Income Securities	3
FIN 7035	Data Analytics in Finance	3
FIN 7040	Artificial Intelligence and Machine Learning for Finance	3
FIN 7090	Money and Capital Markets	3
FIN 7220	Advanced Managerial Finance	3
FIN 7230	Investment Policies	3
FIN 7280	Entrepreneurial Finance and Venture Capital	3
FIN 7870	International Finance	3
FIN 7990	Portfolio Management/Student Managed Investment Fund (SMIF)	3

Global Supply Chain Management		
GSC 7200	ERP Systems and Business Integration	3
GSC 7300	Manufacturing and Supply Chain Analytics	3
GSC 7620	Global Logistics Management	3
GSC 7650	Strategic Procurement	3
GSC 7670	Special Topics in Supply Chain Management	3
GSC 7680	Manufacturing Planning and Control	3
GSC 7920	Supply Chain Process Analysis and Costing	3
GSC 7930	Customs Administration and High Tech Purchasing	3
GSC 7980	Healthcare Supply Chain Management	3
Management		
MGT 7620	Complex Organizations	3
MGT 7640	Management of Human Resources	3
MGT 7650	Strategic Human Resource Management	3
MGT 7660	Entrepreneurial Management	3
MGT 7730	People Analytics	3
MGT 7750	Managing Employee Relations	3
MGT 7816	Leading Self and Others	3
MGT 7900	Project Management	3
Marketing		
MKT 7430	Advertising Management	3
MKT 7450	Business Research and Methodology	3
MKT 7470	Consumer and Industrial Buying Behavior	3
MKT 7500	International Marketing Strategy	3
MKT 7700	Management of Retail Enterprises	3
MKT 7860	Social Media and Digital Marketing Analytics	3
Technology, Information Systems and Analytics		
TIS 7510	Database Management	3
TIS 7520	Information Systems Design	3
TIS 7530	Societal and Ethical Issues in the Information Age	3
TIS 7560	Survey of E-Commerce	3
TIS 7570	Advanced Business Analytics	3
TIS 7900	Project Management	3
TIS 7994	Digital Content Development	3
TIS 7575	Corporate Computer Networks and IT Security	3

Eligibility

'AGRADE' applicants must have an overall g.p.a. of 3.3 through their junior year. Applicants are also expected to have performed at a superior level in their major, as determined by the major department and reflected in a g.p.a. in the major of at least 3.4 at the time of application. Students approved for AGRADE cannot complete Senior Rule.

Application

A student seeking 'AGRADE' status should present to the Mike Ilitch School of Business Graduate Programs Office all of the materials which that department requires for normal graduate admission, EXCEPT for the GMAT or Graduate Record Examination (GRE). Specific graduate admission requirements can be found in this bulletin or obtained from the Graduate Programs Office of the Mike Ilitch School of Business at 313-577-4511.

The earliest date by which a student may apply for the 'AGRADE' program is during the semester in which he/she completes ninety credits toward the undergraduate degree. AGRADE application deadlines are the same as graduate admissions deadlines as posted on the Mike Ilitch School of Business Admissions Web Page.

AGRADE Credits

Students may elect a minimum of three and a maximum of twelve 'AGRADE' credits. These will be used to complete the baccalaureate degree as well as to serve as the beginning of graduate study. Upon formal admission to a master's program, 'AGRADE' credits are transferred as if they were graduate credits transferred from a graduate program at another university. The remaining graduate credits required for the master's degree will be earned in the conventional manner following formal admission to the graduate program.

For more details about the 'AGRADE' program, contact the Frederick Hessler Student Success Center by calling 313-577-4505 or 313-577-4510, or contact the Graduate Programs Office at 313-577-4511 or email gradbusiness@wayne.edu.

Application for Degree

Each candidate must file an Application for Degree (https://wayne.edu/commencement/apply-for-graduation/), NO LATER THAN FRIDAY OF THE FOURTH WEEK OF CLASSES for that semester, in which he or she expects to complete the requirements for the degree. If an Application for Degree was filed for a previous semester in which the student did not graduate, a new application is required.

Attendance Policy

Regular attendance is a necessary condition for success in college study. This policy recognizes that the course content includes classroom lecture and discussion, certain aspects of which may be covered on examinations, quizzes, term papers, or homework assignments. Each instructor will announce his or her attendance standards at the beginning of the term.

Change of Major

Students wishing to change majors or their *Academic Plan* within the Mike Ilitch School of Business must submit a request in writing to the Undergraduate Advisor in the Hessler Student Success Center. An *Academic Plan* for the requested major will then be mailed. Students are advised that such changes occurring late in their program may result in additional coursework beyond the minimum requirement of 120 credits.

Dean's List

The Mike Ilitch School of Business Dean's List is a means of recognizing undergraduate students who have excelled academically in a given semester. The Dean's List will be complied for each semester in the academic year. Inclusion requires a 3.75 g.p.a. for students enrolled for twelve or more semester credits (full-time). Students registered for six to eleven-semester credits (half-time) must earn a 4.00 g.p.a. Students registered for fewer than six-semester credits are not eligible and students who received marks of I, W, N, or U are not eligible.

Degrees

Degrees are granted upon the recommendation of the faculty of the Mike Ilitch School of Business. Consideration is given to both scholastic attainment and to compliance with the standards and rules of the School.

Directed Study

A directed study is intended to give students the opportunity to conduct research in an area of interest to them under the supervision of a faculty member; credits vary between one and three. A cumulative grade point average of 3.00 is required to be eligible for consideration for directed

study work. Students must complete the *Undergraduate Directed Study* form and obtain the required signatures prior to registration. No more than three credits of directed study in one Department are permitted in any semester. A total of no more than six credits of directed study may be used to fulfill graduation requirements. Contact the Frederick Hessler Student Success Center, 313-577-4505 or 313-577-4510, for further information.

Double Major

Students may pursue a double major within the Business School. For more information, contact an advisor in the Hessler Student Success Center, 313-577-4505 or 313-577-4510.

Grade Appeals Procedure

It is the instructor's prerogative to evaluate student work and assign grades in accordance with his or her academic and professional judgment. Grounds for appeal of grades include:

1. the application of non-academic criteria in the grading process, as listed in the university's non-discrimination/affirmative action statute: race, color, sex (including gender identity), national origin, religion, age, sexual orientation, familial status, marital status, height, weight, disability, or veteran status;
2. sexual harassment or discrimination; or
3. evaluation of student work by criteria not directly reflective of performance relative to course requirements.

In those instances where a student disputes the final grade awarded, for one of more of the above reasons, the following steps should be taken to appeal the grade in question.

Informal review

The student should discuss the disputed grade with the instructor of the course. If the dispute is not resolved informally, the student may initiate a formal appeal.

Formal appeal procedure

1. Within 30 calendar days following official notification of final grades for the term in which the disputed grade was awarded, and when the informal review fails to resolve the dispute, the student shall submit a written appeal detailing his/her objection, along with supporting documentation in writing, to the instructor. The instructor should respond in writing within 10 work days.
2. If the dispute remains unresolved, the student shall submit a written statement detailing his or her objections, including a rationale why the department chair should consider this appeal (along with supporting documentation), to the department chair within 10 work days following receipt of the instructor's written response.

   The chairperson shall review the complaint and provide a copy of the written complaint to the instructor. The instructor of the course shall be invited to reply in writing to the objections of the student. Where appropriate, the chairperson may consult with a Grade Appeals Committee for advice in grade disputes. Students will be notified of the chairperson's decision within 20 business days of receiving the request.
3. Matters not resolved at the program level may be appealed to the dean's office. The department chair file folder containing the course syllabus from the semester in which the student took the course, plus the student's letter, the instructor's letter, and the department chair's letter, and the student's written rationale why the dean's office should reconsider this appeal, should be sent to the dean's office. Where appropriate, the dean's office may consult with a Grade Appeals Committee for advice in grade disputes.

   Students shall be notified in writing of the dean's office decision within 30 business days of receiving the request. The dean's office decision shall be the final decision at the college level.

University-level academic appeals procedure

When the procedures within the School have been exhausted, the decision on the record may be appealed with the student's written rationale why the provost's office should reconsider this appeal. Procedures for requesting a provost review are published in the University Bulletin see Academic Appeal Procedures (p. 44).

Graduation with Distinction

Wayne State University bestows upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative grade point average: *Cum Laude, Magna Cum Laude,* and *Summa Cum Laude*. Graduation with distinction is indicated on the student's diploma and on the transcript.

Graduation with Distinction will recognize at each graduation the top twenty percent of students in each College who have earned the highest grade point average in their Colleges, with the following approximate distribution:

Summa Cum Laude: Top five percent
Magna Cum Laude: Next five percent
Cum Laude: Next ten percent

Specific minimum grade point averages will be determined each year in the following manner: based on the grade point average distributions of the previous year's senior class, the grade point average cutoffs for each College will be established to provide for recognition of the top eighteen to twenty percent of the graduation students. Graduation with distinction will not be awarded in cases of any g. p. a. less than 3.0.

The criteria for Graduation with Distinction include:

1. A minimum of fifty-six credits in residence at Wayne State University.

2. A qualifying minimum grade point average (calculated as explained above) on all course work at Wayne State University must be completed by the end of the semester of graduation. (For notation in the commencement program, the grade point average on coursework completed prior to the semester of graduation will be used.)

Honors Program

Departmental Honors

Current Mike Ilitch School of Business students with a cumulative GPA of 3.5 or higher may enroll in courses with an honors component assignment option and complete the 15 required credits to qualify for an honors distinction on their transcript and diploma at graduation.

Eligibility

The departmental honors distinction is open to all business students who have a cumulative GPA of 3.5 or higher. To declare departmental honors, complete this application. (https://forms.wayne.edu/5f3d847de3042)

Requirements

To earn the departmental honors distinction on a transcript and diploma at the time of graduation, students must:

- Maintain a 3.5 GPA or higher
- Complete classes with Honors Option designation:
- One core requirement (3 credits)

TIS 3400, FIN 3290, MKT 2300, MGT 2530, TIS 3630 or GSC 3600

- One major requirement (3 credits)
- One additional business requirement (3 credits) with an Honors Option

Any core class, major class, or any 2000 level or higher business foundation course.

- Complete an honors thesis in an upper-level class (5000 or above) in their major field of study.
- HON 4200 level class (3 credits)

Incomplete Marks

The mark of 'I' is appropriate only when a student has completed all of the requirements for a course except for a specific assignment, such as a project or final examination, and only when the instructor agrees that a student has a valid reason for not completing the assignment.

The mark of 'I' which is not converted to a letter grade within one year from the time it was received will be automatically changed to an 'F'.

Normal Program Load

The normal academic load for an undergraduate student in the Mike Ilitch School of Business is from nine to sixteen credits each semester, depending upon the particular courses elected. No student should expect to carry a full load and at the same time be employed full-time. Students desiring to carry more than eighteen credits must obtain written permission from the Hessler Student Success Center prior to registration. Excess credits will not be honored when taken without prior written approval.

Passed/Not Passed Registration

Undergraduate students in the Mike Ilitch School of Business may *not* take courses offered by the Mike Ilitch School of Business on a *passed/not passed* basis.

Probation and Exclusion

Probation

If a student's cumulative grade point average falls below 2.0, the student will be placed on academic probation. A probation hold will need to be released each term before he or she registers. To obtain this release, the student must see his or her academic advisor.

A student will be off of academic probation at the end of any term in which he or she achieves a cumulative G.P.A. of 2.0 or better.

Exclusion

Students on academic probation will be given two subsequent terms to enroll while on probationary status. At the conclusion of the third consecutive term below 2.0, a student will be excluded from the University. An excluded student may not apply for reinstatement for one calendar year.

The decision to reinstate will be made by the Ilitch School of Business Probation Committee and based upon evidence presented by the student that circumstances have changed during the year away and that the probability of success has increased. Students seeking reinstatement should consult with their academic advisor.

In the event of a exclusion, reinstatement to the Mike Ilitch School of Business will be considered only with the recommendation of the Ilitch School of Business Probation Committee. If, after readmission to the Mike Ilitch School of Business, the academic deficiency is not removed within the first nine credits attempted, the student will be permanently dismissed from the School.

The exclusion of any student will be reviewed by the Probation Committee of the Mike Ilitch School of Business. A student on probation who fails to complete the courses for which he or she registers, without good reason as determined by the Dean or designee, shall not be permitted to re-register in the Mike Ilitch School of Business.

The Ilitch School of Business Probation Committee, upon the recommendation of the student's Department Chairperson, may permanently exclude a student from a major, if the student fails to remove himself or herself from probationary status within the prescribed number of credits.

In matters where the School's final decision is based upon the evaluation of a student's academic performance and when review procedures available to him or her within the School have been exhausted, the student may request the Provost to review that decision on the record.

While on probation, a student may not represent the School in student activities.

Retaking Courses

The University policy on retaking courses is stated at: Repeating Courses — The mark of R. No course in which a student has received a passing grade or mark may be repeated without the prior written approval of the Assistant Dean of Student Services of the Mike Ilitch School of Business.

Records Retention by Instructors

Term papers and examinations shall either be returned to the student or retained by the instructor for a period of ninety days. Thereafter, they may be destroyed.

Residence Requirement

To qualify for a Baccalaureate Degree from the Mike Ilitch School of Business, the final year and the last thirty credits must be taken at Wayne State University. In exceptional cases, a limited number of the last thirty credits toward a degree may be taken at another accredited college or university. All such cases must receive the approval of the Assistant Dean of Student Services before the work is undertaken.

Students returning to the School after a three-year absence are required to conform to the program requirements in effect at the time of their return.

Student Conduct

Each student is subject to official regulations governing student activities and student behavior. Students should familiarize themselves with the obligations of students in the instructional process; see Obligations of Faculty and Students to the Instructional Process. Furthermore, it is the responsibility of each student to adhere to the principles of academic integrity. Academic integrity means that a student is honest with him/herself, fellow students, instructors, and the University in matters concerning his or her educational endeavors. Thus, a student should not falsely claim the work of another as one's own, or misrepresent him/herself so that the measures of one's academic performance do not reflect his/her own work or personal knowledge. Assignments submitted

for any class are expected to be original, i.e., not resubmissions of work submitted in a previous or concurrent class.

If there are reasonable grounds to believe that a student has disregarded the regulations or student responsibilities, he or she may be disciplined. Such discipline may include suspension or dismissal, but no dismissal will be directed without reasonable opportunity for an appropriate hearing, as provided in the Student Due Process statute. For the copies of Student Code of Conduct, please refer to the Dean of Students Office (http://www.doso.wayne.edu/assets/codeofconduct.pdf) where the entire document is available for review.

Transfer of Courses in Major

No more than six semester transfer credits may be applied toward a student's major requirements. These courses must have received a grade of 'C' or better. Transfer of major credit beyond six semester hours may be applied toward free elective requirements. Only transfer courses taken at an AACSB accredited college or university or via community college Articulation Agreements will be considered.

Waiver of Degree Requirements

Students must comply with degree requirements as listed in this bulletin and on their Academic Plan. Students may petition for a modification in degree requirements by completing a waiver form and submitting it to the Frederick Hessler Student Success Center of the Mike Ilitch School of Business. Waiver of a *School requirement* requires the approval of the Dean or his/her designee. Waiver of a *departmental requirement* requires the recommendation of the departmental chairperson. Undergraduate students are advised that no faculty member is authorized to approve a change in degree requirements.

Withdrawals from Class

Students must follow the university procedures for dropping and adding courses (p. 55).

Business Administration (B.A. and B.S.)

Admission Requirements

Effective for students admitted Fall 2009 and thereafter admission to the Mike Ilitch School of Business Undergraduate Program is based upon two criteria: Preprofessional Program Standing and Professional Program Standing, as defined below.

Preprofessional Program Standing is the classification for entering high school students or transfer students admitted directly to the Mike Ilitch School of Business through the WSU Undergraduate Admissions Office. Typically, students are admitted at the freshmen or sophomore levels and pursue Business Foundation requirements, entry level Business Core classes and General Education Requirements. The purpose of the preprofessional coursework is to provide students with business instruction that prepares them for advanced level Business Core courses and business major courses.

Professional Program Standing is the classification for students entering or continuing in the Mike Ilitch School of Business with the completion of fifty-four semester credits at Wayne State University or fifty-four transferable semester credits, and requires a minimum 2.50 grade point average as described in the Mike Ilitch School of Business requirements (consult Frederick Hessler Student Success Center, Room 101 Mike Ilitch School of Business). Entry into Professional Program Standing grants students approval to enroll in advanced Business Core courses and degree-applicable major courses. Students not meeting the grade point average requirement will NOT be allowed to enroll in either of these course groups until the required grade point average is achieved.

High School Students

High School students who meet the University requirements for regular admission (p. 34) are eligible for admission to the Mike Ilitch School of Business.

Transfer Students

Students must meet University requirements for regular admission (p. 34). Students currently in another program at WSU must have a minimum 2.00 g.p.a. to be admitted to the Business School. WSU students with less than a 2.00 g.p.a. will not be considered for admission. Transfer students from outside WSU are required to have a minimum 2.00 g.p.a. from their transfer institution. Transfer students with a 2.0-2.49 g.p.a. will not be allowed to take any Business School Core Courses beyond MGT 2530 and MKT 2300, at the 3000 level or higher or major courses until a minimum 2.5 WSU g.p.a. is achieved. WSU does not limit transfer credit hours from community colleges. However, students must complete a minimum of 30 cr. hrs. at WSU, and the last 30 cr. hrs. must be completed only at WSU. Equivalency tables have been developed with area community colleges which identify lower-division community college courses that are equivalent to lower-division business foundation courses at Wayne State University. Equivalency tables have been developed with area community colleges which identify lower division community college courses that are equivalent to the lower-division business foundation courses at Wayne State University. Articulation Agreements have been signed with Henry Ford CC, Jackson CC, Macomb CC, Oakland CC, Schoolcraft CC and Washtenaw CC to transfer 82 hours for certain Associate Degrees. Contact an Iltich Business Advisor for more details.

Application

Application for admission and all official collegiate transcripts must be submitted by transfer students to the Undergraduate Admissions Office

of Wayne State University. Qualified applicants will then be referred to the Mike Ilitch School of Business' Frederick Hessler Student Success Center.

Admission Appeals

There is no guarantee of admission to the Mike Ilitch School of Business. Formal written appeals of admission denial may be made to the Assistant Dean of Undergraduate Student Services of the Mike Ilitch School of Business.

Program Requirements

Candidates for the **Bachelor of Science in Business Administration** must satisfactorily complete 120 credits including: General Education Requirements, Business Foundation Curriculum, Business Core, Major, and Elective Requirements as outlined below. Within the student's degree program, no more than sixty-four credits in business subjects and upper division economics may be applied toward the degree. All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79). *The courses listed below are required of all business students. No substitute courses are permitted except as noted.*

Candidates for the **Bachelor of Arts in Business Administration** must complete the same degree requirements as for the Bachelor of Science with the additional requirement that a student must attain a level of proficiency in a single foreign language equivalent to the completion of eleven credits through university-level course work or placement by examination administered by the University's Department of Classical and Modern Languages, Literatures and Cultures. In some instances, completion of the Bachelor of Arts foreign language requirements may result in course work beyond the 120 credit minimum.

To be eligible for the degree, students must have earned a minimum 2.0 grade point average in the major requirements and a minimum overall grade point average of 2.0 in all undergraduate course work completed at Wayne State University.

Students must also satisfy University General Education Competency and Group Requirements (p. 24) as part of the Business Administration curriculum.

Foundation Requirements

In the following curricula all courses satisfying General Education Requirements are cited with their appropriate title-prefix codes. Students should consult the Schedule of Classes for all prerequisites.

Code	Title	Credits
ACC 3010	Introduction to Financial Accounting [1]	3
ACC 3020	Introduction to Managerial Accounting [1]	3
BLW 2510	Business Law I	3
COM 1010	Oral Communication: Basic Speech (Minimum 'C' Pre-requisite for COM 3300)	3
COM 3300	Business and Professional Presentations	3
ECO 2010	Principles of Microeconomics [1]	4
ECO 2020	Principles of Macroeconomics [1]	4
ENG 1020	Introductory College Writing [1]	3
ENG 3010	Intermediate Writing [1]	3
MGT 1000	Student Success and Career Development for Business Students	1
PSY 1010	Introductory Psychology	4
TIS 1500	Business Tools and Applications	3
TIS 2300	Quantitative Methods I: Probability and Statistical Inference	3
Total Credits		**40**

Core Requirements

All students must complete the following core courses. *Students are responsible for observing all course prerequisites and limitations.*

Code	Title	Credits
FIN 3290	Business Finance	3
GSC 3600	Operations and Supply Chain Management	3
TIS 3630	Business Information Systems	3
MGT 2530	Management of Organizational Behavior	3
MGT 6890	Strategic Management and Business Policy [1]	3
MKT 2300	Marketing Management	3
TIS 3400	Quantitative Methods II: Statistical Methods	3
Total Credits		**21**

[1] To be taken as one of the last five courses toward bachelor's degree and after completion of all other core courses.

Major Requirements

Majors and specializations are offered through four academic departments:

- Accounting
- Finance
- Global Supply Chain Management
- Management
- Marketing
- Technology, Information Systems and Analytics

Majors in Accounting, Finance, Global Supply Chain Management, Technology, Information Systems and Analytics, Management and Marketing require six courses (eighteen credits). Students also have the option to double major. Each of the undergraduate majors employs a capstone course as a vehicle to assess a student's knowledge of the discipline. Students in all of the majors also complete the capstone course for the undergraduate program:.

Students should refer to the respective departmental section of this bulletin for specific majors and specializations. After selecting a major, students must consult the Frederick Hessler Student Success Center of the Mike Ilitch School of Business to obtain an official Academic Plan. All courses must be taken in accordance with an approved Academic Plan and all course prerequisites and limitations must be observed.

Electives

Electives form an integral part of an education in business. A student's selection of elective courses should be guided, in part, by his or her career objectives. Elective courses constitute study in addition to the business foundation, core, and major requirements listed on the student's Academic Plan.

Each student is encouraged to use elective courses to pursue a double major within the Ilitch School of Business or within another discipline at the University. Elective courses also allow a student to pursue Ilitch Business School Study Abroad opportunities, a Certificate in Entrepreneurship and Innovation, Law minor, and minors in other disciplines at the University.

Language Electives

Students who are preparing for careers in the global economy or employment opportunities overseas or with multinational corporations should consider electing foreign language courses. In addition, students who wish to earn the Bachelor of Arts degree may utilize their electives toward the satisfying of the Bachelor of Arts foreign language requirements.

Cooperative Education Program

The Mike Ilitch School of Business actively participates in the University Cooperative Education (Co-op) Program in which students alternate semesters of work and academic study. Eligibility begins in the junior year or upon having earned more than the minimum fifty-four semester credits. Students interested in this program should contact Ilitch School Career Services, Suite 299, Mike Ilitch School of Business, 2771 Woodward, 313-577-4871.

Students admitted to the program with minimum junior standing should recognize that an additional calendar year may be needed to fulfill the requirements for the bachelor's degree. No academic credit is granted for participation in the Co-op Program; Satisfactory/Unsatisfactory ('S/U') grades are given, however, and are entered on the official University transcript.

Business Administration Minor

The Mike Ilitch School of Business offers a minor in business for undergraduate students majoring in disciplines other than Business. The Business Minor consists of six courses, totaling eighteen credits. Students must also complete prerequisite courses with a minimum grade of C (2.0 g.p.a.) for each course. The minor provides an excellent opportunity for non-business majors to broaden their knowledge of the business disciplines. In addition, the program enhances career prospects and establishes a solid business base for pursuing a Master of Business Administration degree. To be eligible to apply for the Business Minor, students must have a minimum overall grade point average of 2.5.

Code	Title	Credits
Prerequisite Courses		
BA 2300		3
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
Total Credits		**11**

Code	Title	Credits
Required Courses		
ACC 3010	Introduction to Financial Accounting	3
MGT 2530	Management of Organizational Behavior	3
MKT 2300	Marketing Management	3
Select one of the following:		3
FIN 3290	Business Finance	
GSC 3600	Operations and Supply Chain Management	
TIS 3630	Business Information Systems	
Two electives from Mike Ilitch School of Business courses		6
Total Credits		**18**

Law Minor

The Law minor requires a minimum of 18 credits, after the completion of BLW 2510. Students take three classes for three credits each in Business and Law.

Requirements for Business Majors

Code	Title	Credits
BLW 5190	Business Law II	3
LEX 5000	Law in Social Context	3
LEX 5010	Law and Harm	3
LEX 5020	Legal Procedure	3
LEX 5030	Law and Transactions	3
LEX 5100	Law and Regulation	3
Select two courses from the following list:		6
ACC 5170	Introduction to Taxation: Individuals	
ACC 5270	Introduction to Taxation: Business Entities	
EI 5000	Introduction to Entrepreneurship and Innovation	
FIN 5320	Principles of International Finance	
FIN 5340	Valuation	
GSC 5650	Strategic Procurement	
TIS 4575	IT Security	
TIS 5530	Ethics in Information Technology	
MKT 5460	Sales Management	
MGT 5700	Human Resource Management	
MGT 5740	Employee Relations	
MGT 5770	Staffing and Selection	
MGT/TIS 5900	Project Management	
Total Credits		**24**

Requirements for Non-Business Majors

Code	Title	Credits
BLW 2510	Business Law I	3
LEX 5000	Law in Social Context	3
LEX 5010	Law and Harm	3
LEX 5020	Legal Procedure	3
LEX 5030	Law and Transactions	3
LEX 5100	Law and Regulation	3
Select two courses from the following list:		6
BLW 5190	Business Law II	
EI 5000	Introduction to Entrepreneurship and Innovation	
FIN 3290	Business Finance	
FIN 5270	Advanced Business Finance	
FIN 5320	Principles of International Finance	
FIN 5340	Valuation	
GSC 3600	Operations and Supply Chain Management	
GSC 5620	Global Supply Chain Management	
GSC 5650	Strategic Procurement	
MGT 2530	Management of Organizational Behavior	
MGT 5700	Human Resource Management	
MGT 5740	Employee Relations	
MGT 5770	Staffing and Selection	
MGT/TIS 5900	Project Management	
TIS 3630	Business Information Systems	
TIS 4575	IT Security	
TIS 5530	Ethics in Information Technology	
Total Credits		**24**

Entrepreneurship and Innovation (Undergraduate Certificate)

An admissions moratorium is currently in effect for this program.

Entrepreneurs and innovators are critical to the long-term health and prosperity of our economy and society. The certificate is designed for students from any background or area of study passionate about understanding and being active participants in the process of starting or nurturing startup ventures, including founders, co-founders, team members and those providing support services. The certificate will benefit current and future for-profit and nonprofit professionals in business, arts and entertainment, communication and information technology, manufacturing, engineering, science and technology, health care, community and economic development, and other fields. This multidisciplinary program, offered through a collaboration of several schools and colleges, provides an opportunity for students from diverse academic disciplines and areas of interest to learn from each other and exposes students to entrepreneurial action in a variety of settings. The use of an integrative curriculum framework and tool kit across all core and elective courses, experiential learning opportunities built into each of these courses, and consistent interactions with and among students, instructors, coaches, mentors, entrepreneurs, innovators and others engaged in the entrepreneurial environment, provides each student a unique pathway to deeper learning, mastery and higher levels of confidence in applying the specialized knowledge and skills required to develop and launch new venture.

Through this certificate program, students will:

- Demonstrate knowledge of the stages of the new venture creation process, from discovering, creating and refining ideas, to building, testing and evaluating a value proposition and viable business model, to launching, sustaining and growing this new venture by acquiring and managing financial and human resources.
- Learn how lead, manage, and work effectively within teams to achieve success, and to create a positive and ethical work culture.
- Develop a personal network within the entrepreneurial ecosystem with a special emphasis on Detroit and the state of Michigan.
- Tailor their program of study to their unique talents and interests as they explore what it takes to translate ideas into reality, and plan the next steps on their journey of discovery, experimentation and action.

Students who participate in the Entrepreneurship and Innovation Certificate program are eligible to apply for support from the Belinsky Entrepreneurial Learning Laboratory (BELL). The BELL assists sustainable, investment-ready student startups and supports the development of commercialization pathways for WSU intellectual property by providing mentors and subject matter experts, direct support and limited funding to assist in the process of attracting additional funding in the form of revenue growth, grants, loans or direct investment. Direct support will be provided by BELL Fellows, and certificate program students are eligible to apply for these fellowships. Contact the program director for further information.

Students wishing to pursue the Undergraduate Certificate in Entrepreneurship and Innovation should meet with the program director and the undergraduate advisor for the school or college providing oversight of their undergraduate degree program and major.

The Entrepreneurship & Innovation Undergraduate Certificate has been discontinued and is no longer accepting applications. However, current Entrepreneurship and Innovation Undergraduate Certificate students will be able to complete their program.

Candidates must complete 15 credits in course work satisfying the requirements cited below. All course work must be completed in accordance with the academic procedures of the University governing undergraduate scholarship and degrees; see Academic Regulations stipulated by the school of college which provides oversight of your undergraduate degree program and major.

Code	Title	Credits
Required Courses		**6**
EI 5000	Introduction to Entrepreneurship and Innovation	
EI 6000	Entrepreneurship and Innovation Capstone (*Students must complete 12 approved credits before enrolling in EI 6000 Capstone Course. Students must contact the Program Director at least one month prior to registering for this course so that the details of the Capstone Project can be determined.)	
Elective Courses		**9**
ADN 3100	Design Process	
ADN 5200	Design Research Methods	
AID 4300		
AID 5302	Advanced Studio/Batch Production	
ANT 2050	Anthropology of Business	
ANT/GLS 3700	Globalization: Theories, Practices, Implications	
ANT 5210	Anthropological Methods	
ANT 5165	Shop 'Til You Drop: Consumer Society and Culture	
EGR 5655	Innovation & Entrepreneurship I	
EGR 5656	Innovation & Entrepreneurship II	
EGR 5657	Innovation & Entrepreneurship Lab	
EI 5400	Management and Leadership for Entrepreneurs	
EI 5900	Special Topics in Entrepreneurship and Innovation	
EI 5950	Directed Study in Entrepreneurship and Innovation	
FIN 5200	Startup Funding and Profitability	
FIN 5280	Entrepreneurs' Ecosystem	
FPC 5660	Creativity	
IE 4355	Product Engineering	
IE 4800	Engineering Design I: Project Management	
IE 4850	Engineering Economy	
IE 4880	Engineering Design II	
IE 6405	Integrated Product Development	
IE 6425	Product Lifecycle Management and Sustainable Design	
IE 6840	Project Management	
IE 6850	Manufacturing Strategies	
MKT 5610	Marketing New Ventures	
TIS 5705	Inbound Information Technology	
Total Credits		**15**

Note: This list will be updated regularly subject to the review and approval of the curriculum committee of the Entrepreneurship and Innovation program and its advisory board.

Accounting

Office: 391 Mike Ilitch School of Business
Chairperson: Cheol Lee

- Accounting (B.A.) (p. 88)
- Accounting (B.S.) (p. 88)
- Accounting (Post-Bachelor Certificate) (p. 88)

Accounting (B.A.)

The accounting program is designed to prepare students for professional careers in public, corporate, or governmental accounting. While stressing fundamental accounting theory, the curriculum provides thorough application of these concepts to practical situations. A student who is interested in sitting for the Certified Public Accountant (CPA) Exam or other professional certification should seek advice from the Chair of the Accounting Department or the Chair's designee.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Degree Requirements

Candidates for the bachelor's degree must complete 120 credits including satisfaction of the degree requirements (p. 23). All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

The requirements for the Bachelor of Arts are the same as for the Bachelor of Science with the additional requirement that a student must attain a level of proficiency in a single foreign language equivalent to the completion of eleven credits through university-level course work or placement by examination administered by the University's Department of Classical and Modern Languages, Literatures and Cultures. In some instances, completion of the Bachelor of Arts foreign language requirements may result in course work beyond the 120 credit minimum.

The major program in accounting employs a capstone course, ACC 5115, to assess students' knowledge of the discipline. Students who concentrate in accounting must complete the following courses.

Core

Code	Title	Credits
ACC 5100	Intermediate Financial Accounting I	3
ACC 5110	Intermediate Financial Accounting II	3
ACC 5115	Intermediate Financial Accounting III	3
ACC 5130	Accounting Systems Design and Control	3
ACC 5160	Managerial Accounting	3
ACC 5170	Introduction to Taxation: Individuals	3
ACC 5220	Data Analytics and Technologies for Accounting	3
Total Credits		**21**

Accounting (B.S.)

The accounting program is designed to prepare students for professional careers in public, corporate, or governmental accounting. While stressing fundamental accounting theory, the curriculum provides thorough application of these concepts to practical situations. A student who is interested in sitting for the Certified Public Accountant (CPA) Exam or other professional certification should seek advice from the Chair of the Accounting Department or the Chair's designee.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Degree Requirements

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The requirements for the Bachelor of Arts are the same as for the Bachelor of Science with the additional requirement that a student must attain a level of proficiency in a single foreign language equivalent to the completion of eleven credits through university-level course work or placement by examination administered by the University's Department of Classical and Modern Languages, Literatures and Cultures. In some instances, completion of the Bachelor of Arts foreign language requirements may result in course work beyond the 120 credit minimum.

The major program in accounting employs a capstone course, ACC 5115, to assess students' knowledge of the discipline. Students who concentrate in accounting must complete the following courses.

Core

Code	Title	Credits
ACC 5100	Intermediate Financial Accounting I	3
ACC 5110	Intermediate Financial Accounting II	3
ACC 5115	Intermediate Financial Accounting III	3
ACC 5130	Accounting Systems Design and Control	3
ACC 5160	Managerial Accounting	3
ACC 5170	Introduction to Taxation: Individuals	3
ACC 5220	Data Analytics and Technologies for Accounting	3
Total Credits		**21**

Accounting (Post-Bachelor Certificate)

The post-baccalaureate certificate program in accounting is designed to enable students who already hold a bachelor's degree in business administration or accounting to obtain the required educational background to be licensed as a Certified Public Accountant in Michigan.

Admission Requirements

Students must have a bachelor's degree from an accredited institution, with a grade point average of at least 2.0.

Students who have received their undergraduate degree from Wayne State University should process a change in their status at the Registrar's Office to 'Post-Baccalaureate.' Students who have received an undergraduate degree in these areas from another institution must complete the Application for Undergraduate Admission form and request that official transcripts be sent directly to the Office of Admissions.

Certificate Requirements

Candidates for this certificate must successfully complete a minimum of twenty-four credits in course work at Wayne State University following completion of the bachelor's degree, with a cumulative grade point average of not less than 2.0. Of these twenty-four credits, students must complete a minimum of six credits from courses offered by the Department of Accounting. Additionally, a minimum of twelve credits must be from courses offered within the School (Accounting, Finance, Information Systems, Marketing, and Management). Students, who have not completed ACC 3010 and ACC 3020 (or equivalent courses), must complete ACC 3010 and ACC 3020 in addition to the minimum twenty-four credits required for the Certificate.

Each student's *Academic Plan* will be individually designed. Students intending to use this certificate to meet the requirements for licensure as a Certified Public Accountant in Michigan will work with their advisor to ensure that the courses chosen meet the requirements of the licensing body.

Finance

Office: 392 Mike Ilitch School of Business; 313-577-0408
Chairperson: Anand Jha

- Finance (B.A.) (p. 89)
- Finance (B.S.) (p. 90)

Finance (B.A.)

Finance is primarily concerned with the determination of value and making decisions about allocation of funds in corporate and individual settings.

Students who major in Finance can apply their knowledge working in corporations and public finance in determining optimum investment strategies, raising funds to finance these investments, and managing daily operations. Students employed in investment banking and other financial institutions trade in varying types of financial assets such as stocks, bonds, and derivatives, allocate wealth across these assets, and manage and hedge risk.

With increasing globalization of the economy, many corporations employ people who are experts at analyzing potential future investments in foreign markets. Finance specialists become involved with currency exchange rates, foreign economic conditions and forecasts, and techniques for reducing the risk of investments.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Program Requirements

Candidates for the bachelor's degree must complete 120 credits including satisfaction of the degree requirements (p. 23). All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

The requirements for the Bachelor of Arts are the same as for the Bachelor of Science with the additional requirement that a student must attain a level of proficiency in a single foreign language equivalent to the completion of eleven credits through university-level course work or placement by examination administered by the University's Department of Classical and Modern Languages, Literatures and Cultures. In some instances, completion of the Bachelor of Arts foreign language requirements may result in course work beyond the 120 credit minimum.

Code	Title	Credits
Finance Core		
FIN 5000	Financial Statement - Analysis & Modeling	3
FIN 5215	Investment Fundamentals	3
FIN 5270	Advanced Business Finance	3
FIN 6996	Corporate Financial Strategies	3
Finance Electives		
Select two of the following:		6
FIN 5090	Capital Markets	
FIN 5220	Portfolio Management	
FIN 5280	Entrepreneurs' Ecosystem	
FIN 5320	Principles of International Finance	
FIN 5330	Bank Management	
FIN 5340	Valuation	
FIN 5890	Internship in Finance	

FIN 6997	Derivative Securities	
Total Credits		**18**

Students earning a Bachelor's Degree with a major in Finance may find employment in several different areas, including corporate finance, financial institutions, and investments.

Corporate Finance

This area is for the student who wants to concentrate on those aspects of finance that will relate directly to financial decision-making in a business or non-profit organization. The corporate finance area offers careers as financial managers in non-financial corporations. Entry level positions are generally as financial analysts or staff accountants, while potential future responsibilities include management of working capital, operating budgets, financial statement preparation, bank relationships, long term financial planning, capital budgeting, treasury operations and stockholder relations.

Suggested courses to include in final choice of electives for students seeking a career in Corporate Finance:

Code	Title	Credits
FIN 5320	Principles of International Finance	3
FIN 5890	Internship in Finance	3

Financial Markets and Investments

This area is for the student who is interested in working for organizations which offer financial and investment services such as banks, insurance companies and mutual and pension funds. Investment careers can also be found in other financial intermediaries such as investment banking firms, security and investment brokerage houses, and security and commodity exchanges. Responsibilities within such firms are highly varied and include commercial and personal lending, branch management, security analysis, portfolio and trust management, real estate management, and insurance, commodity and security brokerage.

Recommended electives for students seeking a career in Financial Markets and Investments:

Code	Title	Credits
FIN 5090	Capital Markets	3
FIN 5220	Portfolio Management	3
FIN 5280	Entrepreneurs' Ecosystem	3
FIN 5320	Principles of International Finance	3
FIN 5330	Bank Management	3
FIN 5890	Internship in Finance	3
FIN 6997	Derivative Securities	3

Finance (B.S.)

Finance is primarily concerned with the determination of value and making decisions about allocation of funds in corporate and individual settings.

Students who major in Finance can apply their knowledge working in corporations and public finance in determining optimum investment strategies, raising funds to finance these investments, and managing daily operations. Students employed in investment banking and other financial institutions trade in varying types of financial assets such as stocks, bonds, and derivatives, allocate wealth across these assets, and manage and hedge risk.

With increasing globalization of the economy, many corporations employ people who are experts at analyzing potential future investments in foreign markets. Finance specialists become involved with currency exchange rates, foreign economic conditions and forecasts, and techniques for reducing the risk of investments.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

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Code	Title	Credits
Finance Core		
FIN 5000	Financial Statement - Analysis & Modeling	3
FIN 5215	Investment Fundamentals	3
FIN 5270	Advanced Business Finance	3
FIN 6996	Corporate Financial Strategies	3
Finance Electives		
Select two of the following:		6
FIN 5090	Capital Markets	
FIN 5220	Portfolio Management	
FIN 5280	Entrepreneurs' Ecosystem	
FIN 5320	Principles of International Finance	
FIN 5330	Bank Management	
FIN 5340	Valuation	
FIN 5890	Internship in Finance	
FIN 6997	Derivative Securities	
Total Credits		**18**

Students earning a Bachelor's Degree with a major in Finance may find employment in several different areas, including corporate finance, financial institutions, and investments.

Corporate Finance

This area is for the student who wants to concentrate on those aspects of finance that will relate directly to financial decision-making in a business or non-profit organization. The corporate finance area offers careers as financial managers in non-financial corporations. Entry level positions are generally as financial analysts or staff accountants, while potential future responsibilities include management of working capital, operating budgets, financial statement preparation, bank relationships, long term financial planning, capital budgeting, treasury operations and stockholder relations.

Suggested courses to include in final choice of electives for students seeking a career in Corporate Finance:

Code	Title	Credits
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FIN 5890	Internship in Finance	3

Financial Markets and Investments

This area is for the student who is interested in working for organizations which offer financial and investment services such as banks, insurance companies and mutual and pension funds. Investment careers can also be found in other financial intermediaries such as investment banking firms, security and investment brokerage houses, and security and commodity exchanges. Responsibilities within such firms are highly varied and include commercial and personal lending, branch management, security analysis, portfolio and trust management, real estate management, and insurance, commodity and security brokerage.

Recommended electives for students seeking a career in Financial Markets and Investments:

Code	Title	Credits
FIN 5090	Capital Markets	3
FIN 5220	Portfolio Management	3
FIN 5280	Entrepreneurs' Ecosystem	3
FIN 5320	Principles of International Finance	3
FIN 5330	Bank Management	3
FIN 5890	Internship in Finance	3
FIN 6997	Derivative Securities	3

Global Supply Chain Management

Office: Mike Ilitch School of Business
Chairperson: Hakan Yildiz

- Entrepreneurship and Innovation (B.A.) (p. 91)
- Entrepreneurship and Innovation (B.S.) (p. 91)
- Global Supply Chain Management (B.A.) (p. 92)
- Global Supply Chain Management (B.S.) (p. 92)

Entrepreneurship and Innovation (B.A.)

The major in Entrepreneurship and Innovation was designed by the Mike Ilitch School of Business to provide students with specialized knowledge and skills to develop and launch startup ventures, social impact ventures, or work at a startup within the entrepreneurial ecosystem.

Each student will complete 18 credits. Students take four required courses, and two electives from the options below. All prerequisites for each class must be completed. For students with more than one major, E&I required or elective courses taken for degree completion cannot also fulfill requirements toward a different major. In that case, an alternative E&I course will be identified. For transfer students, there is a limit of two classes that can be accepted for the degree requirements. A 2.0 GPA is required overall for the major.

Code	Title	Credits
Required Courses		**12**
EI 5000	Introduction to Entrepreneurship and Innovation	
or MGT 5650	The Entrepreneur and Venture Creation	
EI 6000	Entrepreneurship and Innovation Capstone	
FIN 5200	Startup Funding and Profitability	
MKT 5610	Marketing New Ventures	

Code	Title	Credits
Electives (select two of the following)		**6**
EI 5400	Management and Leadership for Entrepreneurs	
EI 5900	Special Topics in Entrepreneurship and Innovation	
EI 5950	Directed Study in Entrepreneurship and Innovation	
FIN 5280	Entrepreneurs' Ecosystem	
IE 4355	Product Engineering	
LEX 5000	Law in Social Context	
LEX 5030	Law and Transactions	
MKT 5410	Marketing Research and Analysis	
MKT 5450	Consumer Behavior	
MKT 5800	Digital Marketing and Analytics	
MUA 4500	Music Entrepreneurship and Leadership	
TIS 5670	Special Topics in Information Systems	
TIS 5994	Software Tools for Business Applications	

Entrepreneurship and Innovation (B.S.)

The major in Entrepreneurship and Innovation was designed by the Mike Ilitch School of Business to provide students with specialized knowledge and skills to develop and launch startup ventures, social impact ventures, or work at a startup within the entrepreneurial ecosystem.

Each student will complete 18 credits. Students take four required courses, and two electives from the options below. All prerequisites for each class must be completed. For students with more than one major, E&I required or elective courses taken for degree completion cannot also fulfill requirements toward a different major. In that case, an alternative E&I course will be identified. For transfer students, there is a limit of two classes that can be accepted for the degree requirements. A 2.0 GPA is required overall for the major.

Code	Title	Credits
Required Courses		**12**
EI 5000	Introduction to Entrepreneurship and Innovation	
or MGT 5650	The Entrepreneur and Venture Creation	
EI 6000	Entrepreneurship and Innovation Capstone	
FIN 5200	Startup Funding and Profitability	
MKT 5610	Marketing New Ventures	

Code	Title	Credits
Electives (select two of the following)		**6**
EI 5400	Management and Leadership for Entrepreneurs	
EI 5900	Special Topics in Entrepreneurship and Innovation	
EI 5950	Directed Study in Entrepreneurship and Innovation	
FIN 5280	Entrepreneurs' Ecosystem	
IE 4355	Product Engineering	
LEX 5000	Law in Social Context	
LEX 5030	Law and Transactions	
MKT 5410	Marketing Research and Analysis	
MKT 5450	Consumer Behavior	
MKT 5800	Digital Marketing and Analytics	
MUA 4500	Music Entrepreneurship and Leadership	
TIS 5670	Special Topics in Information Systems	
TIS 5994	Software Tools for Business Applications	

Global Supply Chain Management (B.A.)

The Global Supply Chain Management major focuses on management of the flow of goods and information from the source of components and materials through the channels of distribution to the final customer, and beyond, to recycling and disposal. In today's highly competitive environment, the management of purchasing, operations, quality, transportation, inventory, scheduling, and information flows are ever more critical to an organization's ability to satisfy customers and create a competitive advantage. Whether sourcing from non-domestic suppliers, outsourcing business functions, or attempting to market goods and services to consumers in other areas of the world, today's business leaders need a detailed understanding of all the challenges and opportunities arising from a supply chain that is fundamentally global.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Degree Requirements

Candidates for the bachelor's degree must complete 120 credits including satisfaction of the degree requirements (p. 23). All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

Code	Title	Credits
Required Courses		
GSC 5600	Logistics and Transportation Strategy	3
GSC 5650	Strategic Procurement	3
GSC 5680	Production Planning and Control	3
GSC 5690	Principles of Quality Management	3
GSC 6997	Global Supply Chain Analysis and Planning	3
Select one of the following. (Students are strongly encouraged to take 2-3 additional courses using free electives in order to assure greater depth in the field and enhance placement opportunities.)		3
GSC 4991	Study Abroad	
GSC 5200	ERP Systems and Business Integration	
GSC 5300	Manufacturing and Supply Chain Analytics	
GSC 5620	Global Supply Chain Management	
GSC 5670	Special Topics in Supply Chain Management	
GSC 5890	Internship in Global Supply Chain Management	
MGT 5900	Project Management	
GSC 5930	Customs Administration and High Tech Purchasing	
GSC 5980	Healthcare Supply Chain Management	
GSC 5996	Process Analysis and Cost Estimating for Buyers	
GSC 6000	Consultative Analysis and Executive Presentation	
Total Credits		**18**

Students are strongly advised to take an Internship in Supply Chain Management, either without credit or for credit. Students taking the internship for credit need to take it through GSC 5890. Students are also encouraged to take additional courses as electives to obtain depth in field and enhance placement opportunities.

Global Supply Chain Management (B.S.)

The Global Supply Chain Management major focuses on management of the flow of goods and information from the source of components and materials through the channels of distribution to the final customer, and beyond, to recycling and disposal. In today's highly competitive environment, the management of purchasing, operations, quality, transportation, inventory, scheduling, and information flows are ever more critical to an organization's ability to satisfy customers and create a competitive advantage. Whether sourcing from non-domestic suppliers, outsourcing business functions, or attempting to market goods and services to consumers in other areas of the world, today's business leaders need a detailed understanding of all the challenges and opportunities arising from a supply chain that is fundamentally global.

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Code	Title	Credits
Required Courses		
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GSC 5650	Strategic Procurement	3
GSC 5680	Production Planning and Control	3
GSC 5690	Principles of Quality Management	3
GSC 6997	Global Supply Chain Analysis and Planning	3
Select one of the following. (Students are strongly encouraged to take 2-3 additional courses using free electives in order to assure greater depth in the field and enhance placement opportunities.)		3
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GSC 5200	ERP Systems and Business Integration	
GSC 5300	Manufacturing and Supply Chain Analytics	
GSC 5620	Global Supply Chain Management	
GSC 5670	Special Topics in Supply Chain Management	
GSC 5890	Internship in Global Supply Chain Management	
MGT 5900	Project Management	
GSC 5930	Customs Administration and High Tech Purchasing	
GSC 5980	Healthcare Supply Chain Management	
GSC 5996	Process Analysis and Cost Estimating for Buyers	
GSC 6000	Consultative Analysis and Executive Presentation	
Total Credits		**18**

Students are strongly advised to take an Internship in Supply Chain Management, either without credit or for credit. Students taking the internship for credit need to take it through GSC 5890. Students are also encouraged to take additional courses as electives to obtain depth in field and enhance placement opportunities.

Management

Office: 393 Mike Ilitch School of Business; 313-577-4525
Chairperson: Christine Jackson

- Management (B.A.) (p. 93)
- Management (B.S.) (p. 94)

Management (B.A.)

The Management major prepares individuals to compete in a technology-intensive manufacturing or service economy. The required courses have students analyze contemporary management problems, participate in team projects and develop skills in managing people to drive organizational effectiveness.

Admissions Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Degree Requirements

Candidates for the bachelor's degree must complete 120 credits including satisfaction of the degree requirements (p. 23). All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

Students majoring in management will complete the following three core courses, and then select from the designated elective courses listed below.

Code	Title	Credits
Major Courses		
MGT 5530	Advanced Organizational Behavior	3
MGT 5700	Human Resource Management	3
MGT 6995	Management Capstone: Applying Management and Leadership Principles	3
Elective Courses		
Select three of the following:		9
EI 5000	Introduction to Entrepreneurship and Innovation	
MGT 5510	Managing Organizational Structure and Processes	
MGT 5560	Building Leadership Competencies	
MGT 5650	The Entrepreneur and Venture Creation	
MGT 5730	Introduction to People Analytics	
MGT 5740	Employee Relations	
MGT 5770	Staffing and Selection	
MGT 5790	Internship in Management	
MGT/TIS 5900	Project Management	
Total Credits		**18**

Concentration in Human Resource Management

The concentration in Human Resource Management prepares Management majors for a career in the human resource management field by providing additional depth in specific functional areas of human resources beyond the major's required courses. Students will learn advanced human resource management techniques and how to demonstrate the value of human resource management practices to support business strategy. This concentration is only available to students majoring in Management. Management majors with a concentration in Human Resource Management must complete the following courses.

Code	Title	Credits
Major Courses		
MGT 5530	Advanced Organizational Behavior	3
MGT 5700	Human Resource Management	3
MGT 6995	Management Capstone: Applying Management and Leadership Principles	3
HR Concentration Required Courses		
MGT 5730	Introduction to People Analytics	3
MGT 5740	Employee Relations	3
MGT 5770	Staffing and Selection	3
Total Credits		**18**

Management (B.S.)

The Management major prepares individuals to compete in a technology-intensive manufacturing or service economy. The required courses have students analyze contemporary management problems, participate in team projects and develop skills in managing people to drive organizational effectiveness.

Admissions Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Degree Requirements

Candidates for the bachelor's degree must complete 120 credits including satisfaction of the degree requirements (p. 23). All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

Students majoring in management will complete the following three core courses, and then select from the designated elective courses listed below.

Code	Title	Credits
Major Courses		
MGT 5530	Advanced Organizational Behavior	3
MGT 5700	Human Resource Management	3
MGT 6995	Management Capstone: Applying Management and Leadership Principles	3
Elective Courses		
Select three of the following:		9
EI 5000	Introduction to Entrepreneurship and Innovation	
MGT 5510	Managing Organizational Structure and Processes	
MGT 5560	Building Leadership Competencies	
MGT 5650	The Entrepreneur and Venture Creation	
MGT 5730	Introduction to People Analytics	
MGT 5740	Employee Relations	
MGT 5770	Staffing and Selection	
MGT 5790	Internship in Management	
MGT/TIS 5900	Project Management	
Total Credits		**18**

Concentration in Human Resource Management

The concentration in Human Resource Management prepares Management majors for a career in the human resource management field by providing additional depth in specific functional areas of human resources beyond the major's required courses. Students will learn advanced human resource management techniques and how to demonstrate the value of human resource management practices to support business strategy. This concentration is only available to students majoring in Management. Management majors with a concentration in Human Resource Management must complete the following courses.

Code	Title	Credits
Major Courses		
MGT 5530	Advanced Organizational Behavior	3
MGT 5700	Human Resource Management	3
MGT 6995	Management Capstone: Applying Management and Leadership Principles	3
HR Concentration Required Courses		
MGT 5730	Introduction to People Analytics	3
MGT 5740	Employee Relations	3
MGT 5770	Staffing and Selection	3
Total Credits		**18**

Marketing

Office: 279 Mike Ilitch School of Business; 313-577-4525
Chairperson: Abhijit Biswas

- Marketing (B.A.) (p. 95)
- Marketing (B.S.) (p. 95)

Marketing (B.A.)

The Marketing major is designed to prepare students for a variety of careers in marketing. Marketing is the activity and institution involved in creating, communicating, delivering and exchanging offerings that have value for customers and society. Marketing management involves situation analysis, selection of marketing strategies and target markets, and coordination of product development, pricing, promotion and distribution elements.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Degree Requirements

Candidates for the bachelor's degree must complete 120 credits including satisfaction of the degree requirements (p. 23). All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

Marketing majors must select a concentration in advertising strategy (p. 95), marketing management (p. 95), or digital marketing and analytics (p. 95). All students majoring in marketing must complete the requirements of their concentrations and subsequently take MKT 6996.

Advertising Strategy Concentration

This concentration prepares students for work in a wide variety of businesses, advertising agencies, public institutions, and other organizations. It may serve as a background for people who plan to work in the advertising/marketing communications industry, or for general marketing jobs where promotional issues play a particularly prominent role.

Code	Title	Credits
Major Courses		
MKT 5410	Marketing Research and Analysis	3
MKT 5450	Consumer Behavior	3
MKT 5490	Principles of Advertising	3
MKT 5800	Digital Marketing and Analytics	3
MKT 6996	Strategic Marketing	3
Elective Courses		
Select one of the following:		3
MKT 5510	Media Planning in the Digital Age	
MKT 5850	Integrated Marketing Communications Strategy	
Total Credits		**18**

Marketing Management Concentration

This concentration provides students with broad exposure to the discipline of marketing management. In addition to the general focus on marketing management, the marketing management concentration trains individuals for a wide spectrum of marketing careers including marketing research, brand management, sales and sales management and product development.

Code	Title	Credits
Major Courses		
MKT 5410	Marketing Research and Analysis	3
MKT 5450	Consumer Behavior	3
MKT 6996	Strategic Marketing	3
MKT 5800	Digital Marketing and Analytics	3
Elective Courses		
Select two of the following:		6
MKT 4990	Directed Study in Marketing	
MKT 4991	Study Abroad	
MKT 5460	Sales Management	
MKT 5610	Marketing New Ventures	
MKT 5700	Retail Management	
MKT 5750	International Marketing Management	
MKT 5840	Special Topics: Marketing	
MKT 5890	Internship in Marketing	
Total Credits		**18**

Digital Marketing and Analytics Concentration

This concentration specializes in topics related to Digital Marketing and Analytics (DMA), a growing career path for marketing students. Students will learn advanced techniques and how to demonstrate the value of digital practices to support business strategy. The concentration will provide students with better career opportunities within the DMA profession.

Code	Title	Credits
Major Courses		
MKT 5410	Marketing Research and Analysis	3
MKT 5450	Consumer Behavior	3
MKT 6996	Strategic Marketing	3
MKT 5800	Digital Marketing and Analytics	3
Elective Courses		
Select two of the following:		6
MKT 5511	Search Engine Marketing and Optimization	
MKT 5512	Social Media Marketing	
MKT 5510	Media Planning in the Digital Age	
Total Credits		**18**

Marketing (B.S.)

The Marketing major is designed to prepare students for a variety of careers in marketing. Marketing is the activity and institution involved in creating, communicating, delivering and exchanging offerings that have value for customers and society. Marketing management involves situation analysis, selection of marketing strategies and target markets, and coordination of product development, pricing, promotion and distribution elements.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Degree Requirements

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be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

Marketing majors must select a concentration in advertising strategy (p. 96), marketing management (p. 96), or digital marketing and analytics (p. 96). All students majoring in marketing must complete the requirements of their concentrations and subsequently take MKT 6996.

Advertising Strategy Concentration

This concentration prepares students for work in a wide variety of businesses, advertising agencies, public institutions, and other organizations. It may serve as a background for people who plan to work in the advertising/marketing communications industry, or for general marketing jobs where promotional issues play a particularly prominent role.

Code	Title	Credits
Major Courses		
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MKT 5450	Consumer Behavior	3
MKT 5490	Principles of Advertising	3
MKT 5800	Digital Marketing and Analytics	3
MKT 6996	Strategic Marketing	3
Elective Courses		
Select one of the following:		3
MKT 5510	Media Planning in the Digital Age	
MKT 5850	Integrated Marketing Communications Strategy	
Total Credits		**18**

Marketing Management Concentration

This concentration provides students with broad exposure to the discipline of marketing management. In addition to the general focus on marketing management, the marketing management concentration trains individuals for a wide spectrum of marketing careers including marketing research, brand management, sales and sales management and product development.

Code	Title	Credits
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MKT 5450	Consumer Behavior	3
MKT 6996	Strategic Marketing	3
MKT 5800	Digital Marketing and Analytics	3
Elective Courses		
Select two of the following:		6
MKT 4990	Directed Study in Marketing	
MKT 4991	Study Abroad	
MKT 5460	Sales Management	
MKT 5610	Marketing New Ventures	
MKT 5700	Retail Management	
MKT 5750	International Marketing Management	
MKT 5840	Special Topics: Marketing	
MKT 5890	Internship in Marketing	
Total Credits		**18**

Digital Marketing and Analytics Concentration

This concentration specializes in topics related to Digital Marketing and Analytics (DMA), a growing career path for marketing students. Students will learn advanced techniques and how to demonstrate the value of digital practices to support business strategy. The concentration will provide students with better career opportunities within the DMA profession.

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MKT 5800	Digital Marketing and Analytics	3
Elective Courses		
Select two of the following:		6
MKT 5511	Search Engine Marketing and Optimization	
MKT 5512	Social Media Marketing	
MKT 5510	Media Planning in the Digital Age	
Total Credits		**18**

Technology, Information Systems and Analytics

Office: Mike Ilitch School of Business
Chairperson: Rhoda Joseph

- Technology, Information Systems and Analytics (B.A.) (p. 97)
- Technology, Information Systems and Analytics (B.S.) (p. 97)

Technology, Information Systems and Analytics (B.A.)

Technology, Information Systems and Analytics (TIS) refers to the use of computer-based systems to gather and analyze complex information about all aspects of a business. This information is used by managers to make business decisions. Students specializing in TIS frequently pursue career positions as business analysts, data base analysts, ERP specialists, social media specialist, web content manager, and information systems managers. The courses offered in the TIS program emphasize hands-on technical application of relevant software and coverage of content for course-related certification exams.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Program Requirements

Candidates for the bachelor's degree must complete 120 credits including satisfaction of the degree requirements (p. 23). All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

Online Program

The Technology, Information Systems and Analytics B.A. and B.S. pathway program is available in a fully online format. This online pathway program is only available to students who earned an associate degree in business.

Students enrolled in a fully online major are limited to registering for courses listed in the Schedule of Classes with the Instructional Methods: Online - No Scheduled Meetings or Online - Scheduled Meetings. Students who are able to enroll in the online program will qualify for Michigan resident tuition rates; more details are available in the Academic Regulations section of the Undergraduate Bulletin.

Contact an advisor in the Mike Ilitch School of Business for more information about the online Information Systems Management B.A. and B.S. pathway program.

Code	Title	Credits
Major courses		
Select two courses from the following list:		6
TIS 5570	Introduction to Business Analytics	
TIS 5860	Data Communications and Networks	
TIS 5992	Database Systems	
Specialization courses		
Select three courses from one of the following two areas:		9
Inbound information technology (IIT) specialist		
TIS 5670	Special Topics in Information Systems	
TIS 5705	Inbound Information Technology	
TIS 5994	Software Tools for Business Applications	
Enterprise architecture (EA) analyst		
TIS 5200	ERP Systems: Concepts and Practice	
TIS 5560	Survey of e-Commerce	
TIS 5820	Systems Analysis and Design	
TIS 5900	Project Management	
Capstone (required)		
TIS 6997	Information Systems Policy and Management	3
Supplemental		
TIS 4575	IT Security	
TIS 4990	Directed Study in Information Systems Management	
TIS 5530	Ethics in Information Technology	
TIS 5890	Internship in Information Systems	
Total Credits		**18**

Technology, Information Systems and Analytics (B.S.)

Information Systems Management (ISM) refers to the use of computer-based systems to gather and analyze complex information about all aspects of a business. This information is used by managers to make business decisions. Students specializing in ISM frequently pursue career positions as business analysts, data base analysts, ERP specialists, social media specialist, web content manager, and information systems managers. The courses offered in the ISM program emphasize hands-on technical application of relevant software and coverage of content for course-related certification exams.

Admission Requirements

Students who meet the University requirements for regular admission are eligible for admission to the Mike Ilitch School of Business.

Program Requirements

Candidates for the bachelor's degree must complete 120 credits including satisfaction of the degree requirements (p. 23). All course work must be completed in accordance with the academic rules of the University (p. 14) and those of the Mike Ilitch School of Business (p. 79).

Online Program

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TIS 5860	Data Communications and Networks	
TIS 5992	Database Systems	

Specialization courses		
Select three courses from one of the following two areas:		9
Inbound information technology (IIT) specialist		
TIS 5670	Special Topics in Information Systems	
TIS 5705	Inbound Information Technology	
TIS 5994	Software Tools for Business Applications	
Enterprise architecture (EA) analyst		
TIS 5200	ERP Systems: Concepts and Practice	
TIS 5560	Survey of e-Commerce	
TIS 5820	Systems Analysis and Design	
TIS 5900	Project Management	
Capstone (required)		
TIS 6997	Information Systems Policy and Management	3
Supplemental		
TIS 4575	IT Security	
TIS 4990	Directed Study in Information Systems Management	
TIS 5530	Ethics in Information Technology	
TIS 5890	Internship in Information Systems	
Total Credits		**18**

College of Education

Dean: Denise Taliaferro Baszile

The College of Education at Wayne State University is located in, and serves the needs of, one of the nation's largest metropolitan areas. Thus, the College reflects the dynamic character of urban life, and, in its concern with urban problems, places great faith in education as the means by which human circumstances can be improved. To this end, the College prepares educators who have the knowledge, commitment and competence to help young people achieve academic success, preserve individuality, develop democratic values, and realize self-fulfillment.

Professional field experiences are an important aspect of the preparation program; they bring the prospective teacher face-to-face with the realities of the classroom, the school and the community, as well as provide opportunities for participation in the study, research and analysis of contemporary educational issues. These field experiences are scheduled in numerous school districts, community and cultural institutions throughout the metropolitan Detroit area.

As society has been altered by such factors as the development of knowledge, technological advances and population growth, the purposes and processes of education have changed. New technologies of instruction are evolving rapidly and offer the prospective teacher many opportunities for developing a high level of teaching competence. Problems generated in our urban society are complex, and those related to education are no exception. Yet, the opportunities for curriculum innovation, experimentation and leadership have never been greater.

Accreditation

Wayne State University is accredited by the Higher Learning Commission.

The College of Education's teacher certification programs are accredited by the Council for the Accreditation of Educator Preparation (CAEP).

Art Therapy is approved by the American Art Therapy Association (AATA).

Counselor Education is accredited through the Council for Accreditation of Counseling and Related Educational Programs (CACREP) and now includes Rehabilitation Counseling and Community Inclusion, which was formerly accredited through the Council on Rehabilitation Education (CORE). CORE and CACREP have merged.

School and Community Psychology is accredited through the National Association of School Psychologists.

Academic Regulations: College of Education

For complete information regarding academic rules and regulations of the University, students should consult the Academic Regulations (p. 40) section of this bulletin. The following additions and amendments pertain to the College of Education.

Normal Program Load

The normal undergraduate student load is twelve to eighteen credits per semester. Only in exceptional cases is a student allowed to elect a heavier load. Approval of the advisor is needed in those cases where the student petitions to carry more than eighteen credits within a full semester.

If a significant portion of a student's time is spent in outside work, corresponding adjustments must be made in his/her college schedule.

Admission to Programs

Students are admitted directly into the College of Education from high school or other universities or colleges by completing an undergraduate admission application to the University, selection of a College of Education program on the admission application, and acceptance to Wayne State University. Undergraduate and Post-Bachelor applications are processed by the Office of Undergraduate Admissions:

University Office of Undergraduate Admission, Welcome Center
42 W. Warren Ave., P.O. Box 02759
Detroit, Michigan 48202
telephone 313-577-2100

Transfer of College within the University for Teacher Preparation Programs

Undergraduate students at Wayne State University seeking to transfer to a teacher preparation program complete an online Admission Application (https://waynestate.az1.qualtrics.com/jfe/form/SV_5t2MppxZKaWgm5T). Students must have at least a cumulative g.p.a. of 2.5 for regular admission. Students on university academic probation with a g.p.a. less than 2.5 may seek qualified admission by completing the online Alternative Admission Application (https://waynestate.az1.qualtrics.com/jfe/form/SV_6WfMEXHc299K0Sx).

Transfer of College within the University for Community Health, Exercise and Sport Science, and Sport Management Programs

Undergraduate students at Wayne State University seeking to transfer to the majors listed above complete an online Admission Application (https://waynestate.az1.qualtrics.com/jfe/form/SV_5t2MppxZKaWgm5T). Students must have at least a cumulative g.p.a. of 2.0 for regular admission. Students on university academic probation with a g.p.a. less than 2.0 may seek qualified admission by completing the online Alternative Admission Application (https://waynestate.az1.qualtrics.com/jfe/form/SV_6WfMEXHc299K0Sx).

Accelerated Graduate Enrollment (AGRADE) Program

Some programs in the College of Education permit academically strong majors to apply for admission into the college's Accelerated Graduate Enrollment (AGRADE) program. AGRADE procedures enable qualified juniors in the College of Education to apply for an AGRADE master's program and upon admission, begin the program in the senior year by enrolling simultaneously in the undergraduate and graduate programs of the college and apply up to a maximum of sixteen credits towards both a bachelor's and master's degree. Some programs permit less than the maximum number of credits to be applied.

Qualified students may apply for the AGRADE program no earlier than the semester in which ninety credits are being completed. Applicants must have a minimum overall grade point average of 3.30. After admission, continuation in the AGRADE program requires a continuing undergraduate cumulative grade point average of at least a 3.30 and a grade of B or higher in AGRADE coursework, which is consistent for satisfactory academic progress for graduate coursework. Some programs may require a grade point average higher than a 3.30. For more details about the AGRADE program, contact the Division of Academic Services. Students can apply to the program using the AGRADE Application (https://waynestate.az1.qualtrics.com/jfe/form/SV_9MLSkc9yEYmxqId).

Alternative Admission and Reinstatement from Academic Exclusion

Alternative admission or reinstatement from academic exclusion is a process for students meeting either of the conditions below:

1. Students currently excluded may appeal for reinstatement to the College of Education after not attending classes at Wayne State University for more than one year.
2. Students from another college of Wayne State University that currently have less than the minimum GPA required for regular admission and are seeking Alternative Admission into the College of Education.

The application for alternative admission or reinstatement is online (https://waynestate.az1.qualtrics.com/jfe/form/SV_6WfMEXHc299K0Sx).

Not all applicants will be admitted or reinstated. Applications for alternative admission or reinstatement are considered on an individual basis and reviewed by a committee based on academic criteria and merit with the final decision resting with the Assistant Dean of Academic Services.

Readmission Following an Interruption in Residence

Undergraduate students whose attendance at Wayne State has been interrupted for three or more years will be required to apply at the College of Education Division of Academic Services for readmission to the College. Deadline dates for such applications are the same as those for regular admission to the College. In instances of prolonged absences of five years or more, it may be necessary to revalidate credits, either through examinations or refresher courses, within the student's major and the professional education sequences.

Attendance

Regularity in attendance and performance is necessary for success in college work. Although there are no officially excused absences as far as College policy is concerned, the conscientious student is expected to explain absences to the instructor. Such absences may be due to illness; to participation in inter-college activities certified by the sponsoring faculty member; or other similar types of absence for which the student can present to the instructor evidence that he/she was engaged in authorized University activities. Each instructor, at the beginning of the course, will announce his/her attendance requirements.

Education Honors Program

Students with a 3.3 minimum grade point average are eligible for admission to the Education Honors program. Satisfactory completion of the Education Honors Program will lead to a major with honors on the diploma. The requirements consist of 12 credits, including two Honors Option courses from the major (6cr), a HON 4200-level seminar (3cr), and ED 4998 Education Honors Thesis with a College of Education faculty mentor (3cr). Honors courses must be completed with grades of "B" or better. Students interested in the program should speak with their advisor.

Criminal History Check

Students in certification or licensure programs must supply a criminal history check before admission or transfer to the College of Education, clinical experiences or internships, and when applying for licensure or certification. Criminal history checks must be completed through the Wayne State University portal from CastleBranch for a fee. A criminal history check remains valid for six months. Additional criminal history checks may be required at the discretion of the College.

Any person in a certification or licensure program who has been convicted of any offense must provide certified copies of all documents relative to his/her conviction, including the Judgement of Sentence or Register of Actions from the court(s) in which the matter was adjudicated and a narrative describing each incident from his/her perspective. Persons determined by the criminal history check process to have been convicted of any offense and do not provide the required documentation will have their admission or certification/licensure recommendation denied. In other cases, incomplete or non-submission of documentation may result in a program pause, removal from clinical experiences or internships, or exclusion from the College. After reviewing the documentation by College officials or the College's Criminal History Review Board, the applicant will be notified in writing of the decision.

Michigan Public Act 68 of 1993 Sec. 1230 requires public and nonpublic schools to conduct a criminal history check of new teachers, school administrators, school psychologists, and other personnel required to hold State Board of Education approvals.

Note the State Board of Education Teacher Certificate Code: R 390.1201 Certificates; denial, suspension, or revocation.

1. The superintendent of public instruction may refuse to grant or renew, or may suspend for a fixed term, or revoke, or may impose reasonable conditions on, a teaching certificate or state board approval granted pursuant to these rules for the following reasons:
    a. Fraud, or material misrepresentation, concealment or omission of fact in the application for, or the use of, a teaching certificate or state board approval.
    b. Conviction of an offense listed in MCL 380.1535a or MCL 380.1539b.
2. The superintendent of public instruction may refuse to grant or renew a teaching certificate or a state board approval for failure or ineligibility of the applicant to meet the criteria for the applicable certification or state board approval.

Dean's List

The College of Education Dean's List is a means of recognizing undergraduate students who have excelled academically in a given semester. The Dean's List will be compiled for each semester in the academic year. Inclusion requires a 3.75 g.p.a. for students enrolled for twelve or more semester credits (full-time). Students registered for six to eleven-semester credits (half-time) must earn a 4.00 g.p.a. Students registered for fewer than six-semester credits are not eligible and students who receive marks of 'I,' 'W,' 'N,' or 'U' are not eligible.

Students will be notified of inclusion in the Dean's List by electronic communication. The Dean's List will be displayed in the College of Education for each semester and posted on the college's website (https://education.wayne.edu/students/deans-list).

Graduating with Distinction

Wayne State University bestows upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative grade point average: Cum Laude, Magna Cum Laude, and Summa Cum Laude. Graduation with distinction will be indicated on the student's diploma and on the transcript.

Graduation with Distinction will recognize at each graduation the top twenty percent of students in each College who have earned the highest grade point average in their Colleges, with the following approximate distribution:

Summa Cum Laude: Top five percent
Magna Cum Laude: Next five percent
Cum Laude: Next ten percent

Specific minimum grade point averages will be determined each year in the following manner: based on the grade point average distributions of the previous year's senior class, the grade point average cutoffs for each College will be established to provide for recognition of the top eighteen to twenty percent of the graduating students. Graduation with distinction will not be awarded in cases of any g.p.a. less than 3.0.

The criteria for Graduation with Distinction include:

1. A minimum of fifty-six credits in residence at Wayne State University.
2. A qualifying minimum grade point average (calculated as explained above) on all course work at Wayne State University must be completed by the end of the semester of graduation. (For notation in the commencement program, the grade point average on coursework completed prior to the semester of graduation will be used.)

Probation Policy and Academic Exclusion

University Policy

Undergraduate students whose cumulative grade point average falls below 2.00 will be placed on "Academic Probation." Subject to the approval of the President or his/her designee, individual Colleges and Schools may establish higher minimum grade point averages for academic probation in their programs.

An "Academic Probation" hold shall be placed on the student's record when the cumulative grade point average (G.P.A.) falls below 2.00. The student shall be permitted to register only after consultation with and approval by a designated university advisor.

An "academic recovery plan" refers to a written agreement between a student and designated university advisor that identifies factors contributing to subpar academic performance and specifies requirements for a student to be permitted additional terms of academic eligibility rather than being academically excluded. Academic recovery plans must include specific efforts and activities the student will engage in to return to good academic standing. Terms of an academic recovery plan are determined at the discretion of the Schools and Colleges. Failure to comply with terms of the academic recovery plan may result in early termination of the academic recovery plan and academic exclusion.

The statement "Academic Probation" shall be printed on the unofficial transcript for the first term in which the cumulative average falls below 2.00. Thereafter, the statement "Academic Probation" shall appear on the unofficial transcript until the student attains "Regular Status" or is subject to "Academic Exclusion". "Regular Status" is restored when the student achieves a cumulative G.P.A. of 2.00. In any subsequent term where the cumulative G.P.A. is below 2.00, probation will be reinstated.

Students shall be given two subsequent terms of enrollment after going on probation to achieve a cumulative 2.00 G.P.A. At the conclusion of the two subsequent terms, students who have not achieved a cumulative G.P.A. of at least 2.00 shall be excluded from their program and may not apply for readmission or reinstatement for one calendar year, unless they have entered into an academic recovery plan with a designated university advisor.

A student on academic probation may remain academically eligible after two subsequent terms of enrollment if they have consulted with a designated university advisor and entered into an academic recovery plan. Academic recovery plans may not extend beyond an additional two terms of enrollment without approval from the academic Dean or his/her designee.

College of Education Policy for Undergraduate Students in Teacher Preparation Programs

If, at any time, an undergraduate's overall g.p.a. falls below 2.50, the student is automatically placed on College academic probation. Before registering for the next semester, a student on probation must secure approval from their advisor. The College reserves the right to require a student to withdraw at any time from specific courses or from the College entirely if progress does not warrant a continuance.

Residency Requirement

Applicants for a degree from the College of Education must complete at least thirty credits as a registered student in the College. The student must be in residence (enrolled in courses at Wayne State University) during the semester in which he/she completes requirements for the degree.

Transferred Credits

College credits earned at accredited institutions other than Wayne State University may be transferred by an undergraduate student to meet requirements for the bachelor's degrees in the College, provided:

1. the student has been accepted as a matriculated student in the College;
2. the grades received in courses where transfer is desired have been satisfactory; and,
3. credits so earned are applicable to the student's curriculum.

Students should contact their assigned advisor to discuss transfer of credit.

Students currently enrolled or returning students who have taken courses at another institution, should forward official transcripts to the address below or submitted electronically to admissions@wayne.edu.

Wayne State University
Transfer Credit Evaluation
PO Box 02759
Detroit, MI 48202-0759

Students must consult their advisor prior to registering for any course outside of Wayne State University to discuss the limitations of transferring credits. During the senior year, no more than 10 transfer credits will be accepted.

When the student has a degree from an accredited institution and is meeting the requirements for a Michigan Standard Teaching Certificate, some credits may be applied toward the certificate by transfer but at least fifteen credits must be completed at Wayne State.

Bulletin-in-Effect Policy Restriction

Teacher preparation programs must abide by all current requirements set forth by the Michigan Department of Education and other state, federal, and national requirements. As such, in accordance with Wayne State University policy, the Teacher Education Division (TED) restricts the extent to which *the Bulletin in Effect* policy can be utilized. In cases when the Bulletin in Effect policy is restricted due to required program closures, certification changes, etc., students will be notified and will be provided a timeline by which they must complete their current program.

Time Limit for Candidate Certification Recommendation

Any candidate requesting Wayne State University's recommendation of his/her/their application for certification and/or endorsement *more than 24 months after program completion* must complete and submit to Wayne State University's College of Education an "Educator Credential Recommendation: Post-Time Limit Request"; this is separate and distinct from the application to MDE for certification and/or endorsement.

- A candidate may need to retake or complete additional coursework or current assessments in order to meet the current requirements of the educator credential he/she/they seeks.
- A candidate will not be considered for a recommendation unless the candidate documents that he/she/they meets the current MDE requirements of the credential for which he/she/they seek recommendation.

Academic Services: College of Education

Office: 489 Education; 313-577-1601
Assistant Dean: Paul W. Johnson
Undergraduate Advising: Fawne Allossery, Jeffrey Lisiecki, Kurt Troutman, Yan Chen
Pre-Admission Graduate Advising: LaSondra Dawn, Deborah Gibson, KaRie Jorah-Rood, Mary Waker

Purposes of the Division

The Division of Academic Services in the College of Education is responsible for Undergraduate Advising, Graduate Admissions, Graduation & Certification, Curriculum: Course & Program Proposals, Course Scheduling & the Bulletin, Education Scholars Alliance Program, Rumble Fellowships, and Graduate Faculty Appointments.

Advising Services

Advising in the College of Education is centralized for undergraduate students in the Division of Academic Services and decentralized for graduate students in the four academic divisions of the college: 1) Administrative and Organization Studies, 2) Kinesiology, Health and Sport Studies, 3) Theoretical and Behavioral Foundations, and 4) Teacher Education. Undergraduate students have professional advisors and graduate students are advised by faculty in the student's program. Every student admitted to the College of Education is assigned an advisor.

Undergraduate Advising

Advising at the undergraduate level is from "start to finish" meaning students typically have the same advisor from the time of admission through graduation. Having the same advisor allows for deeper relationships and connections to form between student and advisor. Start to finish advising results in consistent advising and messaging with students and creates a culture of expectations and accountability, for both the advisor and student. This level of support fosters the student's connection to the university, resourcefulness, and leads to maintaining or improving student persistence towards academic goals.

Undergraduate advisors also engage in group advising efforts by visiting courses taken by students early in their major and making presentations related to program requirements. Advisors utilize and encourage students to take advantage of university tools such as Advising Works, Degree Works, and STARS to maintain satisfactory academic progress.

Undergraduate students are encouraged to meet with the advisor at least once per semester. Students schedule appointments online with their advisor through the university's Advising Works system. In addition, Academic Services provides "Virtual Open Advising" each Tuesday from 9:00 am to 4:00 pm. Virtual Open Advising is through Zoom on a first-come, first-serve basis and is an ideal time for students to resolve registration problems, completion of verification forms and appeals, submission of applications and general advising questions. Scheduled appointments are for at least 30 minutes for completion of plans of work, establishing multi-year plans, reviewing, student progress toward degree completion, discussion of challenges to matriculation, referral to other university offices and support centers and to keep students focused and on track for completion of degree and certification requirements.

Students seeking admission information should contact Academic Services by calling 313-577-1601, via e-mail at askcoe@wayne.edu, or by attending Virtual Open Advising on Zoom every Tuesday from 9:00 a.m. to 4:00 p.m. in room 489 Education.

Undergraduate Student Services

In addition to advising, the Division of Academic Services provides the following services to students:

- Degree and certificate audits for graduation.
- Recommendations to the Michigan Department of Education for certification and licensure (see the Certification section below).
- Monitoring of the university's academic probation system.

Certification

As a liaison to the Michigan Department of Education, the Division of Academic Services recommends candidates for initial certification as teachers and administrators; approvals for supervisors and directors of Special Education; and licensure for school counselors.

Administrative and Organizational Studies

Office: 341 Education Building; 313-577-1728
Interim Assistant Dean: William E. Hill
https://education.wayne.edu/

The Division of Administrative and Organizational Studies has as its primary goal the development and enhancement of leadership and organizational learning. It is within the scope of this division to study emergent trends, technologies and educational innovations; to develop rationales for supporting educational change; to present viable programs of study for advanced students in education which will enable them to function skillfully as educational leaders in facilitating change, and in developing and conducting on-going programs; and to design and implement learning innovations, and the impact of instructional methodologies on the improvement of human and organizational performance. The program areas — Educational Leadership and Policy Studies and Learning Design and Technology — are under the guidance of this Division.

- Educational Leadership AGRADE (p. 102)

Educational Leadership AGRADE

The Educational Leadership AGRADE program is available to academically strong students completing B.S. degrees in Health and Physical Education Teaching and Sport Management that are interested in K-12 leadership positions and earning a state credential to be a school administrator. The benefit of the AGRADE program is that undergraduate students can begin a master's degree while simultaneously completing their bachelor's degree. Coursework taken during a student's senior year (up to 16 credits) can simultaneously qualify toward the bachelor's and master's degrees.

Students, in consultation with their advisor, can select Educational Leadership graduate courses that will count toward electives in the student's bachelor's degree program and as required courses in the master's degree program. The graduate coursework completed while enrolled as an undergraduate is assessed at the undergraduate tuition rate, resulting in significant tuition savings.

Admission Criteria

Students may apply for the Educational Leadership AGRADE program no earlier than the semester in which ninety credits are being completed. Applicants must have a minimum overall grade point average of 3.30. After admission, the AGRADE program requires a continuing undergraduate cumulative grade point average of at least a 3.30 and a grade of B or higher in Educational Leadership master's coursework.

For more details about the Educational Leadership AGRADE program, contact the Division of Academic Services.

Educational Leadership AGRADE Advising

AGRADE advising is provided by the Division of Academic Services College of Education.

Eligible AGRADE Courses and Sequence

The following master's courses in Educational Leadership may be included in the undergraduate plan of work. Students may take up to a maximum of 16 credits from the following list. Based on the credit hours available, students will most likely earn a maximum of 14 to 15 credit

hours. In addition, other courses may qualify as exceptions with advisor approval.

Code	Title	Credits
EDA 7625	Leadership, Administration and the Principalship	4
EDA 7660	Administrative Leadership in School-Community Relations and Public Relations	3
EDA 7675	Public School Finance and Budgeting	4
EDA 7690	Introduction to Michigan School Law	4
EDA 8650	Staff Development and School Improvement	3

Note: The master's program in Educational Leadership is completed under Plan B (Essay/Project) or Plan C (coursework only).

Kinesiology, Health and Sport Studies

Office: 2152 Faculty Administration Building; 313-577-4249
Assistant Dean: Nate McCaughtry
https://education.wayne.edu/health-exercise-sports

The Division of Kinesiology, Health and Sport Studies offers Bachelor of Science degrees in Community Health, Exercise and Sport Science, Health and Physical Education Teaching, and Sport Management. The Division also offers minors in Community Health, Exercise and Sport Science, Sport and Exercise Psychology, Sport Coaching, Sport Management, and Yoga and Mindfulness. In addition, the Division offers Accelerated Graduate (AGRADE) programs, where students can link any bachelor degree with any master's degree (Community Health, Exercise and Sport Science, Health and Physical Education Teaching, Sport Administration) allowing undergraduate students who have accumulated 90 credit hours and maintained a 3.0 GPA to take master's level courses (up to 16 credits) during their senior year, which will double-count toward both their bachelor and master's degrees, reducing both the time and cost associated with attaining multiple advanced professional degrees. Beyond degree programs, the Division offers courses in Lifestyle Fitness Activities available to all Wayne State University students. The Lifestyle Fitness Activities (LFA) program offers a collection of 2-credit health, wellness, exercise, and sport courses designed to facilitate students' optimal physical and mental health.

- Adapted Physical Education (Undergraduate Certificate) (p. 103)
- Community Health (B.S.) (p. 104)
- Exercise and Sport Science (B.S.) (p. 107)
- Health and Physical Education Teaching (B.S.) (p. 111)
- Sport Management (B.S.) (p. 112)
- Yoga and Mindfulness Minor (p. 115)

Adapted Physical Education (Undergraduate Certificate)

In Michigan, candidates must first be certified in Health and Physical Education (HPE) or Special Education (SPED) before adding an APE endorsement to their teaching certificate.

The **Traditional Route (open to teacher candidates or teachers of HPE or SPED)** involves completing a 21-credit course sequence over two years. After fulfilling the credit requirements, completers can apply for the APE endorsement to be added to their teaching certificates.

The **Accelerated Route (open only to teachers of HPE)** consists of four APE-specific courses, each with embedded clinical experiences. Cohorts will complete this sequence within one year and, upon completion, will sit for the APENS (Adapted Physical Education National Standards) exam. After successfully passing the exam and completing their clinical hours, completers will be eligible to apply for the APE endorsement. The primary audience for this certificate includes teachers already endorsed in HPE and who wish to add the APE endorsement.

Graduation Requirements

Students must complete the required credit hours outlined in the Traditional or Accelerated Routes. A minimum GPA of 2.5 is required to earn the undergraduate certificate, and no grade below a C will be accepted for any course. The Traditional Route is designed to be completed over 2 years, while the Accelerated Route is intended to be finished within 1 year.

Adapted Physical Education K-12

The program is offered in two routes.

1) Traditional Route

The Traditional Route is for teacher candidates or certified teachers of either Health and Physical Education (HPE) or Special Education (SPED) and requires completion of a minimum of 21 credit hours in APE coursework as listed below.

Code	Title	Credits
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5080	Supportive Environments, Engaged Learning	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
HPE 6400	Physical Activity in Pediatric Disabilities (Additional courses required for the Adapted PE Concentration:)	3
HPE 6410	Teaching Adapted Physical Activity and Sport	3
HPE 6420	Teaching Aquatics to Special Populations	3
HPE 6430	Physical Activity Assessment in Special Populations	3
HPE 6440	Leadership Training and Practicum in Adapted Physical Education	3
Total Credits		**21**

2) Accelerated Route

The Accelerated Route is only for teachers of Health and Physical Education (HPE) and requires completion of a minimum of 12 credit hours in APE coursework as listed below. Students receiving tuition support through grant funding for this program may need to complete an additional course requiring at least 15 credit hours (required by the Grand Funding agency).

Code	Title	Credits
HPE 6400	Physical Activity in Pediatric Disabilities (Additional courses required for the Adapted PE Concentration:)	3
HPE 6410	Teaching Adapted Physical Activity and Sport	3
HPE 6420	Teaching Aquatics to Special Populations	3
HPE 6430	Physical Activity Assessment in Special Populations	3
Total Credit Hours		12
For students that are grant funded, an additional course is required:		
HPE 6440	Leadership Training and Practicum in Adapted Physical Education	3
Total Credit Hours		15

Community Health (B.S.)

The Bachelor of Science in Community Health prepares students for careers in the broad field of community health. Coursework includes training in health topics, intervention development and evaluation, health behavior theory, policy and teaching methods. The program also prepares students to take the Certified Health Education Specialist (CHES) exam, which is given by the National Commission for Health Education Credentialing, Inc. (NCHEC). This credential ensures that students are trained and qualified to plan and coordinate community health education programs. The B.S. in Community Health provides practical field experiences and experiential coursework to prepare students for employment in public or private agencies; local health departments; volunteer organizations; hospitals; health insurance companies; worksite/employee health promotion and wellness programs; and a variety of community-based organizations.

Mission Statement

Our mission is to advance health equity through the preparation of Community Health Education Specialists who explore the multiple levels (individual, family, community, policy, systems) and social determinants that influence behavior and health. Community health professionals focus on the community as the setting for analysis, assessment, advocacy, program planning, intervention, evaluation, and research, and are committed to developing, enhancing and using evidence-informed strategies to improve population health.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission to the University.

Advising questions should be directed to the Division of Academic Services, College of Education, 489 Education, phone 313-577-1601.

Program Requirements

Candidates must complete 120 credit hours in coursework, including satisfaction of the University General Education Requirements (p. 24), as well as the major requirements cited below. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 99) governing undergraduate scholarship and degrees.

All courses must be completed with grades of 'C' or better and an overall 2.0 grade point average to meet College graduation requirements. Course changes may occur through periodic curriculum revision, and students are urged to consult assigned advisors prior to each registration period to ensure that all requirements are met.

Code	Title	Credits
HE 1010	Foundations of Health and Health Promotion	3
HE 2310	Dynamics of Personal Health	3
HE 2320	Advancing Policy in Community Health Education	3
HE 3440	Nutrition and Health Education	3
or NFS 2030	Nutrition and Health	
HE 3344	Methods and Materials in Community Health Education	3
HE 3500	Human Disease	3
HE 4010	Foundations of Community Health Program Planning	3
HE 6310	Reproductive Health Education	3
or PH 3750	Reproductive Health	
HE 6320	Mental Health and Substance Abuse	3
HE 6330	Health Behavior Change	3
HE 6501	Measurement and Evaluation in Community Health Education	3
HE 5522	Health Psychology	3-4
or PSY 2410	Health Psychology	
LFA 2330	First Aid and CPR	3
HE 4902	Health Education Internship	5
Other Requirements		**76**
General Education Requirements		
Electives [1]		
Total Credits		**120-121**

[1] The Bachelor of Science (B.S.) with a major in Community Health requires the completion of at least 15 credits of approved program electives. Additional electives may be needed to reach the 120 credit hours required for the degree. Students can use these electives to pursue university minors in certain areas. Not more than three classes will be considered per subject area (i.e., PH, PSY, NFS, SOC, etc.). View a list of approved elective courses (p. 105). Students should consult their advisor for further information before registering for any elective courses not listed on the curriculum guide or Plan of Work.

Optional Program Concentrations within the College of Education

Students are responsible for satisfying the prerequisite and placement requirements prior to enrolling in the listed courses. See the individual courses or contact an advisor for more information.

Exercise and Sport Science Concentration

The Exercise and Sport Science concentration is open to students majoring in programs within the Division of Kinesiology, Health and Sport Studies. This concentration includes five (5) courses, totaling fifteen (15) credit hours. All coursework must be completed in accordance with the academic procedures of the College of Education (p. 99) and the University (p. 14) governing undergraduate scholarship and degrees. All major, concentration, and education courses must be completed with grades of 'C' or better and an overall 2.0 grade point average to meet College graduation requirements.

Code	Title	Credits
Note: Prerequisite coursework may be required for these courses.		
Required (6 credit hours)		
KIN 3000	Professional Perspectives in Kinesiology and Exercise Science	3
KIN 5100	Anatomical and Physiological Bases of Physical Activity	3-5
or BIO 2870	Anatomy and Physiology	
Elective courses (9 credit hours)		**9**
For students interested in lifespan and developmental growth, the following elective courses are recommended:		
KIN 3400	Lifespan Growth and Development	
KIN 3550	Motor Learning and Control	
KIN 3580	Biomechanics	
For students interested in health, fitness, and sports performance, the following elective courses are recommended:		
KIN 3580	Biomechanics	
KIN 6100	Methods of Group Training	
KIN 6120	Strength and Conditioning	
KIN 6300	Exercise Physiology I	
For students who are interested in metabolic, neuromuscular, cardiovascular and respiratory changes, the following elective courses are recommended:		
KIN 3550	Motor Learning and Control	
KIN 3580	Biomechanics	
KIN 6300	Exercise Physiology I	
For students interested in sport and exercise psychology, the following elective courses are recommended:		
KIN 5520	Sport Psychology	
KIN 5523	Physical Activity and Exercise Psychology	
KIN 6210	Physical Activity and Cognition	
HE 5522	Health Psychology	
Total Credits		**15-17**

Sport Management Concentration

The Sport Management concentration is open to students majoring in programs within the Division of Kinesiology, Health and Sport Studies. This concentration includes six (6) courses, totaling eighteen (18) credit hours. All coursework must be completed in accordance with the academic procedures of the College of Education (p. 99) and the University (p. 14) governing undergraduate scholarship and degrees. All major, concentration, and education courses must be completed with grades of 'C' or better and an overall 2.0 grade point average to meet College graduation requirements.

Code	Title	Credits
Note: Prerequisite coursework may be required for these courses.		
Required (3 credit hours)		
SAM 2100	Foundations of Sport Management	3
Electives: Select one the following (3 credit hours)		
SAM 2020	History of Sport	3
SAM 3020	Sociology of Sport	3
SAM 3010	Ethics in Sport	3
Electives: Select one the following (3 credit hours)		
SAM 3030	Sports Promotion	3
SAM 4020	Sport Governance	3
SAM 4030	Sport Finance	3
SAM 4040	Sport Communication	3
Electives: Select at least 9 credits from courses not selected above or from the following list.		
SAM 5510	Principles of Coaching	3
SAM 5700	Sport Leadership	3
SAM 6300	Interscholastic Athletic Directing	3
SAM 6310	Collegiate Athletic Administration	3
SAM 6320	Youth Sports and Recreation	3
SAM 6530	Professional Sport Administration	3
SAM 6531	Sports Event Management	3
SAM 6560	Media Design and Communication	3
SAM 6570	Sports Marketing	3
SAM 6750	Field Work in Sports Administration and Management	1-4
KIN 5520	Sport Psychology	3
Total credit hours: 18		

Community Health Electives

The Bachelor of Science (B.S.) with a major in Community Health requires the completion of 15 credits of approved program electives. Students can use these electives to pursue university minors in certain areas. Not more than three classes will be considered per subject area (i.e., PH, PSY, NFS, SOC, etc.). Other electives not listed can be approved by your assigned academic advisor.

Code	Title	Credits
AFS/HIS/US 2350	Black Detroit	3
AFS/SOC 2600	Race and Racism in America	3
ANT 2400	Food and Culture	3
ANT 3400	Introduction to Medical Anthropology	3
ANT/GLS/PH 3410	Global Health	3

ANT 5240	Cross Cultural Study of Gender	3
ANT 5400	Anthropology of Health and Illness	3
ARB 5700	Arabic for Healthcare Professions	3
CLA 1240	Etymology of Medical Terms	2
COM 3400	Theories of Communication	3
COM 5320	Health Communication	3
COM 5360	Gender and Communication	3
CRJ/GSW 2650	Gender and Crime	3
CRJ/PH 3050	Mental Health and Crime	3
CRJ 3110	Domestic Violence and Criminal Justice	3
CRJ 4230	Child Abuse and Neglect	3
ECO 5550	Economics of Health Care	4
EDP 5450	Child Psychology	2-3
EDP 5480	Adolescent Psychology	2-3
EDP 6210	Foundations of Educational Psychology	3
GSW 2100	Introduction to Queer Studies	3
GSW 2700	Social Science Perspectives on Gender, Sexuality, and Women	3
GSW/AFS 5110	Black Women in America	3
HE 3300	Health of the School Child	3
HE 6000	Yoga: History, Philosophy, and Practice	3
HE 6050	Mindfulness: Philosophy, Theory, Practice, and Research	3
HIS 2530/ PCS 2050/ PS 2550/ SOC 2050	The Study of Non-Violence	3
KIN 3540	Cultural Foundations of Kinesiology	3
KIN 5520	Sport Psychology	3
KIN 5523	Physical Activity and Exercise Psychology	3
LFA 1040	Healthy Lifestyle Basics	2
LFA 1470	Mindfulness, Fitness and Stress Management	2
Limit of 4 credit hours in LFA coursework can count toward the major in Community Health.		
MAE 1000	Detroit by the Numbers	3
MLS 3330	Medical Terminology	1
NFS 2030	Nutrition and Health	3
NFS 3230	Human Nutrition	3-4
NFS 3270	Eating Disorders	3
NFS 4160	Food Laws and Regulations	3
NFS 5220	Community Nutrition	2
NUR 4800	Transcultural Health Through the Life Cycle	3
PCS 3100	Human Trafficking and Modern Slavery	3
PH 2100	Introduction to Public Health	3
PH 2500	Race and Ethnic Disparities in Public Health	3
PH 3100	Social and Behavioral Aspects of Public Health	3
PH 3400	Health in All Policies	3
PH 3500	Environmental Health	3
PH/US 3550	Public Health and the City	3
PH 3600	Special Topics in Public Health	3
PH/SOC 3900	LGBTQ Health	3
PH 4600	Special Topics in Health Disparities	3
PHI 1110	Ethical Issues in Health Care	3
PHI 5250	Justice and Rights in Health Care	4
PHI 5330	Ethics, Law, and Health	4
PSY 2020	Research Methods In Psychology	4
PSY 2030	Statistical Methods in Psychology	4
PSY 2080	Introduction to Drugs, Behavior, and Society	3
PSY 2100	Psychology and the Workplace	3
PSY 2300	Psychology of Everyday Living	4
PSY 2400	Developmental Psychology	4
PSY 2600	Psychology of Social Behavior	4
PSY 3060	Psychology of Learning and Memory: Fundamental Processes	3
PSY 3200	Motivation, Feeling and Emotion	3
PSY 3250	Psychology of Gender	3
PSY 3310	Abnormal Psychology	4
PSY 3380	Human Sexuality	3
PSY 3430	Infant Development	3
PSY 3480	Parent-Child Interaction Across the Lifespan	3
PSY 4310	Psychological Disorders of Children	3
SOC 2201	Race Relations in Metro Detroit	3
SOC 2202	Gendered Worlds	3
SOC 2203	Social Psychology	3
SOC 2210	Sociology of Health and Medicine	3
SOC 2212	From Cradle to Grave: Drugs and Society Across the Life Course	3
SOC 3200	Methods of Social Research	3
SOC 3400	Exploring Marriage and Other Intimate Relationships	3
SOC 3710	Learning About Your Community Through Research	4
SPA 3050	Spanish for the Health Care Profession	3

Community Health AGRADE Overview

The Division of Kinesiology, Health, and Sports Studies (KHS) in the College of Education offers degrees that focus on the broad careers of health, wellness, exercise, sport, and human performance. With programs in Community Health (CH), Exercise and Sport Science (ESS), Health and Physical Education Teaching (HPET), and Sport Administration and Management (SAM), KHS prepares students to excel in a range of health-related professions.

The Community Health AGRADE program is available to academically strong students completing B.S. degrees in Community Health; Exercise and Sport Science; Health and Physical Education Teaching; and Sport Management so they can begin a master's degree while simultaneously completing their bachelor's degree. Coursework taken during a student's senior year (up to 16 credits) can simultaneously qualify toward the bachelor's and master's degrees. In this case, after completing any bachelor's degree in this division, students would have also completed a substantial portion of the coursework required for the Master of Science in Community Health. This allows motivated students the opportunity to complete the requirements for both degrees in an accelerated format.

Our bachelor's programs typically have between 15-25 elective courses in their plans of work. This AGRADE program allows students to utilize graduate courses in Community Health to fulfill these elective requirements. Students, in consultation with their advisor, can select Community Health graduate courses that count toward the student's bachelor's and master's degrees. The graduate coursework completed while enrolled as an undergraduate is assessed at the undergraduate tuition rate, resulting in significant tuition savings.

Admission Criteria

Students may apply for the Community Health AGRADE program no earlier than the semester in which ninety credits are being completed. Applicants must have a minimum overall grade point average of 3.30. After admission, the AGRADE program requires a continuing undergraduate cumulative grade point average of at least a 3.30 and a grade of B or higher in Community Healthy master's coursework.

Advising

AGRADE advising is provided by the Division of Academic Services College of Education.

Eligible AGRADE Courses

The following table outlines the Community Health master's courses that could be included in an undergraduate plan of work. Students may take up to a maximum of 16 credits from the following list. In addition, other master's courses may qualify as exceptions.

Code	Title	Credits
HE 5522	Health Psychology	3
HE 6100	Health Communication Methods and Techniques	3
HE 6310	Reproductive Health Education	3
or HE 6320	Mental Health and Substance Abuse	
HE 6420	Introduction to Health Education Program Design	3
HE 6501	Measurement and Evaluation in Community Health Education	3
HE 6530	Principles and Practice of Health Education and Health Promotion	3
HE 6560	Integrating Evidence-Based Practices in Community Health: Translating Research-To-Practice	3
HE 6570	Advancing Community Health and Health Equity	3
KHS 8540	Theories of Health Behavior	3

Exercise and Sport Science (B.S.)

The Exercise and Sport Science degree provides students with a scientific-based curriculum for improving human performance and wellness, and is an ideal preparation for successful entry into a variety of graduate professional programs such as nursing, occupational therapy, physician assistant, physical therapy, athletic training, or medical school.

Students develop application skills for sport and fitness activities, assessment and evaluation of various populations and fitness levels, and human movement systems from all of the subdisciplines of kinesiology (e.g., exercise physiology, exercise and physical activity psychology, motor learning and development, biomechanics, and others). Career options include corporate wellness, exercise physiologist, cardiac rehabilitation, strength and condition coach, and a wide variety of therapeutic exercise and recreation positions.

Admission Requirements

Undergraduate students entering Wayne State University, either from high school or transferring from other accredited universities or colleges, are admitted directly into the bachelor's degree program.

Admission questions should be directed to the Division of Academic Services, College of Education, 489 Education, phone 313-577-1601.

Program Requirements

Candidates must complete 120 credit hours in coursework, including satisfaction of the University General Education Requirements (p. 24), as well as the major requirements cited below. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 99) governing undergraduate scholarship and degrees.

All courses must be completed with grades of 'C' or better and an overall 2.0 grade point average to meet College graduation requirements. Course changes may occur through periodic curriculum revision, and students are urged to consult assigned advisors prior to each registration period to ensure that all requirements are met.

Exercise and Sport Science Major

Code	Title	Credits
Exercise and Sport Science Requirements [1,2]		
PSY 1010	Introductory Psychology	3-4
or PSY 1020	Elements of Psychology	
BIO 2870	Anatomy and Physiology	5
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
PHY 1020	Conceptual Physics: The Basic Science	3-4
or PHY 2130	Physics for the Life Sciences I	
or PHY 2170	University Physics I for Scientists and Engineers	
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	4-5
or CHM 1020	Survey of General Chemistry	
or CHM 1060	General, Organic and Biochemistry	
Major Requirements (40 credits) [2]		
KHS 1000	Contemporary Issues in Sport, Exercise, and Health Sciences	3
KIN 3000	Professional Perspectives in Kinesiology and Exercise Science	3
KIN 3400	Lifespan Growth and Development	3
KIN 3540	Cultural Foundations of Kinesiology	3
HE 3440	Nutrition and Health Education	3
or NFS 2030	Nutrition and Health	
HE 3500	Human Disease	3
KIN 3550	Motor Learning and Control	3
KIN 5523	Physical Activity and Exercise Psychology	3
or KIN 5520	Sport Psychology	
KIN 3580	Biomechanics	3
KIN 6300	Exercise Physiology I	3
KIN 6100	Methods of Group Training	3
or KIN 6120	Strength and Conditioning	
KIN 6320	Fitness Assessment and Exercise Prescription	3
KIN 5350	Exercise Science Internship	4
Elective Requirements (21 credits) [3]		**21**
Complete a minimum of 21 semester credits of electives related to the field of Exercise and Sport Science.		
General Education Requirements		
Total credit hours		**120**

1. All courses in this list, except for BIO 2870, also satisfy the Natural Scientific Inquiry (NSI) requirement of the University's General Education Program.
2. Students are responsible for satisfying the prerequisite and placement requirements prior to enrolling in the listed courses. See the individual courses or contact an advisor for more information.
3. The Bachelor of Science (B.S.) with a major in Exercise and Sport Science requires the completion of at least 21 credits of approved

program electives. Additional electives may be needed to reach the 120 credit hours required for the degree. Students can use these electives to pursue university minors in certain areas. Not more than three classes will be considered per subject area (i.e., PH, PSY, NFS, SOC, etc.). View a list of approved elective courses (p. 109). Students should consult their advisor for further information before registering for any elective courses not listed on the curriculum guide or Plan of Work.

Optional Program Concentrations within the College of Education

Students are responsible for satisfying the prerequisite and placement requirements prior to enrolling in the listed courses. See the individual courses or contact an advisor for more information.

Community Health Concentration

The Community Health concentration is open to students majoring in programs within the Division of Kinesiology, Health and Sport Studies. This concentration includes five (5) courses, totaling fifteen (15) credit hours. All coursework must be completed in accordance with the academic procedures of the College of Education (p. 99) and the University (p. 14) governing undergraduate scholarship and degrees. All major, concentration, and education courses, must be completed with grades of 'C' or better and an overall 2.0 grade point average, to meet College graduation requirements.

Code	Title	Credits
Required Courses		
HE 1010	Foundations of Health and Health Promotion	3
HE 2320	Advancing Policy in Community Health Education	3
HE 4010	Foundations of Community Health Program Planning [1]	3
HE 3344	Methods and Materials in Community Health Education [2]	3
HE 6501	Measurement and Evaluation in Community Health Education [3]	3
Total Credits		**15**

1. Prerequisite is HE 1010 Foundation of Health and Health Promotion
2. Prerequisite is HE 1010 Foundation of Health and Health Promotion or HE 6330 Health Behavior Change
3. Prerequisite is HE 4010 Foundation of Community Health Program Planning

Sport Management Concentration

The Sport Management concentration is open to students majoring in programs within the Division of Kinesiology, Health and Sport Studies. This concentration includes six (6) courses, totaling eighteen (18) credit hours. All coursework must be completed in accordance with the academic procedures of the College of Education (p. 99) and the University (p. 14) governing undergraduate scholarship and degrees. All major, concentration, and education courses must be completed with grades of 'C' or better and an overall 2.0 grade point average to meet College graduation requirements.

Code	Title	Credits
Note: Prerequisite coursework may be required for these courses.		
Required (3 credit hours)		
SAM 2100	Foundations of Sport Management	3
Electives: Select one the following (3 credit hours)		
SAM 2020	History of Sport	3
SAM 3020	Sociology of Sport	3
SAM 3010	Ethics in Sport	3
Electives: Select one the following (3 credit hours)		
SAM 3030	Sports Promotion	3
SAM 4020	Sport Governance	3
SAM 4030	Sport Finance	3
SAM 4040	Sport Communication	3
Electives: Select at least 9 credits from courses not selected above or from the following list.		
SAM 5510	Principles of Coaching	3
SAM 5700	Sport Leadership	3
SAM 6300	Interscholastic Athletic Directing	3
SAM 6310	Collegiate Athletic Administration	3
SAM 6320	Youth Sports and Recreation	3
SAM 6530	Professional Sport Administration	3
SAM 6531	Sports Event Management	3
SAM 6560	Media Design and Communication	3
SAM 6570	Sports Marketing	3
SAM 6750	Field Work in Sports Administration and Management	1-4
KIN 5520	Sport Psychology	3
Total credit hours: 18		

Optional Program Concentrations outside the College of Education

Students may select a concentration from the list below. The concentration options in this section are designed to prepare students for successful admission into a professional healthcare graduate degree program and a successful career in any of the rapidly expanding allied health professions.

Students are responsible for satisfying any prerequisite(s) and placement requirements prior to enrolling in the listed courses. See the individual courses or contact an advisor for more information.

Pre-professional health sciences concentrations serve as a framework to assist students in their preparation for applications and successful admissions into graduate professional health sciences programs after graduation (e.g., Physical Therapy, Occupational Therapy, Physician Assistant, etc.). Concentrations may not reflect all of the required coursework for admissions into particular graduate professional health science programs, however, they provide students with an early advantage. Students need to verify with the graduate professional health science program they aspire to be admitted into after graduating with their bachelor's degree to determine all of the prerequisite courses that will be required for admission, as well as any additional non-academic requirements that may be required to be eligible for future admission.

Some of the courses in the pre-professional health sciences concentrations may have required prerequisite courses. Please verify the prerequisite course requirements of the pre-professional health sciences concentration you intend to complete during your B.S. in Exercise and Sport Science degree program.

Pre-Occupational Therapy

Code	Title	Credits
KIN 3580	Biomechanics	3
PSY 2400	Developmental Psychology	4
PSY 3310	Introduction to Psychopathology	4

Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the OT graduate/ professional degree program.		
COM 1010	Oral Communication: Basic Speech	3
PS 1010	American Government	4
PSY 1010	Introductory Psychology	4
STA 1020	Elementary Statistics	3
Social Inquiry course (cannot be satisfied using PS 1010)		3-4
Total Credits		**28-29**

Pre-Pathologists' Assistant

Code	Title	Credits
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
Organic Chemistry with Lab		5
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the Pathologists' Assistant graduate degree program		
General Chemistry with Lab		5
ENG 1020	Introductory College Writing	3
MAT 1000 or above OR STA 1020		3-4
Total Credits		**21-22**

Pre-Pharmacy

Code	Title	Credits
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
CHM 2220 & CHM 2230	Organic Chemistry II and Organic Chemistry II Laboratory	5
CHM 5600	Survey of Biochemistry	3
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the Pharmacy graduate/ professional degree program.		
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
ENG 1020	Introductory College Writing	3
COM 1010	Oral Communication: Basic Speech	3
MAT 2010	Calculus I	4
STA 1020	Elementary Statistics	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
Total Credits		**46**

Pre-Physical Therapy

Code	Title	Credits
Chemistry (CHM) course		3
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	5
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the PT graduate/ professional degree program.		
ENG 1020	Introductory College Writing	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
STA 1020	Elementary Statistics	3
PSY 1010	Introductory Psychology	4
Chemistry (CHM) course with lab		4-5
Total Credits		**27-28**

Pre-Physician Assistant

Code	Title	Credits
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
CHM 1030	Survey of Organic/Biochemistry	4
PSY 2400	Developmental Psychology	4
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the Physician Assistant graduate degree program.		
CHM 1020	Survey of General Chemistry	4
ENG 1020	Introductory College Writing	3
ENG 3010	Intermediate Writing	3
STA 1020	Elementary Statistics	3
NFS 2030	Nutrition and Health	3
Total Credits		**29**

The Bachelor of Science (B.S.) with a major in Exercise and Sport Science requires the completion of 21 credits of approved program electives. Students can use these electives to pursue university minors in certain areas or fulfill requirements for admission to a professional program. Other electives not listed can be approved by your assigned academic advisor.

Code	Title	Credits
HE 2310	Dynamics of Personal Health	3
HE 3300	Health of the School Child	3
HE 3440	Nutrition and Health Education	3
HE 5522	Health Psychology	3
HE 6310	Reproductive Health Education	3
HE 6320	Mental Health and Substance Abuse	3
HE 6330	Health Behavior Change	3
HPE 6400	Physical Activity in Pediatric Disabilities	3
HPE 6410	Teaching Adapted Physical Activity and Sport	3
HPE 6420	Teaching Aquatics to Special Populations	3
HPE 6430	Physical Activity Assessment in Special Populations	3
IE 3120	Work Design	3
KHS 6540	Workshop in Kinesiology, Health and Sport Studies	1-3
KIN 2560	Individual Problems in Kinesiology	1-3
KIN 5100	Anatomical and Physiological Bases of Physical Activity	3
KIN 5360	Senior Research Project	1-5
KIN 5520	Sport Psychology	3
or KIN 5523	Physical Activity and Exercise Psychology	
KIN 6120	Strength and Conditioning	3
KIN 6150	ECG Interpretation	3
KIN 6160	Pharmacology for the Physical Activity Professional	3
KIN 6210	Physical Activity and Cognition	3
KIN 6310	Exercise Physiology II	3

LFA 2330	First Aid and CPR	3
PSL 5010	Individual Research I	2-5
SAM 3010	Ethics in Sport	3
SAM 3020	Sociology of Sport	3
SAM 4020	Sport Governance	3
SAM 4030	Sport Finance	3
SAM 4040	Sport Communication	3
SAM 5510	Principles of Coaching	3
SAM 5700	Sport Leadership	3
Lifestyle Fitness Activity (LFA) Courses (4 Crs. maximum, excludes LFA 2330) *LFA 1020 cannot be used to meet elective credit		**2-4**
Business Courses (6 cr. maximum)		
MKT 2300	Marketing Management	
MGT 2530	Management of Organizational Behavior	
EI 5000	Introduction to Entrepreneurship and Innovation	
Psychology (PSY) Course(s) at the 2000+ level (8 Crs. maximum)		
Sociology (SOC) Course (4 Crs. maximum)		
Additional Nutrition & Food Science (NFS) Course (6 Crs. maximum, excludes NFS 2030)		
Pre-professional (21 Crs. maximum)		
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
BIO 2550	Fundamentals of Cell Biology for Neuroscience	4
BIO 2600	Introduction to Cell Biology	4
BIO 3100	Cellular Biochemistry	3
BIO 3200	Human Physiology	3
BIO 4630	Histology	4
CHM 1030	Survey of Organic/Biochemistry	4
CHM 1060	General, Organic and Biochemistry	5
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1125	General Chemistry I for Engineers	3
CHM 1145	General Chemistry II for Engineers	3
CHM 1240	Organic Chemistry I	4
CHM 1250	Organic Chemistry I Laboratory	1
CHM 2220	Organic Chemistry II	4
CHM 2225	Organic Chemistry II for Engineers	3
CHM 2230	Organic Chemistry II Laboratory	1
CHM 5600	Survey of Biochemistry	3
MAT 2010	Calculus I	4
MLS 3330	Medical Terminology	1
OT/RT 5650	Pathophysiology for Health Sciences	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	5
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	5
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory	5
STA 1020	Elementary Statistics	3
STA 2210	Probability and Statistics	4
Credits completed in an university minor		
Total Elective Credits 21+		

Exercise and Sport Science AGRADE Overview

The Division of Kinesiology, Health, and Sports Studies (KHS) in the College of Education offers degrees that focus on the broad careers of health, wellness, exercise, sport, and human performance. With programs in Athletic Training (AT), Community Health (CH), Exercise and Sport Science (ESS), Health and Physical Education Teaching (HPET), and Sport Administration and Management (SAM), KHS prepares students to excel in a range of health-related professions.

The Exercise and Sport Science AGRADE program is available to academically strong students completing B.S. degrees in Community Health; Exercise and Sport Science; Health and Physical Education Teaching; and Sport Management so they can begin a master's degree while simultaneously completing their bachelor's degree. Coursework taken during a student's senior year (up to 16 credits) can simultaneously qualify toward the bachelor's and master's degrees. In this case, after completing any bachelor's degree in this division, students would have also completed a substantial portion of the coursework required for the Master of Science in Exercise and Sport Science. This allows motivated students the opportunity to complete the requirements for both degrees in an accelerated format.

Our bachelor's programs typically have between 15-25 elective courses in their plans of work. This AGRADE program allows students to utilize graduate courses in Exercise and Sport Science to fulfill these elective requirements. Students, in consultation with their advisor, can select Exercise and Sport Science graduate courses that count toward the student's bachelor's and master's degrees. The graduate coursework completed while enrolled as an undergraduate is assessed at the undergraduate tuition rate, resulting in significant tuition savings.

Admission Criteria

Students may apply for the Exercise and Sport Science AGRADE program no earlier than the semester in which ninety credits are being completed. Applicants must have a minimum overall grade point average of 3.30. After admission, the AGRADE program requires a continuing undergraduate cumulative grade point average of at least a 3.30 and a grade of B or higher in Exercise and Sport Science master's coursework.

For more details about the Exercise and Sport Science AGRADE program, contact the Division of Academic Services.

Exercise and Sport Science AGRADE Advising

AGRADE advising is provided by the Division of Academic Services College of Education.

Eligible AGRADE Courses and Sequence

The following table outlines the Exercise and Sport Science master's courses that could be included in the undergraduate plan of work. Students may take up to a maximum of 16 credits from the following list. In addition, other courses may qualify as exceptions.

Code	Title	Credits
KIN 5100	Anatomical and Physiological Bases of Physical Activity	3
KIN 5523	Physical Activity and Exercise Psychology	3
KIN 6100	Methods of Group Training	3
KIN 6120	Strength and Conditioning	3
KIN 6300	Exercise Physiology I	3

KIN 6310	Exercise Physiology II	3
KIN 7580	Biomechanical Analysis of Motor Activity	3
KIN 8530	Motor Learning	3

Health and Physical Education Teaching (B.S.)

The B.S. in Health and Physical Education Teaching emphasizes obtaining knowledge in content areas and subdisciplines of Health and Physical Education. Candidates who successfully complete coursework and pass the Michigan Test for Teacher Certification in both content areas receive an initial teaching certificate in Health and Physical Education (grades K - 12) by the Michigan Department of Education.

The curriculum includes: curriculum development for school Health and Physical Education teaching, implementing developmentally appropriate instructional for diverse learners, assessing Health and Physical Education content knowledge and skill proficiency, using instructional technology effectively, and demonstrating the qualities of a professional educator.

The program prepares candidates to meet proficiencies defined in several accreditation standards:

- The Michigan Interstate Teacher Assessment and Support Consortium (MI InTASC) Model Core Teaching Standards, adopted by the State Board of Education (SBE) in 2013, define the theoretical and practical knowledge, skills, and dispositions that all entry-level teachers should possess upon completion of an approved teacher preparation program.
- Michigan-specific content standards define the central concepts, tools of inquiry, and structures of the specific discipline(s) in which teacher candidates seek endorsement, as well as pedagogical applications of that disciplinary knowledge." "*Standards for the preparation of Health and Physical Education Teachers in Michigan."*

Admission Requirements

Undergraduate students entering Wayne State University, either from high school or transferring from other universities or colleges, are admitted directly into the Bachelors program. Admission questions should be directed to the Division of Academic Services, College of Education, 489 Education, phone 313-577-1601.

Program Requirements

A minimum of 120 credits is required for completion of this degree: satisfaction of the University General Education Program; All coursework must be completed in accordance with the academic procedures of the College of Education and the University governing undergraduate scholarship and degrees. All major, minor, and education courses must be completed with grades of 'C' or better and an overall 2.5 grade point average to meet College graduation requirements. Course changes may occur through periodic curriculum revisions. Students are encouraged to consult their assigned advisors prior to each registration period to ensure that all requirements are met.

Degree Requirements

Code	Title	Credits
General Education Program		
General Education Program Competencies, Group Requirements (p. 24)		35
Health and Physical Education Teaching Required Courses (64 credits)		
KIN 5100	Anatomical and Physiological Bases of Physical Activity	3
KIN 6110	Motor Learning and Development	3
HPE 6120	Sports I	3
HPE 6140	Fitness and Dance	3
HPE 6200	Management and Instruction in Health and Physical Education	3
HPE 6210	Curriculum and Instruction in Health and Physical Education	3
HPE 6220	Technology in Health and Physical Education	3
HPE 6230	Socio-cultural Issues in Physical Activity	3
HPE 6400	Physical Activity in Pediatric Disabilities	3
HE 6310	Reproductive Health Education	3
HE 6320	Mental Health and Substance Abuse	3
HE 6330	Health Behavior Change	3
HE 6340	Advanced Concepts in Health	3
HE 6360	Performance Based Assessment	3
HE 6500	Secondary Health Methods	3
HPE 6510	Elementary Health and Physical Education Methods	3
HPE 6520	Secondary Physical Education Methods	3
HPE 6600	Student Teaching and Seminar	10
RLL 6121	Teaching Literacies across the Content Areas	3
Health and Physical Education Teaching Electives		
Students may select 21 credits of electives from the courses listed below or other electives approved by an advisor.		21
HPE 6130	Sports II	
HPE 6150	Adventure and Outdoor Pursuits	
HPE 6160	Aquatic Leadership	
HPE 6410	Teaching Adapted Physical Activity and Sport	
HPE 6420	Teaching Aquatics to Special Populations	
HPE 6430	Physical Activity Assessment in Special Populations	
HPE 6440	Leadership Training and Practicum in Adapted Physical Education	
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	
SED 5080	Supportive Environments, Engaged Learning	
TED 2220	Foundations III: Foundations of Inclusive Schooling	
Total Credits		**120**

Adapted Physical Education K-12 Concentration

The Adapted Physical Education K-12 concentration requires 21 credits of coursework, including the following:

Code	Title	Credits
Course Required in the HPET Major:		
HPE 6400	Physical Activity in Pediatric Disabilities	3
Courses that are Electives in the HPET Major:		
HPE 6410	Teaching Adapted Physical Activity and Sport	3
HPE 6420	Teaching Aquatics to Special Populations	3
HPE 6430	Physical Activity Assessment in Special Populations	3
HPE 6440	Leadership Training and Practicum in Adapted Physical Education	3

SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5080	Supportive Environments, Engaged Learning	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
Total Credits		**21**

Health and Physical Education Teaching AGRADE Overview

The Division of Kinesiology, Health, and Sports Studies (KHS) in the College of Education offers degrees that focus on the broad careers of health, wellness, exercise, sport, and human performance. With programs in Community Health (CH), Exercise and Sport Science (ESS), Health and Physical Education Teaching (HPET), and Sport Administration and Management (SAM), KHS prepares students to excel in a range of health-related professions.

The Health and Physical Education Teaching AGRADE program is available to academically strong students completing B.S. degrees in Community Health; Exercise and Sport Science; Health and Physical Education Teaching; and Sport Management so they can begin a master's degree while simultaneously completing their bachelor's degree. Coursework taken during a student's senior year (up to 16 credits) can simultaneously qualify toward the bachelor's and master's degrees. In this case, after completing any bachelor's degree in this division, students would have also completed a substantial portion of the coursework required for the Master of Science in Health and Physical Education Teaching. This allows motivated students the opportunity to complete the requirements for both degrees in an accelerated format.

Our bachelor's programs typically have between 15-25 elective courses in their plans of work. This AGRADE program allows students to utilize graduate courses in Health and Physical Education Teaching to fulfill these elective requirements. Students, in consultation with their advisor, can select Health and Physical Education Teaching graduate courses that count toward the student's bachelor's and master's degrees. The graduate coursework completed while enrolled as an undergraduate is assessed at the undergraduate tuition rate, resulting in significant tuition savings.

Admission Criteria

Students may apply for the Health and Physical Education Teaching AGRADE program no earlier than the semester in which ninety credits are being completed. Applicants must have a minimum overall grade point average of 3.30. After admission, the AGRADE program requires a continuing undergraduate cumulative grade point average of at least a 3.30 and a grade of B or higher in Health and Physical Education Teaching master's coursework.

Advising

AGRADE advising is provided by the Division of Academic Services College of Education.

Eligible AGRADE Courses

The following table outlines the Health and Physical Education Teaching masters' courses that could be included in a Bachelor (undergraduate) plan of work. Students may take up to a maximum of 16 credits from the following list. In addition, other courses may qualify as exceptions.

Code	Title	Credits
KIN 5100	Anatomical and Physiological Bases of Physical Activity	3
KIN 6110	Motor Learning and Development	3
HPE 6220	Technology in Health and Physical Education	3
HPE 6230	Socio-cultural Issues in Physical Activity	3
HE 6330	Health Behavior Change	3
HPE 6400	Physical Activity in Pediatric Disabilities	3
HPE 6410	Teaching Adapted Physical Activity and Sport	3
HPE 6420	Teaching Aquatics to Special Populations	3
HPE 6430	Physical Activity Assessment in Special Populations	3
HPE 6440	Leadership Training and Practicum in Adapted Physical Education	3
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5080	Supportive Environments, Engaged Learning	2
TED 6220	Foundations III: Foundations of Inclusive Schooling	2

Sport Management (B.S.)

The major in sport management leads to a bachelor of science degree and prepares students for entry-level professional positions in the sport industry. Coursework includes industry-specific training in management, marketing, finance, governance and ethics. Students will additionally have the opportunity to select from a host of advanced courses that focus on specialized issues related to different segments of the sports industry, including collegiate, interscholastic, professional, and recreation. As a capstone experience, students will apply the knowledge they gained in the classroom to field experiences and internships to maximize their professional preparation. (For additional information, please see the Sport Management homepage (https://education.wayne.edu/sports-administration-management)).

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credit hours in coursework, including satisfaction of the University General Education Requirements (p. 24), as well as the major requirements cited below. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 99) governing undergraduate scholarship and degrees.

All courses must be completed with grades of 'C' or better and an overall 2.0 grade point average to meet College graduation requirements. Course changes may occur through periodic curriculum revision, and students are urged to consult assigned advisors prior to each registration period to ensure that all requirements are met.

Code	Title	Credits
Required Courses		
SAM 2020	History of Sport	3
SAM 2100	Foundations of Sport Management	3
SAM 3010	Ethics in Sport	3
SAM 3020	Sociology of Sport	3
SAM 3030	Sports Promotion	3
SAM 4030	Sport Finance	3
SAM 4020	Sport Governance	3
SAM 4040	Sport Communication	3

SAM 5000	Professional Practicum	3
SAM 5700	Sport Leadership	3
SAM 5750	Internship in Sports Management	6
Select at least one of the following:		3
SAM 6531	Sports Event Management	
SAM 6560	Media Design and Communication	
SAM 6570	Sports Marketing	
Select at least one of the following		3
SAM 5510	Principles of Coaching	
SAM 6300	Interscholastic Athletic Directing	
SAM 6310	Collegiate Athletic Administration	
SAM 6320	Youth Sports and Recreation	
SAM 6530	Professional Sport Administration	
KIN 5520	Sport Psychology	
Elective Courses [1]		**25**
General Education Requirements		
Total credit hours		**120**

[1] Elective credits (a minimum of twenty-five credits) will be selected by the student in consultation with the advisor. Additional electives may be needed to reach the 120 credit hours required for the degree. No more than four credits from Lifestyle Fitness Activity (LFA) courses can be used towards elective credits. View a list of approved elective courses (p. 113). Students should consult their advisor for further information and prior to registering for any elective courses not listed on the curriculum guide or Plan of Work.

Optional Program Concentrations within the College of Education

Students are responsible for satisfying the prerequisite and placement requirements prior to enrolling in the listed courses. See the individual courses or contact an advisor for more information.

Community Health Concentration

The Community Health concentration is open to students majoring in programs within the Division of Kinesiology, Health and Sport Studies. This concentration includes five (5) courses, totaling fifteen (15) credit hours. All coursework must be completed in accordance with the academic procedures of the College of Education (p. 99) and the University (p. 14) governing undergraduate scholarship and degrees. All major, minor, and education courses, must be completed with grades of 'C' or better and an overall 2.0 grade point average, to meet College graduation requirements.

Code	Title	Credits
Required Courses		
HE 1010	Foundations of Health and Health Promotion	3
HE 2320	Advancing Policy in Community Health Education	3
HE 4010	Foundations of Community Health Program Planning [1]	3
HE 3344	Methods and Materials in Community Health Education [2]	3
HE 6501	Measurement and Evaluation in Community Health Education [3]	3
Total Credits		**15**

[1] Prerequisite is HE 1010 Foundation of Health and Health Promotion

[2] Prerequisite is HE 1010 Foundation of Health and Health Promotion or HE 6330 Health Behavior Change

[3] Prerequisite is HE 4010 Foundation of Community Health Program Planning

Exercise and Sport Science Concentration

The Exercise and Sport Science concentration is open to students majoring in programs within the Division of Kinesiology, Health and Sport Studies. This concentration includes five (5) courses, totaling fifteen (15) credit hours. All coursework must be completed in accordance with the academic procedures of the College of Education (p. 99) and the University (p. 14) governing undergraduate scholarship and degrees. All major, concentration, and education courses must be completed with grades of 'C' or better and an overall 2.0 grade point average to meet College graduation requirements.

Code	Title	Credits
Note: Prerequisite coursework may be required for these courses.		
Required (6 credit hours)		
KIN 3000	Professional Perspectives in Kinesiology and Exercise Science	3
KIN 5100	Anatomical and Physiological Bases of Physical Activity	3-5
or BIO 2870	Anatomy and Physiology	
Elective courses (9 credit hours)		**9**
For students interested in lifespan and developmental growth, the following elective courses are recommended:		
KIN 3400	Lifespan Growth and Development	
KIN 3550	Motor Learning and Control	
KIN 3580	Biomechanics	
For students interested in health, fitness, and sports performance, the following elective courses are recommended:		
KIN 3580	Biomechanics	
KIN 6100	Methods of Group Training	
KIN 6120	Strength and Conditioning	
KIN 6300	Exercise Physiology I	
For students who are interested in metabolic, neuromuscular, cardiovascular and respiratory changes, the following elective courses are recommended:		
KIN 3550	Motor Learning and Control	
KIN 3580	Biomechanics	
KIN 6300	Exercise Physiology I	
For students interested in sport and exercise psychology, the following elective courses are recommended:		
KIN 5520	Sport Psychology	
KIN 5523	Physical Activity and Exercise Psychology	
KIN 6210	Physical Activity and Cognition	
HE 5522	Health Psychology	
Total Credits		**15-17**

Sport Management Electives

The Bachelor of Science (B.S.) with a major in Sport Management requires the completion of 25 credits of approved program electives. Students can use these electives to pursue university minors in certain areas. Other electives not listed can be approved by your assigned academic advisor.

Code	Title	Credits
SAM 5510	Principles of Coaching	3
SAM 6300	Interscholastic Athletic Directing	3
SAM 6310	Collegiate Athletic Administration	3

SAM 6320	Youth Sports and Recreation	3
SAM 6530	Professional Sport Administration	3
SAM 6531	Sports Event Management	3
SAM 6750	Field Work in Sports Administration and Management	1-4
KIN 3550	Motor Learning and Control	3
KIN 5520	Sport Psychology	3
KIN 5523	Physical Activity and Exercise Psychology	3
KIN 6100	Methods of Group Training	3
KIN 6110	Motor Learning and Development	3
KIN 6120	Strength and Conditioning	3
KIN 6210	Physical Activity and Cognition	3
HPE 6160	Aquatic Leadership	3
HPE 6200	Management and Instruction in Health and Physical Education	3
HPE 6410	Teaching Adapted Physical Activity and Sport	3
HE 3440	Nutrition and Health Education	3
LFA 2330	First Aid and CPR	3
Lifestyle Fitness Activity (LFA) Courses (4 Cr. maximum)		2-4
NFS 2030	Nutrition and Health (Meets Natural Science Inquiry Laboratory Requirement only when taken concurrently with NFS 2220)	3
COM 1600	Introduction to Audio-Television-Film Production	3
COM 1610	Fundamentals of New Media Production	3
COM 2030	Media Writing Toolkit	3
COM 2210	Media Writing and Storytelling	3
COM 5130	Communication and Social Marketing	3
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
MKT 2300	Marketing Management	3
MGT 2530	Management of Organizational Behavior	3
Other elective courses approved by advisor		
COM 2000	Introduction to Communication Practices and Professions	3
AFS 2245	Blacks and Sport in the United States	3
MGT 1040	Managing Diversity in the Workplace	3
EDP 5450	Child Psychology	2-3
EDP 5480	Adolescent Psychology	2-3
EHP 3600	Introduction to the Philosophy of Education	3
HE 2310	Dynamics of Personal Health	3
HE 3300	Health of the School Child	3
HE 5522	Health Psychology	3
HE 6000	Yoga: History, Philosophy, and Practice	3
HE 6050	Mindfulness: Philosophy, Theory, Practice, and Research	3
KIN 5100	Anatomical and Physiological Bases of Physical Activity	3
KHS 1000	Contemporary Issues in Sport, Exercise, and Health Sciences	3
NFS 3230	Human Nutrition	3-4
NFS 5231	Nutrition and Physical Performance	3
PSY 1010 or PSY 1020	Introductory Psychology (or PSY 1020 (not both)) Elements of Psychology	4
SEM 5100	Introduction to Sport & Entertainment Management	3
SOC 2208	Sociology of Sport	3

Sports Administration AGRADE Overview

The Division of Kinesiology, Health, and Sports Studies (KHS) in the College of Education offers degrees that focus on the broad careers of health, wellness, exercise, sport, and human performance. With programs in Community Health (CH), Exercise and Sport Science (ESS), Health and Physical Education Teaching (HPET), and Sport Administration and Management (SAM), KHS prepares students to excel in a range of health-related professions.

The Sports Administration AGRADE program is available to academically strong students completing B.S. degrees in Community Health; Exercise and Sport Science; Health and Physical Education Teaching; and Sport Management so they can begin a master's degree while simultaneously completing their bachelor's degree. Coursework taken during a student's senior year (up to 16 credits) can simultaneously qualify toward the bachelor's and master's degrees. In this case, after completing any bachelor's degree in this division, students would have also completed a substantial portion of the coursework required for the Masters of Arts (M.A.) in Sports Administration. This allows motivated students the opportunity to complete the requirements for both degrees in an accelerated format.

Our bachelor's programs typically have between 15-25 elective courses in their plans of work. This AGRADE program allows students to utilize graduate courses in Sports Administration to fulfill these elective requirements. Students, in consultation with their advisor, can select Sports Administration graduate courses that count toward the student's bachelor's and master's degrees. The graduate coursework completed while enrolled as an undergraduate is assessed at the undergraduate tuition rate, resulting in significant tuition savings.

Admission Criteria

Students may apply for the Sports Administration AGRADE program no earlier than the semester in which ninety credits are being completed. Applicants must have a minimum overall grade point average of 3.30. After admission, the AGRADE program requires a continuing undergraduate cumulative grade point average of at least a 3.30 and a grade of B or higher in Sports Administration Masters coursework.

Advising

AGRADE advising is provided by the Division of Academic Services College of Education.

Eligible AGRADE Courses

The following table outlines the Sports Administration master's courses that could be included in an undergraduate plan of work. Students may take up to a maximum of 16 credits from the following list. In addition, other master's courses may qualify as exceptions.

Code	Title	Credits
SAM 6410	Introduction to Sports Administration	3
SAM 6570	Sports Marketing	3
SAM 6660	Risk Management in Physical Education and Sports	3
SAM 6661	Equity and Access in Sport	3
SAM 7540	Concepts of Management in Health, Physical Education and Recreation	3
SAM 7581	Sport Finance	3
Select 6 credits from the following electives:		
SAM 5510	Principles of Coaching	
SAM 6300	Interscholastic Athletic Directing	

SAM 6310	Collegiate Athletic Administration
SAM 6320	Youth Sports and Recreation
SAM 6530	Professional Sport Administration
SAM 6531	Sports Event Management
SAM 6560	Media Design and Communication

Yoga and Mindfulness Minor

The Division of Kinesiology, Health and Sport Studies in the College of Education offers a minor in Yoga and Mindfulness for undergraduate and graduate students majoring in any discipline. The minor provides an excellent opportunity for students to broaden their knowledge of yoga and mindfulness philosophy, practice, and teaching skills. In addition, the program enhances career prospects across all professions as students learn how to integrate and design yoga and mindfulness activities and programs within their area of study. As restorative practices, yoga and mindfulness enables anyone working in health care, social work, education, exercise, etc. professions to practice self-care and better serve the individuals they serve in their respective careers.

To be eligible to apply for the Yoga and Mindfulness minor, students must have a minimum overall grade point average of 2.75. For advising regarding the yoga and mindfulness minor, students with last names A-K should contact Fawne Allossery (ac9010@wayne.edu). Students with last names L-Z should contact Kurt Troutman (fz4394@wayne.edu).

The Yoga and Mindfulness minor allows students in any department across all schools and colleges at WSU to add yoga and mindfulness skills and knowledge as an added credential to their degree programs. The addition of a Yoga and Mindfulness minor will expand employment opportunities and add expertise in yoga and mindfulness philosophy and theory, holistic health promotion, knowledge of body movement and mechanics, and leading others in yoga and mindfulness programs in many different career settings.

The minor is a minimum of 15 credit hours consisting of the courses listed below (9 credit hours of required cores and 6 credit hours of elective courses). The electives allow the student to further develop yoga and mindfulness skills by applying them to specific content areas. Additional courses can qualify as electives in consultation with an advisor in the Division of Academic Services in the College of Education.

Code	Title	Credits
Required Yoga and Mindfulness courses		**9**
HE 6000	Yoga: History, Philosophy, and Practice	
HE 6050	Mindfulness: Philosophy, Theory, Practice, and Research	
HE 6200	Yoga and Mindfulness in Professional Practice	
Elective courses		**6**
HE 2310	Dynamics of Personal Health	
HE 6330	Health Behavior Change	
LFA 1460	Yoga Fusion	
LFA 1470	Mindfulness, Fitness and Stress Management	
LFA 1480	Yoga	
LFA 1780	Tai Chi Chuan: Beginning	
ATR 5140	Clinical Gross Anatomy	
BIO 2870	Anatomy and Physiology	
EDP 1000	Psychology of Human Happiness	
HPE 6140	Fitness and Dance	
HPE 6200	Management and Instruction in Health and Physical Education	
KIN 3550	Motor Learning and Control	
KIN 3580	Biomechanics	
KIN 5100	Anatomical and Physiological Bases of Physical Activity	
KIN 5520	Sport Psychology	
KIN 5523	Physical Activity and Exercise Psychology	
KIN 6100	Methods of Group Training	
KIN 6300	Exercise Physiology I	
KIN 6310	Exercise Physiology II	
PCS 2050/ HIS 2530/ PS 2550/ SOC 2050	The Study of Non-Violence	
PSY 2410	Health Psychology	
SW 6815	Mind-Body-Spirit Approaches and Social Work Practice	
Total Credits		**15**

Teacher Education

Office: 241 Education Building; 313-577-0902
Assistant Dean: Nimisha H. Patel, Ph.D.

There are a number of pathways to teacher certification at Wayne State University, and all prepare future teachers to be knowledgeable, skillful, and caring professionals who are able to make a difference in the lives of children and youth. Students in our teacher certification programs benefit from coursework taught by outstanding faculty and from clinical experiences in Detroit and surrounding areas. Program faculty prepare students to effectively engage and work with diverse students; they conduct research and teach courses that focus on creating school experiences that are academically rigorous, personally meaningful, and sustain a vibrant democracy.

Bachelor's of Science Degree Requirements

Candidates for Bachelor of Science in Education must complete at least 120 credits in coursework with a minimum grade point average of 2.5. No grade below a 'C' may be used to meet requirements specific to any certification and/or endorsement program; a grade of 'C-minus' is not acceptable.

The following outline presents the general distribution of credits to be fulfilled for initial certification programs at the Bachelor's level. NOTE: Some programs require more than 120 credits.

1. Forty credits in pre-professional coursework including 6-8 credits in English to fulfill Basic and Intermediate Composition requirements and courses specified by individual program areas.
2. Completion of the appropriate professional education sequence.
3. Completion of University General Education Requirements (see General Education Program).

Michigan Standard Teaching Certificate Requirements

In addition to successfully completing all requirements for a Bachelors of Science in Education certification programs, candidates must also pass their respective Michigan Test for Teacher Certification (MTTC). The MTTC is required by the State of Michigan. Candidates must attain a passing score in order to be recommended for and to attain a State of Michigan Standard Teaching Certification. Each certification area requires a specific MTTC. Some certification areas may required multiple MTTCs. All endorsements also require successful completion of program requirements and passing MTTC scores.

Michigan Teaching Certificates

Teaching Certification are granted by the State of Michigan. The College of Education recommends certification to those who successfully complete all requirements for a certification program and for whom we have the required official passing MTTC scores.

Standard Teaching Certificate The Standard Certificate is the initial certificate issued by the State of Michigan for a five-year period. Renewal of the Standard Certificate adds five years to the certificate's validity and renewals are currently unlimited.

Professional Teaching Certificate Teachers may advance to a five-year Professional Certificate after completing additional requirements. The Professional Certificate currently has unlimited renewals. The requirements for the Professional Certificate can be found at https://www.michigan.gov/mde/services/ed-serv/ed-cert/cert-guidance/teacher-recertification/progress-to-professional

Contact a College of Education advisor for additional information.

Certification for Post-Baccalaureate Students

One who graduates from an accredited higher education institution may seek a teaching certificate by completing a post-baccalaureate program. This program does not lead to a degree, but completion of the program, along with passing MTTC scores will make the candidate eligible for a Michigan Standard Teaching Certificate.

Endorsements

Students may enroll in one of the endorsement programs while also enrolled in one of the Bachelor's of Science certification programs. However, certification in one of the B.S. programs must be attained in order for an endorsement to be awarded.

Bilingual/Bicultural Endorsement (BBE). The Bilingual Education certifies a teacher who is qualified to teach classes of bilingual children. The BBE K-12 endorsement is 24 credit hours. All students in the BBE program must successfully complete the language proficiency examinations specified by the Graduate School, if applicable, and the designated language of his/her/their individual program prior to taking courses for this program. Interested students should consult their advisor.

English as a Second Language Endorsement (ESL). The English as a Second Language (ESL) Endorsement certifies a teacher who is qualified to teach learners with limited English proficiency. The ESL K-12 endorsement is 24 credit hours. Interested students should consult their advisor.

Grade Level Endorsements. Candidates may add grade bands (e.g., adding a 3-6 grade band to a PK-3 grade band)

Content Endorsements. Candidates may add content area endorsements (e.g., adding a 7-12 science certification to a 7-12 mathematics certification)

For more information regarding endorsements, consult an advisor.

Applications for an endorsement must be made within five years of meeting the endorsement requirements. State examinations must be passed for all endorsements.

Office of Educational Partnerships and Experiences

Director: Dr. Linda Hicks
Office: 221 Education Building; 313-577-1644

Prerequisite requirements for student teaching eligibility are:

1. Admission to the College of Education.
2. Completion of all TED Certification Program coursework with grades of 'C' or better, as required.
3. Meet all TED Certification Program requirements
4. Submission of the Student Teaching Application by the deadline. Those who submit a late application are not guaranteed a student teaching clinical placement.

Application Procedures

Submit completed application forms to the Office of Educational Partnerships and Experiences prior to the deadline of the appropriate application period (see below).

Application Deadlines

If you want to intern during FALL TERM, materials must be filed online by March 15.

If you want to intern during WINTER TERM, materials must be filed online by October 15.

Advising Offices

- Health and Physical Education, Room 260, Matthaei Building
- Music Education, 1321 Old Main
- All other programs, Room 489, Education Building

- Early Childhood Education (B.S.Ed.) (p. 117)
- Educational Studies (B.S.Ed.) (p. 118)
- Elementary Education (B.S.Ed.) (p. 118)
- Middle Childhood Education (B.S.Ed.) (p. 120)
- Multi-Age Education (B.S.Ed.) (p. 121)
- Secondary Education (B.S.) (p. 122)
- Special Education (B.S.) (p. 125)
- Bilingual Education PK-12 Teaching Endorsement Minor (https://bulletins.wayne.edu/undergraduate/college-education/teacher-education/bilingual-education-pk-12-teaching-endorsement-minor/)
- Deaf Studies Minor (p. 136)
- English as a Second Language PK-12 Teaching Endorsement Minor (https://bulletins.wayne.edu/undergraduate/college-education/teacher-education/english-second-language-pk-12-teaching-endorsement-minor/)
- Urban Education and Equity Studies Minor (p. 136)
- Visual Arts Education (Teacher Certification) (p. 137)

Early Childhood Education (B.S.Ed.)

Admissions Requirements

Admission requirement standards are similar across Michigan public universities. A minimum of 120 credits are required for completion of this degree: satisfaction of the University General Education Program; All course work must be completed in accordance with the academic procedures of the College of Education and University governing undergraduate scholarship and degrees. All major, minor, and education courses, must be completed with grades of 'C' or better and an overall 2.5 grade point average, to meet College graduation requirements. Course changes may occur through periodic curriculum revision and students are urged to consult assigned advisors prior to each registration period to insure that all requirements are met.

Degree Requirements

A minimum of 120 credits are required for completion of this degree: satisfaction of the University General Education Program (https://bulletins.wayne.edu/undergraduate/general-information/general-education/); All course work must be completed in accordance with the academic procedures of the College of Education (https://bulletins.wayne.edu/undergraduate/college-education/academic-regulations/) and University (https://bulletins.wayne.edu/undergraduate/general-information/) governing undergraduate scholarship and degrees. All major, minor, and education courses must be completed with grades of 'C' or better and an overall 2.5 grade point average to meet College graduation requirements. Course changes may occur through periodic curriculum revision, and students are urged to consult assigned advisors prior to each registration period to ensure that all requirements are met.

Early Childhood Education: Required courses for the Birth to Kindergarten (B-K) Grade Band

Code	Title	Credits
General Education Courses		**27**
The General Education Requirements for Quantitative Experience (MAT 1110) and Natural Scientific Inquiry w/Lab (SCE 2100/ SCE 2105) are included in the B-K Grade Band coursework.		
Approximately 27 credit hours are needed for General Education courses not included in the B-k Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		
Content Areas		
MAT 1110	Mathematics for Elementary School Teachers I	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4
Early Childhood Education		
ELE 2000	Child Development: Birth-Age 8	3
ELE 2010	Equitable Partnerships with Families and Communities	3
ELE 2015	Play: How Young Children Learn	3
ELE 2020	Foundations of Early Childhood Education and Clinical Experience	3
ELE 2025	Social Emotional Learning: Birth-Age 8	3
ELE 2035	Inclusion, Equity, and Justice in Early Childhood	3
ELE 2050 & ELE 2055	Intentional and Inclusive Teaching: Infants and Toddlers and Intentional and Inclusive Teaching: Infants and Toddlers Clinical Experience	4
ELE 2075	The Creative Arts in Early Childhood Education	3
ELE 6030	Assessment of Young Children	3
ELE 6041	The Content Areas in Early Childhood Curriculum	3
ELE 6100	Planning and Implementing Preschool Curriculum	3
ELE 6110	Planning Infant and Toddler Curriculum	3
ELE 6130	Early Childhood Advocacy, Leadership, and Administration	3
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6205	Literacy Foundations	3
ELE 6210 & ELE 6211	Literacy Methods I (PK-3) and Literacy Clinical Experience (PK-3)	4
TED 6730 & ELE 6080	Early Childhood Preschool Apprenticeship and Intentional and Inclusive Teaching: The Preschool Learning Environment	9
TED 6740	Early Childhood Special Education Student Teaching	12
Electives		**15**
Electives as needed to reach the required 120 credit hours for the degree.		
Total Credits		**120**

Educational Studies (B.S.Ed.)

The Educational Studies program is designed for current College of Education students in the Teacher Education Division's teacher certification programs (not new students) interested in the study of education in its many forms - how students learn, how institutions teach, how social, and cultural factors shape learning, etc. - but who do not seek formal teacher licensure or certification from the state. This major provides a broad-based foundation in education. Graduates will be prepared for roles in educationally-related organizations, community settings, or continuing their studies in graduate school.

Admission Requirements:

1. The student holds Junior-level or higher standing at Wayne State University in the College of Education and is a current student in one of the teacher certification programs in the Teacher Education Division.
2. The student is in good academic standing, with a cumulative GPA of 2.0 or higher.
3. Successful completion of the pre-professional course sequence and successful completion of one semester of the professional sequence cohort program.
4. Completion of an application form requesting a change to this new program.

A minimum of 120 credits are required for completion of this degree: satisfaction of the University General Education Program (https://bulletins.wayne.edu/undergraduate/general-information/general-education/); All course work must be completed in accordance with the academic procedures of the College of Education (https://bulletins.wayne.edu/undergraduate/college-education/academic-regulations/) and University (https://bulletins.wayne.edu/undergraduate/general-information/) governing undergraduate scholarship and degrees. All major, minor, and education courses must be completed with grades of 'C-' or better and an overall 2.0 grade point average to meet graduation requirements. Course changes may occur through periodic curriculum revision, and students are urged to consult assigned advisors prior to each registration period to ensure that all requirements are met.

The degree requirements are listed in the table below.

Code	Title	Credits
1) General Education Courses		
Approximately 34 credit hours are needed for General Education courses, some of which may have been met by prior program courses: Basic Composition (BC), Intermediate Composition (IC), Oral Communication (OC), Quantitative Experience (QE), Social Inquiry (SI), Cultural Inquiry (CI), Natural Scientific Inquiry* (NSI), Global Learning (GL), Diversity Equity & Inclusion (DEI), and Civic Literacy (CIV). *A second NSI course with a lab section is required.		
2) Program Courses		
All prior coursework completed in one of the following degree programs:		
Early Childhood Education		
Elementary Education		
Middle Childhood Education		
Multi-Age Education		
Secondary Education		
Special Education		
3) Elective Courses		
Elective courses as needed to reach the minimum requirement of 120 credit hours.		

Elementary Education (B.S.Ed.)

Admission Requirements

Currently, students may be entered into one of our teacher certification programs upon admission (p. 34) to Wayne State University.

Degree Requirements

All students must complete the college requirements for the specific grade band concentration as outlined below. A minimum of 120 credit hours is required for the degree. Students have a choice of selecting a single band concentration (PK-3, 3-6, or Teach Detroit 3-6).

Some of the courses cited in each of the grade bands may satisfy the University General Education Requirements. (p. 24)

PK-3 Grade Band

Code	Title	Credits
General Education Courses		
The General Education Requirements for Quantitative Experience (MAT 1110; MAT 1120) and the Natural Scientific Inquiry (NSI) with lab (SCE 2100 and SCE 2105) are included in the PK-3 Grade Band coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the PK-3 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
MAT 1110	Mathematics for Elementary School Teachers I	3
MAT 1120	Mathematics for Elementary School Teachers II	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4
ELE 2020	Foundations of Early Childhood Education and Clinical Experience	3
ELE 6205	Literacy Foundations	3
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6210	Literacy Methods I (PK-3)	3
ELE 6370	Mathematics Methods (PK-3)	3
TED 6610	Elementary Education P-3 Clinical Methods I	2
ELE 6225	Literacy Methods II (PK-6)	3
ELE 6350	Mathematics Foundations (PK-6)	3
ELE 6550	Science Curriculum and Methods (PK-6)	2
SSE 5720	Social Studies Disciplines for Elementary Teachers I	3
SSE 6720	Social Studies Disciplines for Elementary Teachers II	3

ELE 6600	Social Studies Methods (PK-6)	3
ELE 6041	The Content Areas in Early Childhood Curriculum	3
ELE 6800	Methods for Integrated Curriculum and Pedagogy (PK-6)	3
TED 6660	Elementary Education Clinical Methods II	2
TED 6750	Elementary Education Student Teaching	12
Choose One		**3**
EDP 3310	Educational Psychology	
ELE 2000	Child Development: Birth-Age 8	
Electives		**13**
Elective courses can be taken as needed to meet the 120 hours requirement.		
Total Credits		**120**

3-6 Grade Band

Code	Title	Credits
General Education Courses		
The General Education Requirements for Quantitative Experience (MAT 1110; MAT 1120) and the Natural Scientific Inquiry (NSI) with lab (SCE 2100 and SCE 2105) are included in the 3-6 Grade Band coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the 3-6 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 3310	Educational Psychology	3
MAT 1110	Mathematics for Elementary School Teachers I	3
MAT 1120	Mathematics for Elementary School Teachers II	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4
ELE 6205	Literacy Foundations	3
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6215	Literacy Methods I (3-6)	3
ELE 6380	Mathematics Methods (3-6)	3
TED 6615	Elementary Education 3-6 Clinical Methods I	2
ELE 6225	Literacy Methods II (PK-6)	3
ELE 6350	Mathematics Foundations (PK-6)	3
SSE 5720	Social Studies Disciplines for Elementary Teachers I	3
SSE 6720	Social Studies Disciplines for Elementary Teachers II	3
ELE 6600	Social Studies Methods (PK-6)	3
ELE 6500	Science Curriculum and Methods (3-6)	3
ELE 6550	Science Curriculum and Methods (PK-6)	2
ELE 6800	Methods for Integrated Curriculum and Pedagogy (PK-6)	3
TED 6660	Elementary Education Clinical Methods II	2
TED 6750	Elementary Education Student Teaching	12
Electives		**16**
Elective courses can be taken as needed to meet the 120 hours requirement.		
Total Credits		**120**

Teach Detroit 3-6 Grade Band

Code	Title	Credits
Admission Requirements:		
Unique to this concentration is an interest and commitment for working in the Detroit Community and an interview. Approximately 12 students will be admitted annually.		
General Education Courses		
The General Education Requirements for Quantitative Experience (MAT 1110; MAT 1120) and the Natural Scientific Inquiry (NSI) with lab (SCE 2100 and SCE 2105) are included in the Teach Detroit 3-6 Grade Band coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the Teach Detroit 3-6 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
Required Courses (51 Credit Hours)		
MAT 1110	Mathematics for Elementary School Teachers I	3
MAT 1120	Mathematics for Elementary School Teachers II	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6 *	4
ELE 6205	Literacy Foundations	3
ELE 6010	Equitable Partnerships with Families and Communities	3
ELE 6350	Mathematics Foundations (PK-6)	3
ELE 6215	Literacy Methods I (3-6)	3
ELE 6380	Mathematics Methods (3-6)	3
TED 6615	Elementary Education 3-6 Clinical Methods I	2
ELE 6225	Literacy Methods II (PK-6)	3
ELE 6600	Social Studies Methods (PK-6)	3
ELE 6550	Science Curriculum and Methods (PK-6)	2
TED 6750	Elementary Education Student Teaching	12
Subtotal of 79 credit hours of required coursework.		
Electives		**41**
Please verify your elective courses with your advisor.		
Select 41 credits to reach the required 120 credits for the degree.		
Other Recommended Education Courses		
EDP 3310	Educational Psychology	
ELE 6200	Diverse Children's Literature for Elementary Teachers	
ELE 6500	Science Curriculum and Methods (3-6)	
ELE 6800	Methods for Integrated Curriculum and Pedagogy (PK-6)	
TED 6660	Elementary Education Clinical Methods II	

SSE 5720	Social Studies Disciplines for Elementary Teachers I	
SSE 6720	Social Studies Disciplines for Elementary Teachers II	
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	
TED 2020	Technology Integration in Teaching	
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	
Total Credits		**120**

* Note: SCE 5100 and 5105 may be taken in place of SCE 2100 and 2105. However, SCE 5100 and 5105 do not meet the General Education Requirement for Natural Scientific Inquiry (NSI) with lab. Electing SCE 5100 and 5105 will require additional coursework to meet the NSI with lab requirement.

Middle Childhood Education (B.S.Ed.)

The Bachelor of Science in Education (BSEd) in Middle Childhood Education leads to a Michigan Department of Education (MDE) teacher certification in grades 5-9. Students will gain extensive classroom and clinical experience to develop the content, skills, and dispositions needed to successfully work in middle-level classrooms. Candidates who successfully complete all program requirements will earn an undergraduate degree. All candidates are required to earn a minimum GPA of 2.5 and earn a grade of "C" or better in all required program courses to earn the degree. Additionally, candidates must pass the certification-specific MTTC to be recommended for certification.

A minimum of 120 credits are required for completion of this degree: satisfaction of the University General Education Program (https://bulletins.wayne.edu/undergraduate/general-information/general-education/); All course work must be completed in accordance with the academic procedures of the College of Education (https://bulletins.wayne.edu/undergraduate/college-education/academic-regulations/) and University (https://bulletins.wayne.edu/undergraduate/general-information/) governing undergraduate scholarship and degrees. All major, minor, and education courses must be completed with grades of 'C' or better and an overall 2.5 grade point average to meet College graduation requirements. Course changes may occur through periodic curriculum revision, and students are urged to consult assigned advisors prior to each registration period to ensure that all requirements are met.

Math 5-9 Grade Band Concentration Requirements

An admissions moratorium is currently in effect for this concentration.

Code	Title	Credits
General Education Courses		
Math 5-9: The General Education Requirement for Quantitative Experience (MAT 1070; MAT 1800) is included in the Math 5-9 Grade Band coursework.		
Approximately 31 credit hours are needed for General Education courses not included in the Math 5-9 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Natural Scientific Inquiry w/Lab, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		31
Electives		
At least 13 credit hours of electives are needed to meet the 120-credit hour requirement.		13
Content Courses		
Placement based on prior coursework or testing is required before registering for MAT 1070.		
MAT 1070	College Algebra	5
MAT 1800	Elementary Functions	4
MAT 2010	Calculus I	4
MAT 2860	Discrete Mathematics	3
MAT 5040	Elementary Abstract Algebra	4
STA 1020	Elementary Statistics	3
MAE 5100	Geometry for Middle School Teachers	3
MAE 5130	Problem Solving for Middle School Teachers (5-9)	3
MAE 5140	Proportional and Algebraic Reasoning for Middle Grades Teachers (5-9)	3
Foundational Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
MAE 6075	Historical and Social Contexts of Teaching Mathematics (5-12)	3
Methods Courses & Co-Req Clinicals		
MAE 5150	Methods and Materials of Instruction: Secondary School Mathematics	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
MAE 6050	Teaching Mathematics Methods in the Middle Grades	3
TED 6670	Middle and Secondary Education Clinical Methods II	3
Final Clinical Experience		
TED 6760	Middle and Secondary Education Student Teaching	12
Total Credits		**120**

Science 5-9 Grade Band Concentration Requirements

Code	Title	Credits
General Education Courses		
Science 5-9: The General Education Requirement for Quantitative Experience (MAT 1070; MAT 1800), Natural Scientific Inquiry (many of the science courses), Natural Scientific Inquiry w/Lab (many of the science courses with labs) are included in the Science 5-9 Grade Band coursework.		
Approximately 24 credit hours are needed for General Education courses not included in the Science 5-9 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		24

Content Courses		
Placement based on prior coursework or testing is required before registering for MAT 1070. Additionally, pre-requisites for science courses (e.g. physics, chemistry, etc.) may also be required.		
MAT 1070	College Algebra	5
MAT 1800	Elementary Functions	4
MAT 6150	Probability and Statistics for Teachers	4
AST 2010 & AST 2011	Descriptive Astronomy and Descriptive Astronomy Laboratory	5
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
Choose One		**3-5**
BIO 2600	Introduction to Cell Biology	
BIO 2700	Evolution: Basic Concepts and Applications	
BIO 2870	Anatomy and Physiology	
BIO 3500	Ecology and the Environment	
Choose One		**5**
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	
ESG 1010 & ESG 1011	Geology: The Science of the Earth and Geology: The Science of the Earth Laboratory	4
ESG 1370	Meteorology: The Study of Weather	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
SCE 6010	Safety in the Science Classroom	2
Foundational Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
Method Courses		
SCE 5060	Methods and Materials of Instruction in Secondary School Science I	3
SCE 5070	Methods and Materials of Instruction in Secondary School Science II	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 5600	Assessment for Middle and Secondary Education	3
Final Clinical Experience		
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Total Credits		**124-126**

Multi-Age Education (B.S.Ed.)

The Bachelor of Science in Education (BSEd) in Multi-Age Education leads to a Michigan Department of Education (MDE) teacher certification in Visual Arts Education PK-12. Students will gain extensive classroom and clinical experience to develop the content, skills, and dispositions needed to successfully work in PK-12 classrooms. Candidates who successfully complete all program requirements will earn an undergraduate degree. All candidates are required to earn a minimum GPA of 2.5 and earn a grade of "C" or better in all required program courses to earn the degree. Additionally, candidates must pass the certification-specific MTTC to be recommended for certification. To learn more about MDE teacher certification, please visit: https://www.michigan.gov/mde/services/ed-serv/ed-cert/permits-placement/courses-that-can-be-taught

General Information:

A minimum of 120 credits are required for completion of this degree: satisfaction of the University General Education Program (https://bulletins.wayne.edu/undergraduate/general-information/general-education/). All coursework must be completed in accordance with the academic procedures of the College of Education and University governing undergraduate scholarships and degrees. All major, minor, and education courses must be completed with grades of 'C' or better and an overall 2.5 grade point average to meet College graduation requirements. Course changes may occur through periodic curriculum revision, and students are urged to consult assigned advisors prior to each registration period to ensure that all requirements are met.

Visual Arts Education PK-12

Code	Title	Credits
General Education Requirements		
Visual Arts Education PK-12: The General Education Requirement for Cultural Inquiry is included in the Visual Arts Education PK-12 required coursework.		
Approximately 25 credit hours are needed for General Education courses not included in the Visual Arts Education PK-12 coursework: Basic Composition, Intermediate Composition, Oral Communication, Quantitative Experience, Natural Scientific Inquiry, Natural Scientific Inquiry w/Lab, *Diversity Equity & Inclusion Inquiry, Civic Literacy Inquiry, Social Inquiry, and Global Learning Inquiry.		25
ACO 1200	Surface Studio	3
ACR 2550	Introduction to Ceramics	3
ADR 1050	Drawing I	3
ADR 2070	Introduction to Life Drawing	3
AH 1110	Survey of Art History: Ancient through Medieval	3
AH 1120	Survey of Art History: Renaissance through Modern	3
AH 3750	African American Art and Design	3
APA 2000	Introduction to Oil Painting	3
APH 2400	Introduction to Photography	3
APR 2300	Printmaking	3
ASL 2150	Beginning Sculpture	3
AED 5000	Introduction to Art Education	3

AED 5100	Topics in Art Education	3
AED 5150	Computer Graphics in the Classroom	3
AED 5160	Theory and Practice in Art Education	3
AED 5500	2d Methods and Materials	3
AED 5510	3d Methods and Materials	3
AED 5890	The Art of Indigenous Cultures: Inclusion in the K-12 Curriculum	3
AED 6920	Multi-Cultural Issues in Art Education	3
EDP 5480	Adolescent Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
TED 6630	Multi-Age Education Clinical Methods I	2
TED 6680	Multi-Age Education Clinical Methods II	3
TED 6770 & TED 6720	Multi-Age Education Student Teaching and Multi-Age Education Student Teaching Seminar	15
Choose One		**3**
ACO 1230	Space Studio	
ACO 1270	Time Studio	

Note: Students must take the following courses for 3 credit hours: AED 5100, AH 1110, AH 1120 and EDP 5480.

Total Credits	**120**

Secondary Education (B.S.)

The secondary education curriculum leads to a bachelor's degree in education and secondary school teaching certification. Whereas this degree is granted by the College of Education, students also have the option of earning secondary school certification in conjunction with a bachelor's degree from the College of Fine, Performing and Communication Arts or the College of Liberal Arts and Sciences. For information regarding these combined degree programs, see an advisor. No grade below 'C' may be used to meet requirements specific to secondary education certification program; a grade of 'C-minus' is not acceptable.

Admission Requirements

Currently, students may be entered into one of our teacher certification programs upon admission (p. 34) to Wayne State University.

Admissions moratoria are in effect for the following World Language concentrations: Arabic K-12, French K-12, and Spanish K-12.

Degree Requirements

All students must complete the college requirements for the specific grade band concentration as outlined below. A minimum of 120 credit hours is required for the degree in one of the concentration areas.

Some of the courses cited in the grade bands may satisfy the University General Education Requirements (p. 24) (approximately 35 hours maximum).

English Language Arts Education Grade Band 7-12

Code	Title	Credits
General Education Courses		
The General Education Requirements for Intermediate Composition (ENG 2390), Cultural Inquiry (ENG 2250), Diversity Equity & Inclusion Inquiry (ENG 2530 or ENG 2570), and Global Learning Inquiry (ENG 2540) are included in the English Language Arts 7-12 Grade Band coursework.		
Approximately 22 credit hours are needed for General Education courses not included in the English Language Arts 7-12 Grade Band: Basic Composition, Oral Communication, Quantitative Experience, Natural Scientific Inquiry, Natural Scientific Inquiry w/Lab, Civic Literacy Inquiry, and Social Inquiry.		22
Elective Courses		
Depending on course choices for the ELA Content Courses, 6 to 8 credit hours of electives may be needed to meet the 120-credit hour requirement.		6
Foundational Courses		
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
Content Courses		
ENG 2200	Shakespeare: Writing about Texts	3
ENG 2250	British Literature: Writing about Texts	3
ENG 2350	American Literature: Writing about Texts	3
ENG 2390	Introduction to African-American Literature: Writing about Texts	3
ENG 2395	Stories of Detroit: Writing about Texts	3
ENG 2430	Digital Literacies: Writing about Texts	3
ENG 2540	Global Literatures: Writing about Texts	3
ENG 5720	Linguistics and Education	3
ENG 5730	English Grammar	3
Choose One		**3**
ENG 2530	Queer Literatures: Writing about Texts	
ENG 2570	Women Writers: Writing about Texts	
Choose One		**3-4**
ENG 2450	Introduction to Film	
ENG 3020	Writing and Community	
ENG 3800	Living Writers	
ENG 3810	The Craft of Poetry	
ENG 3820	The Craft of Prose	
Choose ONE		**3**
ENG 2415	Geopolitics and Literature: Writing about Texts	
ENG 2730	Languages of the World	
ENG 2800	Foundations of Creative Writing	
ENG 3120	English Literature after 1700	
English Education Courses		
EED 5200	Methods of Teaching English (7-12)	3
EED 6120	Teaching Composition Methods (7-12)	3

EED 6210	Language, Literacy, and Learning	3
EED 6310	Young Adult Literature	3
EED 6330	Teaching Literature Methods (7-12)	3
TED 5350	Topics in Racial Justice in Education	3
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
Final Clinical Experience		
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Total Credits		**120-121**

Mathematics Education Grade Band 7-12

Code	Title	Credits
General Education Courses		
Math 7-12: The General Education Requirement for Quantitative Experience is included in the Math 7-12 Grade Band coursework.		
Approximately 31 credit hours are needed for General Education courses not included in the Math 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Natural Scientific Inquiry w/Lab, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		31
Elective Courses		
At least 16 credit hours of electives are needed to meet the 120-credit hour requirement.		16
Foundational Courses		
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
Content Courses		
Note: Placement based on prior coursework or testing is required before registering for MAT 2010. Additional courses may be needed before taking MAT 2010.		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
STA 2210	Probability and Statistics	4
MAT 2860	Discrete Mathematics	3
MAT 5040	Elementary Abstract Algebra	4
MAT 6140	Geometry: An Axiomatic Approach	3
Methods Courses		
MAE 5150	Methods and Materials of Instruction: Secondary School Mathematics	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
MAE 6050	Teaching Mathematics Methods in the Middle Grades	3
TED 6670	Middle and Secondary Education Clinical Methods II	3
MAE 6075	Historical and Social Contexts of Teaching Mathematics (5-12)	3
TED 2020	Technology Integration in Teaching	3
Final Clinical Experience		
TED 6760	Middle and Secondary Education Student Teaching	12
Total Credits		**120**

Science Education Grade Band 7-12

Code	Title	Credits
General Education Courses		
Science 7-12: The General Education Requirement for Quantitative Experience, Natural Scientific Inquiry, and Natural Scientific Inquiry w/Lab are included in the Science 7-12 Grade Band coursework.		
Approximately 24 credit hours are needed for General Education courses not included in the Science 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		24
Foundational Courses		
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
Content Courses		
Note: Placement based on prior coursework or testing is required before registering for MAT 1800. Additionally, pre-requisites for science courses (e.g. physics, chemistry, etc.) may also be required.		
MAT 1800	Elementary Functions	4
MAT 2010	Calculus I	4
MAT 6150	Probability and Statistics for Teachers	4
AST 2010 & AST 2011	Descriptive Astronomy and Descriptive Astronomy Laboratory	5
ESG 1010 & ESG 1011	Geology: The Science of the Earth and Geology: The Science of the Earth Laboratory	4
ESG 1370	Meteorology: The Study of Weather	3
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5

PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	5
Any 3000 or higher Physics (PHY) Course (at least three credit hours)		3
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
Biology Course		
Select one of the following courses:		3-5
BIO 2600	Introduction to Cell Biology	
BIO 2700	Evolution: Basic Concepts and Applications	
BIO 2870	Anatomy and Physiology	
BIO 3500	Ecology and the Environment	
SCE 6010	Safety in the Science Classroom	2
Methods Courses		
SCE 5060	Methods and Materials of Instruction in Secondary School Science I	3
SCE 5070	Methods and Materials of Instruction in Secondary School Science II	3
TED 2020	Technology Integration in Teaching	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 5600	Assessment for Middle and Secondary Education	3
Final Clinical Experience		
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Total Credits		**136-138**

Social Studies Education Grade Band 7-12

Code	Title	Credits
General Education Courses		
Social Studies 7-12: The General Education Requirement for Civic Literacy Inquiry, Social Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry are included in the Social Studies 7-12 Grade Band coursework.		
Approximately 22 credit hours are needed for General Education courses not included in the Social Studies 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Quantitative Experience, Natural Scientific Inquiry, and Natural Scientific Inquiry w/Lab and Cultural Inquiry.		22
Foundational Courses		
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
Content Courses		
AFS 1010	Introduction to African American Studies	3
ANT 3530	Native Americans	3
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
GPH 1100	World Regional Patterns	4
HIS 1000	World Civilization to 1500	3
HIS 1300	Europe and the World: 1500-1945	4
HIS 1400	The World Since 1945	4
HIS 2040	American Foundations to 1877	3
HIS 2050	Modern America: Since 1877	3
LAS 1420	Introduction to Interdisciplinary Latino/a Studies Research	3
PS 1010	American Government	4
Choose ONE		**4**
GPH 2000	Introduction to Urban Studies	
HIS 2000	Introduction to Urban Studies	
PS 2000	Introduction to Urban Studies	
US 2000	Introduction to Urban Studies	
Choose ONE		**3**
ASN 2500	Introduction to Asian American Studies	
TED 2500	Introduction to Asian American Studies	
Choose ONE		**3-4**
ECO 5410	Economics of Race and Gender	
GPH 3600	Introduction to Geographic Information Systems	
PS 2820	Introduction to Peace and Conflict Studies	
Choose ONE		**3-4**
GPH 2200	Geography of Michigan	
HIS 2240	History of Michigan	
PS 3070	Michigan Politics	
Social Studies Education Courses		
SSE 5800	Introduction to Social Studies Education	1
SSE 6710	Secondary Social Studies Methods I	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
SSE 6730	Secondary Social Studies Methods II	3
TED 5350	Topics in Racial Justice in Education	3
TED 5600	Assessment for Middle and Secondary Education	3
TED 6670	Middle and Secondary Education Clinical Methods II	3
Final Clinical Experience		
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Total Credits		**125-127**

Michigan Test for Teacher Certification Requirement

Code	Title	Credits
Passing scores on the Michigan Test for Teacher Certification (MTTC) subject area tests are required for recommendations to the Michigan Department of Education for teacher certification. Scores are typically valid for five years from the date a candidate successfully passes their test.		

Special Education (B.S.)

The Bachelor's of Science in Special Education leads to a grade-band certification (e.g., B-K; PK-3, 3-6, etc.) along with certification in Special Education in the area of Cognitive Impairment or Autism Spectrum Disorder. Candidates must meet the grade-band certification requirements and attain a Michigan Standard Teaching Certification in that grade-band in order to attain the Cognitive Impairment or Autism Spectrum Disorder certification.

Admission Requirements

Currently, students may be entered into one of our teacher certification programs upon admission (p. 34) to Wayne State University.

Degree Requirements

All students must complete University General Education Requirements (p. 24), in addition to their respective concentration requirements. The total number of credit hours for the degree varies from 131 to 161 depending on the concentration. Some of the courses cited in the concentrations may satisfy the University General Education Requirements (p. 24).

No grade below 'C' may be used to meet any certification-required course.

ASD: Autism Spectrum Disorder; CI: Cognitive Impairment

ASD & Birth-Kindergarten

Code	Title	Credits
General Education Courses		
The General Education Requirements for Quantitative Experience (MAT 1110) and Natural Scientific Inquiry w/Lab (SCE 2100/ SCE 2105) are included in the B-K Grade Band coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the B-K Concentration coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
Foundational Coursework		
ELE 2000	Child Development: Birth-Age 8	3
ELE 2015	Play: How Young Children Learn	3
ELE 2020	Foundations of Early Childhood Education and Clinical Experience	3
ELE 2025	Social Emotional Learning: Birth-Age 8	3
ELE 2035	Inclusion, Equity, and Justice in Early Childhood	3
ELE 2050 & ELE 2055	Intentional and Inclusive Teaching: Infants and Toddlers and Intentional and Inclusive Teaching: Infants and Toddlers Clinical Experience	4
MAT 1110	Mathematics for Elementary School Teachers I	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
BK Education Courses		
ELE 2010	Equitable Partnerships with Families and Communities	3
ELE 2075	The Creative Arts in Early Childhood Education	3
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6205	Literacy Foundations	3
ELE 6210 & ELE 6211	Literacy Methods I (PK-3) and Literacy Clinical Experience (PK-3)	4
ELE 6030	Assessment of Young Children	3
ELE 6040 & ELE 6045	Intentional and Inclusive Teaching: The Content Areas (PK-K) and Intentional and Inclusive Teaching: ECE Clinical Preschool	4
ELE 6100	Planning and Implementing Preschool Curriculum	3
ELE 6110	Planning Infant and Toddler Curriculum	3
ELE 6130	Early Childhood Advocacy, Leadership, and Administration	3
TED 6730 & ELE 6080	Early Childhood Preschool Apprenticeship and Intentional and Inclusive Teaching: The Preschool Learning Environment	9
TED 6740	Early Childhood Special Education Student Teaching	6
ASD Courses		
SED 6021	Introduction to Teaching Students with Autism Spectrum Disorder	3
SED 6030	Teaching Students with Cognitive, Behavior, and Communication Differences	3
SED 6050	Teaching Students with Communication Differences	3
SED 6060	Teaching Students with Movement and Sensory Differences	2
SED 6070	Assessment and Evaluation of Students with Autism	3
Total Credits		**123**

CI & Birth-Kindergarten

Code	Title	Credits
General Education Courses		
The General Education Requirements for Quantitative Experience (MAT 1110) and Natural Scientific Inquiry w/Lab (SCE 2100/ SCE 2105) are included in the B-K Grade Band coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the B-K Concentration coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
Foundational Coursework		
ELE 2000	Child Development: Birth-Age 8	3
ELE 2015	Play: How Young Children Learn	3
ELE 2020	Foundations of Early Childhood Education and Clinical Experience	3
ELE 2025	Social Emotional Learning: Birth-Age 8	3
ELE 2035	Inclusion, Equity, and Justice in Early Childhood	3
ELE 2050 & ELE 2055	Intentional and Inclusive Teaching: Infants and Toddlers and Intentional and Inclusive Teaching: Infants and Toddlers Clinical Experience	4
MAT 1110	Mathematics for Elementary School Teachers I	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4

TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
BK Education Courses		
ELE 2010	Equitable Partnerships with Families and Communities	3
ELE 2075	The Creative Arts in Early Childhood Education	3
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6205	Literacy Foundations	3
ELE 6210 & ELE 6211	Literacy Methods I (PK-3) and Literacy Clinical Experience (PK-3)	4
ELE 6030	Assessment of Young Children	3
ELE 6040 & ELE 6045	Intentional and Inclusive Teaching: The Content Areas (PK-K) and Intentional and Inclusive Teaching: ECE Clinical Preschool	4
ELE 6100	Planning and Implementing Preschool Curriculum	3
ELE 6110	Planning Infant and Toddler Curriculum	3
ELE 6130	Early Childhood Advocacy, Leadership, and Administration	3
TED 6730 & ELE 6080	Early Childhood Preschool Apprenticeship and Intentional and Inclusive Teaching: The Preschool Learning Environment	9
TED 6740	Early Childhood Special Education Student Teaching	6
CI Courses		
SED 5110	Introduction to Teaching Students with Moderate/Significant Support Needs	3
SED 5115	Observation and Assessment of Students with Moderate/Significant Support Needs	3
SED 5121	Language Development and Instruction for Students with Moderate/Significant Support Needs	2
SED 5125	Teaching Students with Significant/Multiple Support Needs	3
SED 5130	Teaching Students with Moderate Support Needs	3
Total Credits		**123**

ASD & Grades P-3

Code	Title	Credits
General Education		
The General Education Requirements for Quantitative Experience (MAT 1110; MAT 1120) and the Natural Scientific Inquiry (NSI) with lab (SCE 2100 and SCE 2105) are included in the coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the required coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
Education Foundation Courses		
ELE 2020	Foundations of Early Childhood Education and Clinical Experience	3
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
Choose One		**3**
EDP 3310	Educational Psychology	
ELE 2000	Child Development: Birth-Age 8	
PK-3 Concentration Courses		
MAT 1110	Mathematics for Elementary School Teachers I	3
MAT 1120	Mathematics for Elementary School Teachers II	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4
ELE 6041	The Content Areas in Early Childhood Curriculum	3
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6205	Literacy Foundations	3
ELE 6210	Literacy Methods I (PK-3)	3
ELE 6370	Mathematics Methods (PK-3)	3
TED 6610	Elementary Education P-3 Clinical Methods I	2
ELE 6225	Literacy Methods II (PK-6)	3
ELE 6350	Mathematics Foundations (PK-6)	3
ELE 6550	Science Curriculum and Methods (PK-6)	2
ELE 6600	Social Studies Methods (PK-6)	3
SSE 5720	Social Studies Disciplines for Elementary Teachers I	3
SSE 6720	Social Studies Disciplines for Elementary Teachers II	3
ELE 6800	Methods for Integrated Curriculum and Pedagogy (PK-6)	3
TED 6660	Elementary Education Clinical Methods II	2
TED 6750	Elementary Education Student Teaching	12
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
ASD Courses		
SED 6021	Introduction to Teaching Students with Autism Spectrum Disorder	3
SED 6030	Teaching Students with Cognitive, Behavior, and Communication Differences	3
SED 6050	Teaching Students with Communication Differences	3
SED 6060	Teaching Students with Movement and Sensory Differences	2
SED 6070	Assessment and Evaluation of Students with Autism	3
TED 6790	Special Education Internship	6
Total Credits		**135**

CI & Grades P-3

Code	Title	Credits
General Education Courses		
The General Education Requirements for Quantitative Experience (MAT 1110; MAT 1120) and the Natural Scientific Inquiry (NSI) with lab (SCE 2100 and SCE 2105) are included in the coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the required coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3
ELE 2020	Foundations of Early Childhood Education and Clinical Experience	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
Choose One		**3**
EDP 3310	Educational Psychology	
ELE 2000	Child Development: Birth-Age 8	
PK-3 Concentration Courses		
MAT 1110	Mathematics for Elementary School Teachers I	3
MAT 1120	Mathematics for Elementary School Teachers II	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6041	The Content Areas in Early Childhood Curriculum	3
ELE 6205	Literacy Foundations	3
ELE 6210	Literacy Methods I (PK-3)	3
ELE 6370	Mathematics Methods (PK-3)	3
TED 6610	Elementary Education P-3 Clinical Methods I	2
ELE 6225	Literacy Methods II (PK-6)	3
ELE 6350	Mathematics Foundations (PK-6)	3
ELE 6550	Science Curriculum and Methods (PK-6)	2
SSE 5720	Social Studies Disciplines for Elementary Teachers I	3
SSE 6720	Social Studies Disciplines for Elementary Teachers II	3
ELE 6600	Social Studies Methods (PK-6)	3
ELE 6800	Methods for Integrated Curriculum and Pedagogy (PK-6)	3
TED 6660	Elementary Education Clinical Methods II	2
TED 6750	Elementary Education Student Teaching	12
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
CI Courses		
SED 5110	Introduction to Teaching Students with Moderate/ Significant Support Needs	3
SED 5115	Observation and Assessment of Students with Moderate/Significant Support Needs	3
SED 5121	Language Development and Instruction for Students with Moderate/Significant Support Needs	2
SED 5125	Teaching Students with Significant/Multiple Support Needs	3
SED 5130	Teaching Students with Moderate Support Needs	3
TED 6790	Special Education Internship	6
Total Credits		**135**

ASD & Grades 3-6

Code	Title	Credits
General Education Courses		
The General Education Requirements for Quantitative Experience (MAT 1110; MAT 1120) and the Natural Scientific Inquiry (NSI) with lab (SCE 2100 and SCE 2105) are included in the coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the required coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 3310	Educational Psychology	3
Grades 3-6 Concentration Courses		
MAT 1110	Mathematics for Elementary School Teachers I	3
MAT 1120	Mathematics for Elementary School Teachers II	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6205	Literacy Foundations	3
ELE 6225	Literacy Methods II (PK-6)	3
ELE 6215	Literacy Methods I (3-6)	3
ELE 6380	Mathematics Methods (3-6)	3
TED 6615	Elementary Education 3-6 Clinical Methods I	2
ELE 6350	Mathematics Foundations (PK-6)	3
ELE 6550	Science Curriculum and Methods (PK-6)	2
ELE 6500	Science Curriculum and Methods (3-6)	3
SSE 5720	Social Studies Disciplines for Elementary Teachers I	3
SSE 6720	Social Studies Disciplines for Elementary Teachers II	3
ELE 6600	Social Studies Methods (PK-6)	3

ELE 6800	Methods for Integrated Curriculum and Pedagogy (PK-6)	3
TED 6660	Elementary Education Clinical Methods II	2
TED 6750	Elementary Education Student Teaching	12
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
ASD Courses		
SED 6021	Introduction to Teaching Students with Autism Spectrum Disorder	3
SED 6030	Teaching Students with Cognitive, Behavior, and Communication Differences	3
SED 6050	Teaching Students with Communication Differences	3
SED 6060	Teaching Students with Movement and Sensory Differences	2
SED 6070	Assessment and Evaluation of Students with Autism	3
TED 6790	Special Education Internship	6
Total Credits		**132**

CI & Grades 3-6

Code	Title	Credits
General Education Courses		
The General Education Requirements for Quantitative Experience (MAT 1110; MAT 1120) and the Natural Scientific Inquiry (NSI) with lab (SCE 2100 and SCE 2105) are included in the coursework.		
Approximately 28 credit hours are needed for General Education courses not included in the required coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		28
Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 3310	Educational Psychology	3
Grades 3-6 Concentration Courses		
MAT 1110	Mathematics for Elementary School Teachers I	3
MAT 1120	Mathematics for Elementary School Teachers II	3
SCE 2100 & SCE 2105	Integrated Science Content PK-6 and Integrated Science Lab PK-6	4
ELE 6200	Diverse Children's Literature for Elementary Teachers	3
ELE 6205	Literacy Foundations	3
ELE 6215	Literacy Methods I (3-6)	3
ELE 6380	Mathematics Methods (3-6)	3
TED 6615	Elementary Education 3-6 Clinical Methods I	2
ELE 6225	Literacy Methods II (PK-6)	3
ELE 6350	Mathematics Foundations (PK-6)	3
ELE 6550	Science Curriculum and Methods (PK-6)	2
ELE 6500	Science Curriculum and Methods (3-6)	3
SSE 5720	Social Studies Disciplines for Elementary Teachers I	3
SSE 6720	Social Studies Disciplines for Elementary Teachers II	3
ELE 6600	Social Studies Methods (PK-6)	3
ELE 6800	Methods for Integrated Curriculum and Pedagogy (PK-6)	3
TED 6660	Elementary Education Clinical Methods II	2
TED 6750	Elementary Education Student Teaching	12
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
CI Courses		
SED 5110	Introduction to Teaching Students with Moderate/Significant Support Needs	3
SED 5115	Observation and Assessment of Students with Moderate/Significant Support Needs	3
SED 5121	Language Development and Instruction for Students with Moderate/Significant Support Needs	2
SED 5125	Teaching Students with Significant/Multiple Support Needs	3
SED 5130	Teaching Students with Moderate Support Needs	3
TED 6790	Special Education Internship	6
Total Credits		**132**

ASD & Science 5-9

Code	Title	Credits
General Education Courses		
Science 5-9: The General Education Requirement for Quantitative Experience (MAT 1070; MAT 1800), Natural Scientific Inquiry (many of the science courses), Natural Scientific Inquiry w/Lab (many of the science courses with labs) are included in the Science 5-9 Grade Band coursework.		
Approximately 24 credit hours are needed for General Education courses not included in the Science 5-9 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		24
Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2

EDP 5480	Adolescent Psychology	3
Science 5-9 Content Courses		
Placement based on prior coursework or testing is required before registering for MAT 1070. Additionally, pre-requisites for science courses (e.g. physics, chemistry, etc.) may also be required.		
MAT 1070	College Algebra	5
MAT 1800	Elementary Functions	4
MAT 6150	Probability and Statistics for Teachers	4
AST 2010 & AST 2011	Descriptive Astronomy and Descriptive Astronomy Laboratory	5
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
Choose One Biology Course		**3-5**
BIO 2600	Introduction to Cell Biology	
BIO 2700	Evolution: Basic Concepts and Applications	
BIO 2870	Anatomy and Physiology	
BIO 3500	Ecology and the Environment	
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
ESG 1010 & ESG 1011	Geology: The Science of the Earth and Geology: The Science of the Earth Laboratory	4
ESG 1370	Meteorology: The Study of Weather	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
Choose One		**5**
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	
Science Education Courses		
RLL 6121	Teaching Literacies across the Content Areas	3
SCE 5060	Methods and Materials of Instruction in Secondary School Science I	3
SCE 5070	Methods and Materials of Instruction in Secondary School Science II	3
SCE 6010	Safety in the Science Classroom	2
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
ASD Courses		
SED 6021	Introduction to Teaching Students with Autism Spectrum Disorder	3
SED 6030	Teaching Students with Cognitive, Behavior, and Communication Differences	3
SED 6050	Teaching Students with Communication Differences	3
SED 6060	Teaching Students with Movement and Sensory Differences	2
SED 6070	Assessment and Evaluation of Students with Autism	3
TED 6790	Special Education Internship	6
Total Credits		**152-154**

CI & Science 5-9

Code	Title	Credits
General Education Courses		
Science 5-9: The General Education Requirement for Quantitative Experience (MAT 1070; MAT 1800), Natural Scientific Inquiry (many of the science courses), Natural Scientific Inquiry w/Lab (many of the science courses with labs) are included in the Science 5-9 Grade Band coursework.		
Approximately 24 credit hours are needed for General Education courses not included in the Science 5-9 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		24
Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
Science 5-9 Content Courses		
Placement based on prior coursework or testing is required before registering for MAT 1070. Additionally, pre-requisites for science courses (e.g. physics, chemistry, etc.) may also be required.		
MAT 1070	College Algebra	5
MAT 1800	Elementary Functions	4
MAT 6150	Probability and Statistics for Teachers	4
AST 2010 & AST 2011	Descriptive Astronomy and Descriptive Astronomy Laboratory	5
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
Choose One Biology Course		**3-5**
BIO 2600	Introduction to Cell Biology	
BIO 2700	Evolution: Basic Concepts and Applications	
BIO 2870	Anatomy and Physiology	
BIO 3500	Ecology and the Environment	
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
ESG 1010 & ESG 1011	Geology: The Science of the Earth and Geology: The Science of the Earth Laboratory	4
ESG 1370	Meteorology: The Study of Weather	3

PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
Choose One		**5**
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	
Science Education Courses		
RLL 6121	Teaching Literacies across the Content Areas	3
SCE 5060	Methods and Materials of Instruction in Secondary School Science I	3
SCE 5070	Methods and Materials of Instruction in Secondary School Science II	3
SCE 6010	Safety in the Science Classroom	2
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
CI Courses		
SED 5110	Introduction to Teaching Students with Moderate/Significant Support Needs	3
SED 5115	Observation and Assessment of Students with Moderate/Significant Support Needs	3
SED 5121	Language Development and Instruction for Students with Moderate/Significant Support Needs	2
SED 5125	Teaching Students with Significant/Multiple Support Needs	3
SED 5130	Teaching Students with Moderate Support Needs	3
TED 6790	Special Education Internship	6
Total Credits		**152-154**

ASD & ELA 7-12

Code	Title	Credits
The General Education Requirements for Intermediate Composition (ENG 2390), Cultural Inquiry (ENG 2250), Diversity Equity & Inclusion Inquiry (ENG 2530 or ENG 2570), and Global Learning Inquiry (ENG 2540) are included in the English Language Arts 7-12 Grade Band coursework.		
Approximately 22 credit hours are needed for General Education courses not included in the English Language Arts 7-12 Grade Band: Basic Composition, Oral Communication, Quantitative Experience, Natural Scientific Inquiry, Natural Scientific Inquiry w/Lab, Civic Literacy Inquiry, and Social Inquiry.		22
Education Foundation Courses		
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
English Content Courses		
ENG 2200	Shakespeare: Writing about Texts	3
ENG 2250	British Literature: Writing about Texts	3
ENG 2350	American Literature: Writing about Texts	3
ENG 2390	Introduction to African-American Literature: Writing about Texts	3
ENG 2395	Stories of Detroit: Writing about Texts	3
ENG 2430	Digital Literacies: Writing about Texts	3
ENG 2540	Global Literatures: Writing about Texts	3
ENG 5720	Linguistics and Education	3
ENG 5730	English Grammar	3
Choose One		**3**
ENG 2530	Queer Literatures: Writing about Texts	
ENG 2570	Women Writers: Writing about Texts	
Choose One		**3**
ENG 2450	Introduction to Film	
ENG 3020	Writing and Community	
ENG 3800	Living Writers	
ENG 3810	The Craft of Poetry	
ENG 3820	The Craft of Prose	
Choose One		**3**
ENG 2415	Geopolitics and Literature: Writing about Texts	
ENG 2730	Languages of the World	
ENG 2800	Foundations of Creative Writing	
ENG 3120	English Literature after 1700	
English Education Courses		
EED 5200	Methods of Teaching English (7-12)	3
EED 6120	Teaching Composition Methods (7-12)	3
EED 6210	Language, Literacy, and Learning	3
EED 6310	Young Adult Literature	3
EED 6330	Teaching Literature Methods (7-12)	3
RLL 6121	Teaching Literacies across the Content Areas	3
TED 5350	Topics in Racial Justice in Education	3
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2

SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
ASD Courses		
TED 6790	Special Education Internship	6
SED 6021	Introduction to Teaching Students with Autism Spectrum Disorder	3
SED 6030	Teaching Students with Cognitive, Behavior, and Communication Differences	3
SED 6050	Teaching Students with Communication Differences	3
SED 6060	Teaching Students with Movement and Sensory Differences	2
SED 6070	Assessment and Evaluation of Students with Autism	3
Total Credits		**142**

CI & ELA 7-12

Code	Title	Credits
The General Education Requirements for Intermediate Composition (ENG 2390), Cultural Inquiry (ENG 2250), Diversity Equity & Inclusion Inquiry (ENG 2530 or ENG 2570), and Global Learning Inquiry (ENG 2540) are included in the English Language Arts 7-12 Grade Band coursework.		
Approximately 22 credit hours are needed for General Education courses not included in the English Language Arts 7-12 Grade Band: Basic Composition, Oral Communication, Quantitative Experience, Natural Scientific Inquiry, Natural Scientific Inquiry w/Lab, Civic Literacy Inquiry, and Social Inquiry.		22
Education Foundation Courses		
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
English Content Courses		
ENG 2200	Shakespeare: Writing about Texts	3
ENG 2250	British Literature: Writing about Texts	3
ENG 2350	American Literature: Writing about Texts	3
ENG 2395	Stories of Detroit: Writing about Texts	3
ENG 2390	Introduction to African-American Literature: Writing about Texts	3
ENG 2430	Digital Literacies: Writing about Texts	3
ENG 2540	Global Literatures: Writing about Texts	3
ENG 5720	Linguistics and Education	3
ENG 5730	English Grammar	3
Choose One		**3**
ENG 2530	Queer Literatures: Writing about Texts	
ENG 2570	Women Writers: Writing about Texts	
Choose One		**3**
ENG 2450	Introduction to Film	
ENG 3020	Writing and Community	
ENG 3800	Living Writers	
ENG 3810	The Craft of Poetry	
ENG 3820	The Craft of Prose	
Choose One		**3**
ENG 2415	Geopolitics and Literature: Writing about Texts	
ENG 2730	Languages of the World	
ENG 2800	Foundations of Creative Writing	
ENG 3120	English Literature after 1700	
English Education Courses		
EED 5200	Methods of Teaching English (7-12)	3
EED 6120	Teaching Composition Methods (7-12)	3
EED 6210	Language, Literacy, and Learning	3
EED 6310	Young Adult Literature	3
EED 6330	Teaching Literature Methods (7-12)	3
RLL 6121	Teaching Literacies across the Content Areas	3
TED 5350	Topics in Racial Justice in Education	3
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
CI Courses		
SED 5110	Introduction to Teaching Students with Moderate/Significant Support Needs	3
SED 5115	Observation and Assessment of Students with Moderate/Significant Support Needs	3
SED 5121	Language Development and Instruction for Students with Moderate/Significant Support Needs	2
SED 5125	Teaching Students with Significant/Multiple Support Needs	3
SED 5130	Teaching Students with Moderate Support Needs	3
TED 6790	Special Education Internship	6
Total Credits		**142**

ASD & Mathematics 7-12

Code	Title	Credits
General Education		
Math 7-12: The General Education Requirement for Quantitative Experience is included in the Math 7-12 Grade Band coursework.		
Approximately 31 credit hours are needed for General Education courses not included in the Math 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Natural Scientific Inquiry w/Lab, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		31
Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3

TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
Mathematics Content Courses		
Note: Placement based on prior coursework or testing is required before registering for MAT 2010. Additional courses may be needed before taking MAT 2010.		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
MAT 2860	Discrete Mathematics	3
MAT 5040	Elementary Abstract Algebra	4
MAT 6140	Geometry: An Axiomatic Approach	3
STA 2210	Probability and Statistics	4
Mathematics Education Courses		
MAE 5150	Methods and Materials of Instruction: Secondary School Mathematics	3
MAE 6050	Teaching Mathematics Methods in the Middle Grades	3
MAE 6075	Historical and Social Contexts of Teaching Mathematics (5-12)	3
RLL 6121	Teaching Literacies across the Content Areas	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760	Middle and Secondary Education Student Teaching	12
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
ASD Courses		
SED 6021	Introduction to Teaching Students with Autism Spectrum Disorder	3
SED 6030	Teaching Students with Cognitive, Behavior, and Communication Differences	3
SED 6050	Teaching Students with Communication Differences	3
SED 6060	Teaching Students with Movement and Sensory Differences	2
SED 6070	Assessment and Evaluation of Students with Autism	3
TED 6790	Special Education Internship	6
Total Credits		**132**

CI & Mathematics 7-12

Code	Title	Credits
General Education		
Math 7-12: The General Education Requirement for Quantitative Experience is included in the Math 7-12 Grade Band coursework.		
Approximately 31 credit hours are needed for General Education courses not included in the Math 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Natural Scientific Inquiry, Natural Scientific Inquiry w/Lab, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		31
Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
Mathematics Content Courses		
Note: Placement based on prior coursework or testing is required before registering for MAT 2010. Additional courses may be needed before taking MAT 2010.		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
MAT 2860	Discrete Mathematics	3
MAT 5040	Elementary Abstract Algebra	4
MAT 6140	Geometry: An Axiomatic Approach	3
STA 2210	Probability and Statistics	4
Mathematics Education Courses		
MAE 5150	Methods and Materials of Instruction: Secondary School Mathematics	3
MAE 6050	Teaching Mathematics Methods in the Middle Grades	3
MAE 6075	Historical and Social Contexts of Teaching Mathematics (5-12)	3
RLL 6121	Teaching Literacies across the Content Areas	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760	Middle and Secondary Education Student Teaching	12
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
CI Courses		

SED 5110	Introduction to Teaching Students with Moderate/ Significant Support Needs	3
SED 5115	Observation and Assessment of Students with Moderate/Significant Support Needs	3
SED 5121	Language Development and Instruction for Students with Moderate/Significant Support Needs	2
SED 5125	Teaching Students with Significant/Multiple Support Needs	3
SED 5130	Teaching Students with Moderate Support Needs	3
TED 6790	Special Education Internship	6
Total Credits		**132**

ASD & Science 7-12

Code	Title	Credits
General Education		
Science 7-12: The General Education Requirement for Quantitative Experience, Natural Scientific Inquiry, and Natural Scientific Inquiry w/Lab are included in the Science 7-12 Grade Band coursework.		
Approximately 24 credit hours are needed for General Education courses not included in the Science 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		24
Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
Science Concentration Content Courses		
Note: Placement based on prior coursework or testing is required before registering for MAT 1800. Additionally, pre-requisites for science courses (e.g. physics, chemistry, etc.) may also be required.		
MAT 1800	Elementary Functions	4
MAT 2010	Calculus I	4
MAT 6150	Probability and Statistics for Teachers	4
AST 2010 & AST 2011	Descriptive Astronomy and Descriptive Astronomy Laboratory	5
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
Choose One Biology Course		**3-5**
BIO 2600	Introduction to Cell Biology	
BIO 2700	Evolution: Basic Concepts and Applications	
BIO 2870	Anatomy and Physiology	
BIO 3500	Ecology and the Environment	
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
ESG 1010 & ESG 1011	Geology: The Science of the Earth and Geology: The Science of the Earth Laboratory	4
ESG 1370	Meteorology: The Study of Weather	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	5
PHY: Any 3000-level or higher		3
Science Education Courses		
RLL 6121	Teaching Literacies across the Content Areas	3
SCE 5060	Methods and Materials of Instruction in Secondary School Science I	3
SCE 5070	Methods and Materials of Instruction in Secondary School Science II	3
SCE 6010	Safety in the Science Classroom	2
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
ASD Courses		
SED 6021	Introduction to Teaching Students with Autism Spectrum Disorder	3
SED 6030	Teaching Students with Cognitive, Behavior, and Communication Differences	3
SED 6050	Teaching Students with Communication Differences	3
SED 6060	Teaching Students with Movement and Sensory Differences	2
SED 6070	Assessment and Evaluation of Students with Autism	3
TED 6790	Special Education Internship	6
Total Credits		**164-166**

CI & Science 7-12

Code	Title	Credits
General Education		
Science 7-12: The General Education Requirement for Quantitative Experience, Natural Scientific Inquiry, and Natural Scientific Inquiry w/Lab are included in the Science 7-12 Grade Band coursework.		
Approximately 24 credit hours are needed for General Education courses not included in the Science 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Civic Literacy Inquiry, Social Inquiry, Cultural Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry.		24

Education Foundation Courses		
TED 2020	Technology Integration in Teaching	3
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
Science Concentration Content Courses		
Note: Placement based on prior coursework or testing is required before registering for MAT 1800. Additionally, pre-requisites for science courses (e.g. physics, chemistry, etc.) may also be required.		
MAT 1800	Elementary Functions	4
MAT 2010	Calculus I	4
MAT 6150	Probability and Statistics for Teachers	4
AST 2010 & AST 2011	Descriptive Astronomy and Descriptive Astronomy Laboratory	5
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
Choose One Biology Course		**3-5**
BIO 2600	Introduction to Cell Biology	
BIO 2700	Evolution: Basic Concepts and Applications	
BIO 2870	Anatomy and Physiology	
BIO 3500	Ecology and the Environment	
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
ESG 1010 & ESG 1011	Geology: The Science of the Earth and Geology: The Science of the Earth Laboratory	4
ESG 1370	Meteorology: The Study of Weather	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	5
PHY: Any 3000-level or higher		3
Science Education Courses		
RLL 6121	Teaching Literacies across the Content Areas	3
SCE 5060	Methods and Materials of Instruction in Secondary School Science I	3
SCE 5070	Methods and Materials of Instruction in Secondary School Science II	3
SCE 6010	Safety in the Science Classroom	2
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
CI Courses		
TED 6790	Special Education Internship	6
SED 5110	Introduction to Teaching Students with Moderate/Significant Support Needs	3
SED 5115	Observation and Assessment of Students with Moderate/Significant Support Needs	3
SED 5121	Language Development and Instruction for Students with Moderate/Significant Support Needs	2
SED 5125	Teaching Students with Significant/Multiple Support Needs	3
SED 5130	Teaching Students with Moderate Support Needs	3
Total Credits		**164-166**

ASD & Social Studies 7-12

Code	Title	Credits
General Education		
Social Studies 7-12: The General Education Requirement for Civic Literacy Inquiry, Social Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry are included in the Social Studies 7-12 Grade Band coursework.		
Approximately 22 credit hours are needed for General Education courses not included in the Social Studies 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Quantitative Experience, Natural Scientific Inquiry, and Natural Scientific Inquiry w/Lab and Cultural Inquiry.		22
Education Foundation Courses		
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
Social Studies Content Courses		
AFS 1010	Introduction to African American Studies	3
ANT 3530	Native Americans	3
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
GPH 1100	World Regional Patterns	4
HIS 1000	World Civilization to 1500	3
HIS 1300	Europe and the World: 1500-1945	4
HIS 1400	The World Since 1945	4
HIS 2040	American Foundations to 1877	3

HIS 2050	Modern America: Since 1877	3
LAS 1420	Introduction to Interdisciplinary Latino/a Studies Research	3
PS 1010	American Government	4
Choose One		**3**
ASN 2500	Introduction to Asian American Studies	
TED 2500	Introduction to Asian American Studies	
Choose One		**4**
GPH 2000	Introduction to Urban Studies	
HIS 2000	Introduction to Urban Studies	
PS 2000	Introduction to Urban Studies	
US 2000	Introduction to Urban Studies	
Choose One		**3-4**
ECO 5410	Economics of Race and Gender	
GPH 3600	Introduction to Geographic Information Systems	
PS 2820	Introduction to Peace and Conflict Studies	
Choose One		**3-4**
GPH 2200	Geography of Michigan	
HIS 2240	History of Michigan	
PS 3070	Michigan Politics	
Social Studies Education Courses		
RLL 6121	Teaching Literacies across the Content Areas	3
SSE 5800	Introduction to Social Studies Education	1
SSE 6710	Secondary Social Studies Methods I	3
SSE 6730	Secondary Social Studies Methods II	3
TED 5350	Topics in Racial Justice in Education	3
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2
TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
ASD Courses		
SED 6021	Introduction to Teaching Students with Autism Spectrum Disorder	3
SED 6030	Teaching Students with Cognitive, Behavior, and Communication Differences	3
SED 6050	Teaching Students with Communication Differences	3
SED 6060	Teaching Students with Movement and Sensory Differences	2
SED 6070	Assessment and Evaluation of Students with Autism	3
TED 6790	Special Education Internship	6
Total Credits		**153-155**

CI & Social Studies 7-12

Code	Title	Credits
General Education		
Social Studies 7-12: The General Education Requirement for Civic Literacy Inquiry, Social Inquiry, Diversity Equity & Inclusion Inquiry, and Global Learning Inquiry are included in the Social Studies 7-12 Grade Band coursework.		
Approximately 22 credit hours are needed for General Education courses not included in the Social Studies 7-12 Grade Band coursework: Basic Composition, Intermediate Composition, Oral Communication, Quantitative Experience, Natural Scientific Inquiry, and Natural Scientific Inquiry w/Lab and Cultural Inquiry.		22
Education Foundation Courses		
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5100	Professional Engagement, Advocacy, and Instructional Planning	2
EDP 5480	Adolescent Psychology	3
Social Studies Content Courses		
AFS 1010	Introduction to African American Studies	3
ANT 3530	Native Americans	3
ASN 2500	Introduction to Asian American Studies	3
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
GPH 1100	World Regional Patterns	4
HIS 1000	World Civilization to 1500	3
HIS 1300	Europe and the World: 1500-1945	4
HIS 1400	The World Since 1945	4
HIS 2040	American Foundations to 1877	3
HIS 2050	Modern America: Since 1877	3
LAS 1420	Introduction to Interdisciplinary Latino/a Studies Research	3
PS 1010	American Government	4
PS 2000	Introduction to Urban Studies	4
Choose One		**3-4**
ECO 5410	Economics of Race and Gender	
GPH 3600	Introduction to Geographic Information Systems	
PS 2820	Introduction to Peace and Conflict Studies	
Choose One		**3-4**
GPH 2200	Geography of Michigan	
HIS 2240	History of Michigan	
PS 3070	Michigan Politics	
Social Studies Education Courses		
RLL 6121	Teaching Literacies across the Content Areas	3
SSE 5800	Introduction to Social Studies Education	1
SSE 6710	Secondary Social Studies Methods I	3
SSE 6730	Secondary Social Studies Methods II	3
TED 5350	Topics in Racial Justice in Education	3
TED 5600	Assessment for Middle and Secondary Education	3
TED 6620	Middle and Secondary Education Clinical Methods I	2

TED 6670	Middle and Secondary Education Clinical Methods II	3
TED 6760 & TED 6710	Middle and Secondary Education Student Teaching and Middle and Secondary Education Student Teaching Seminar	15
Special Education Foundation Courses		
SED 5000	History, Philosophy, and Ethics of Teaching Students with Disabilities	2
SED 5075	Consultation and Collaboration for Inclusive Teaching	2
SED 5080	Supportive Environments, Engaged Learning	2
SED 5090	Transitions for Students with Disabilities	2
CI Courses		
SED 5110	Introduction to Teaching Students with Moderate/Significant Support Needs	3
SED 5115	Observation and Assessment of Students with Moderate/Significant Support Needs	3
SED 5121	Language Development and Instruction for Students with Moderate/Significant Support Needs	2
SED 5125	Teaching Students with Significant/Multiple Support Needs	3
SED 5130	Teaching Students with Moderate Support Needs	3
TED 6790	Special Education Internship	6
Total Credits		**153-155**

Deaf Studies Minor

The Minor in Deaf Studies is a minimum of 21 credit hours. The 21 credit hours must have a minimum cumulative grade point average of2.0#with no course grade below 'C-minus'.

Code	Title	Credits
ASE 2050	Deaf Culture	3
ASE 3000	American Sign Language I	3
ASE 3020	American Sign Language II	3
ASE 3030	American Sign Language III	3
ASE 3040	American Sign Language IV	3
ASE 5060	Fingerspelling and Numbers	3
ASE 5070	Non-Manual Grammatical Features of American Sign Language	3
Total Credits		**21**

Urban Education and Equity Studies Minor

The College of Education offers a Minor in Urban Education and Equity Studies for undergraduate students majoring in other disciplines. This minor provides an excellent opportunity for students interested in pursuing a career in education, social service and community organizations, in planning, policy, and program development roles, as well as graduate and professional studies centered in urban ecologies.

The Minor in Urban Education and Equity Studies is a minimum of 18 credits consisting of at least 10 credits of required courses and 8 credits of elective courses. The 18 credits must have a minimum cumulative grade point average of 2.0, with no course grade below 'C'. A grade of 'C-minus' or lower is not acceptable.

Code	Title	Credits
Required Courses		
MAE 1000	Detroit by the Numbers	3
TED 2210	Foundations II: Intersections of Culture, Language, Identity & Schooling	2
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
TED 5350	Topics in Racial Justice in Education	3
Elective Courses - A minimum of 8 credits from the following options		**8**
ASE 2050	Deaf Culture	
AFS/LAS 2250	AfroLatino/a History and Culture	
AFS/HIS/US 2350	Black Detroit (Gen Ed: DEI)	
AFS/ENG 2390	Introduction to African-American Literature: Writing about Texts (Gen Ed: DEI, IC)	
AFS/SOC 2600	Race and Racism in America	
AFS/HIS 3140	African American History I: 1400-1865 (Gen Ed: DEI)	
AFS/HIS 3150	African American History II: 1865-1968 (Gen Ed: DEI)	
AFS/HIS 3155	African American History III: 1968 - Present (Gen Ed: DEI)	
AFS/HIS 3170	Ethnicity and Race in American Life	
ASN 2500	Introduction to Asian American Studies	
EDP 3310	Educational Psychology	
ELE 2010	Equitable Partnerships with Families and Communities	
ELE 2035	Inclusion, Equity, and Justice in Early Childhood	
ELE 6200	Diverse Children's Literature for Elementary Teachers	
ENG/GSW 2530	Queer Literatures: Writing about Texts (Gen Ed: DEI)	
ENG 2540	Global Literatures: Writing about Texts (Gen Ed: GL)	
ENG/GSW 2570	Women Writers: Writing about Texts (Gen Ed: CI, DEI)	
GPH/HIS/PS/US 2000/SOC 2500	Introduction to Urban Studies (Gen Ed: DEI, SI)	
GPH 3130	Introductory Urban Geography (Gen Ed: GL, SI)	
GPH 3600	Introduction to Geographic Information Systems	
GSW 2100	Introduction to Queer Studies (Gen Ed: DEI)	
GSW 2500	Humanities Perspectives on Gender, Sexuality, and Women (Gen Ed: CI, DEI)	
GSW 2600/HIS 2605	History of Women, Gender and Sexuality in the Modern World (Gen Ed: DEI, GL)	
GSW 2700	Social Science Perspectives on Gender, Sexuality, and Women (Gen Ed: DEI, SI)	
HE 3300	Health of the School Child	
HE 6320	Mental Health and Substance Abuse	
HIS/LAS 2430	History of Latino/as in the United States	
HIS/US 3650	History of Detroit (Gen Ed: DEI)	
HPE 6400	Physical Activity in Pediatric Disabilities	
LAS 2100/SPA 2400	Chicano/a Literature and Culture (Gen Ed: CI, DEI, GL)	
LAS 2110/SPA 2500	Puerto Rican Literature and Culture (Gen Ed: CI, DEI)	
LAS 3610	Seminar in Latino/a Urban Problems (Gen Ed: SI)	

PS 2240	Introduction to Urban Politics and Policy (Gen Ed: SI)	
SOC 2201	Race Relations in Metro Detroit	
SOC 2202	Gendered Worlds (Gen Ed: DEI)	
SOC 2300	Social Inequality (Gen Ed: DEI, SI)	
TED 2200 & TED 2205	Foundations I: Foundations of Education in Urban Spaces and Foundations Field Experience	
Total Credits		**18**

Visual Arts Education (Teacher Certification)

The Visual Arts Education Teacher Certification requires thirty prerequisite course credits prior to admission to the program (usually taken during undergraduate studies in art), forty-four credits taken after admission to the College of Education, as well as Student Teaching. Potential students should make an appointment with coordinator Anita Ricks-Bates to discuss program requirements by calling 313-577-0490 or via e-mail at ad8045@wayne.edu.

Code	Title	Credits
Foundation Requirements (30 credit hours)		
ADR 1050	Drawing I	3
ADR 1060	Drawing II	3
AH 1110	Survey of Art History: Ancient through Medieval	3
AH 1120	Survey of Art History: Renaissance through Modern	3
ACO 1200	Surface Studio	3
ACO 1230	Space Studio	3
or ACO 1270	Time Studio	
ADR 2070	Introduction to Life Drawing	3
ADR 3070	Intermediate Life Drawing	3
APA 2000	Introduction to Oil Painting	3
ASL 2150	Beginning Sculpture	3
Intermediate Requirements (6 credit hours)		
AED 5000	Introduction to Art Education	3
AED 5160	Theory and Practice in Art Education	3
Advanced Studio and Methodology Requirements (21 credit hours)		
AED 5020	Painting: Methods and Materials	3
AED 5890	The Art of Indigenous Cultures: Inclusion in the K-12 Curriculum	3
AED 5070	Methods and Materials of Sculptural Expression	3
AED 5280	Printmaking: Methods and Materials	3
AED 5690	Collage, Assemblage, and Multi-Media: Methods and Materials	3
AED 5150	Computer Graphics in the Classroom	3
AED 5230	Ceramics Education I	3
Professional Education Requirements (17 credit hours)		
The following courses must be completed prior to student teaching.		
AT 7500	Cultural and Social Diversity in Art Therapy	3
EDP 3310	Educational Psychology	3
TED 2220	Foundations III: Foundations of Inclusive Schooling	2
or TED 6220	Foundations III: Foundations of Inclusive Schooling	
RLL 6121	Teaching Literacies across the Content Areas	3
AED 5100	Topics in Art Education	3
AED 5650	Art Teaching Laboratory (coreq: AED 5100)	3
Student Teaching Requirements (6 credit hours)		
Students must take and pass the Michigan Test for Teacher Certification (MTTC) Visual Arts Education Test (https://bulletins.wayne.edu/undergraduate/college-education/teacher-education/095 prior to student teaching./)		
TED 5780	Student Teaching & Seminar (Half day field placement at the elementary or secondary level to meet State K-12 certification requirements)	2
TED 5790	Directed Teaching and Conference for Special Groups (Full day placement at the level you wish to teach full time: elementary or secondary)	4
Total Credits		**80**

Theoretical and Behavioral Foundations

Interim Assistant Dean: William Hill
Office: 341 Education Building; (313) 577-1670
https://education.wayne.edu/

The Division of Theoretical and Behavioral Foundations includes degree programs in educational evaluation and research, counseling, educational psychology, school and community psychology, counseling psychology, and rehabilitation counseling and community inclusion. The Division is designed to facilitate a realization of the following aims:

1. to integrate the educational experiences and course offerings;
2. to perform a service function in meeting the needs of those enrolled in other divisions within the College;
3. to provide degree and specialist programs for those who are majoring in a particular field of the division;
4. to provide students with an opportunity to study those aspects of educational thought and practice that are interdisciplinary as well as foundational;
5. to formulate programs looking toward the development of new combinations of specialties, as in
   a. counseling-psychology,
   b. pupil personnel managers in school systems,
   c. utilization of theoretical and behavioral foundations in teacher education,
   d. underlying philosophical premises of educational programs and practices;
6. to design interdisciplinary, cross disciplinary, and multidisciplinary experiences for and with students.

James and Patricia Anderson College of Engineering

Dean: Ali Abolmaali

College Mission Statement

The James and Patricia Anderson College of Engineering has three important missions: teaching, research, and outreach — serving the region, State and nation as part of an urban comprehensive research university. Students are prepared for professional practice, graduate study, lifelong learning, and for leadership roles in society. Faculty members develop the scientific and technological base for the engineering profession, and disseminate advanced technical knowledge to engineers, other professionals, and the public. A balance among the three missions is sought through a partnership built among students, faculty, staff, alumni, government, and private industry. This is achieved by maintaining an academic environment that is both intellectually stimulating and supportive of all of its constituents, regardless of race, gender, or ethnic background.

College Organization

The academic programs of the James and Patricia Anderson College of Engineering are organized into two Divisions: Engineering and Engineering Technology.

The Division of Engineering includes seven academic departments:

- Biomedical Engineering
- Chemical Engineering and Materials Science
- Computer Science
- Civil and Environmental Engineering
- Electrical and Computer Engineering
- Industrial and Manufacturing Engineering
- Mechanical Engineering

Programs leading to the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees in engineering are offered by these departments. Five programs leading to a Bachelor of Science in Engineering Technology and a Master of Science in Engineering Technology are offered in the Division of Engineering Technology.

Profession of Engineering

Engineering requires people of imagination who can plan and create. Engineers design, simplify, refine and economize. They are pragmatists serving the needs of society through the development and improvement of technology. The engineer's resources include an intimate knowledge of scientific laws and their applications to engineering problems as well as ability to use mathematics and computers and, above all, an imaginative and an inquiring mind.

Engineers can start their careers in many functional roles — designer, test engineer, manufacturing engineer, sales engineer, researcher, or a combination of these and other roles. Engineering has become a profession that often leads to executive management positions. As more and more of the decisions of management in government and business are based on technical considerations, engineers with the necessary background are called upon to make these choices. Engineers do not devote their attention solely to innovations in technology. In all of these roles they look beyond their inventions and conceptions to consider the societal effect of their work, including its economic, aesthetic, safety, and environmental aspects.

At present, the minimum education required for general competence in the practice of engineering is a bachelor's degree in one of the fields of engineering. However, many engineering positions require an additional year or two of education at the graduate level leading to the master's degree. Whenever possible, students are urged to continue their education to this point. For engineering research or teaching, and in some areas of practice, the doctoral degree is recommended. For further information about graduate programs in engineering, consult the Wayne State University Graduate Bulletin.

For all engineers, continuing professional competence in the midst of our constantly changing technology requires educational renewal and a life-long dedication to continuing education. The College offers seminars, institutes and off-campus programs to meet this need. In addition, regular College courses are available on an elective, post-degree basis.

Engineering Technologist

The evolution of our civilization has always been closely associated with technology and science. Now, and in the future, this association will become even more important. New knowledge has inspired advances in technology, resulting in new career opportunities. Far-reaching developments in communications and instrumentation technology, highly sophisticated machine tools and manufacturing processes, new energy sources and new man-made materials, and computer applications have all revolutionized the techniques of industrial manufacturing and management.

This on-going expansion of scientific and engineering knowledge has changed the make-up of the engineering team through the inclusion of the engineering technologist. The engineering technologist, in cooperation with the engineer, organizes people, materials and equipment to design, construct, operate, maintain and manage technical engineering projects. He or she should have a commitment to that technological progress which will create a better life for everyone. Because of the increasing challenges in this information age, it is no longer possible for one person to master all of the knowledge and skills necessary to execute technical projects. Quite often, a team effort is required -- with each member of the team highly

trained in a specific area. Today's engineering teams involve engineers and engineering technologists and may also include technicians, scientists, physicians, craftsmen, and other specialists.

Engineering technology supports engineering activities through a combination of scientific and professional knowledge with technological skills and concentrates on the industrial applications of engineering. Because of the extensive variety of functional opportunities, and the wide variety of industrial enterprises available to the engineering technologist, there has been a great deal of specialization. An engineering technologist can specialize in three related ways: discipline, function and industry.

For example, the discipline could be mechanical, the function could be design, and the industry could be automotive; or the discipline could be electrical, the function field installation, and the industry electric power generation. Through its undergraduate and graduate programs, the Division of Engineering Technology allows students to gain the specialization that they desire to contribute to interdisciplinary teams as engineering technologists.

College Facilities

The James and Patricia Anderson College of Engineering's facilities include five separate buildings with almost 300,000 square feet of classroom, office, and laboratory space. The newest of these is the Marvin I. Danto Engineering Development Center, featuring research and educational space that is dedicated to interdisciplinary work in areas of nanotechnology, automotive engineering, urban infrastructure, and alternative energies. Among the facilities are multimedia classrooms, a comprehensive computer center, electronics and machine shops, student project space, dedicated teaching laboratories, and sophisticated research laboratories. The four multimedia classrooms support innovative course delivery techniques, including interactive distance learning with classrooms at a variety of sites within Wayne State, at other colleges and universities, and at industrial sites. The PACE Teaming Center is designed to promote interdisciplinary project work with links to real-world engineering problems. The computer facilities include dedicated computer graphics, design, and personal computing hardware and software.

The Division of Engineering Technology is housed in a dedicated building of approximately 24,000 square feet, located at 4855 Fourth Street.

The undergraduate laboratories provide facilities in such areas as computer graphics, fluid mechanics, thermal sciences, system dynamics, statistical computation, materials science, and rapid prototyping. Some specific laboratories associated with departmental engineering specializations include: chemical measurements; chemical unit operations; materials testing and processing; nanomaterials synthesis, characterization, and device manufacturing; electron microscopy; optical metallography; soil mechanics; environmental and hydraulic engineering; roadway and building materials; structural modeling; analog and digital communications systems; computer systems; control systems; analog circuits; digital systems; microcomputers and microprocessor applications; power systems; electronics; optics; computer vision; artificial neural networks; integrated circuits fabrication; automotive engineering; human factors engineering; computer aided manufacturing; 3D printing, 3D CNC; robotics; sand casting and testing; and stress analysis.

These laboratories are used for instructional and research purposes along with such research facilities as a molecular beam laboratory; a clean room facility for device materials research; a biomechanics accelerator and impact laboratory; an acoustics and noise control laboratory; and a structural behavior laboratory. All of these are available for experimentation and research in connection with the undergraduate curricula on a college-wide basis.

The College provides support for the various instructional and research laboratories in the construction, modification, repair, calibration and installation of experimental equipment. In addition, the College offers sophisticated assistance in the design of electronic and instrumentation equipment and devices. Qualified students are encouraged to use these facilities under the supervision of trained professionals.

Many undergraduate and graduate students pursue their studies in the College while working in local industry, either full-time or part-time, where unique research facilities unavailable on campus may be found. In such situations, students are encouraged to pursue their college-credit research at the employment site, where they work under the joint supervision of their faculty advisor and a company representative. Such research can take the form of undergraduate directed study courses, Master of Science theses, or Ph.D. dissertations.

Accreditation

In addition to the accreditation of Wayne State University by the Higher Learning Commission of the North Central Association of Colleges and Secondary Schools, the undergraduate programs listed below are accredited by ABET Inc. In the Division of Engineering, the programs below that lead to a Bachelor of Science degree are accredited by the Engineering Accreditation Commission (EAC) of ABET Inc. The Electrical/Electronic Engineering Technology program and the Mechanical Engineering Technology program, offered by the Division of Engineering Technology, are accredited by the Technology Accreditation Commission (TAC) of ABET. Program accreditation is based upon careful, periodic appraisal of the faculty, curriculum, and facilities of the College. This approval provides assurance of an up-to-date, high quality education pertinent to the engineering profession. Such accreditation is recognized by other universities, prospective employers, and state professional licensing agencies.

DIVISION OF ENGINEERING (undergraduate)

Bachelor of Science Programs in:

- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

are accredited by the:

Engineering Accreditation Commission of ABET
111 Market Place, Suite 1150
Baltimore MD 21202-4012
(Telephone 410-347-7700).

DIVISION OF ENGINEERING TECHNOLOGY (undergraduate)

Electrical/Electronic Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Electrical/Electronic(s) Engineering Technology Program Criteria.

Mechanical Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Mechanical Engineering Technology Program Criteria.

Location of the College

The College is located in the heart of Detroit, Michigan, renowned as a center of automotive engineering and production. The Michigan economy is in transition, with new focus on the emerging fields of biomedical and alternative energy technologies. This industrial center provides a wealth of examples of modern engineering practice and opportunities to explore the latest in vehicle design and production, automation design, transportation planning, telemetry, hydraulic and pneumatic controls, electric power generation, and computer design and production. The research and educational strengths of Wayne State's James and Patricia Anderson College of Engineering mesh well with the traditional and new engineering industries within Michigan, preparing students for those fields. The many industries of southeastern Michigan provide engineering students with rich and varied work experiences through full or part-time employment or through the Cooperative Education Program (p. 144).

The College is affiliated with the eleven other schools and colleges of the University which, with its 29,000 students, provides a broad selection of educational opportunities on an interdisciplinary basis.

Academic Regulations: Engineering Division

Undergraduate Registration

All Division of Engineering undergraduate students are required to meet with their Engineering advisor a minimum of once per academic year in order to discuss their academic progress and curriculum. It is strongly recommended that these meetings take place before each semester's registration. Special attention should be paid to course pre- and co-requisites as well as College grade requirements in prerequisites. It is the student's responsibility to ensure that all pre-requisite and co-requisite requirements are satisfied. Students will be removed from courses entered without satisfying these requirements. Students wishing to receive a waiver of pre- or co-requisite requirements must submit an Academic Petition *prior* to registering for the affected course.

Some courses may be offered only once a year; others may have multiple sections running every semester. The University Schedule of Classes (http://www.classschedule.wayne.edu), published prior to each semester, shows when and where the classes will meet and outlines registration procedures and times.

Attendance Policy

Regular attendance in classes is necessary for success in college work. Excessive unexcused absences may result in a student failing a course. The student should arrange with the course instructor in advance for all predictable absences. Absences due to illness or conditions beyond the student's control should be reported as soon as possible via phone or e-mail to the instructor, and substantiating documentation provided upon the student's return to class.

Dean's List of Honor Students

A student who achieves a term grade point average of 3.75 or more, based on a program of twelve credits or more, is cited by the Dean for distinguished scholarship and is included on the Dean's List of Honor Students.

AGRADE Program (Accelerated Graduate Enrollment)

Accelerated Graduate Enrollment: The James and Patricia Anderson College of Engineering enables academically superior undergraduate seniors to enroll simultaneously in undergraduate and graduate programs and apply a maximum of sixteen credits toward both an undergraduate and graduate degree in the student's major field. Students who elect the 'AGRADE' Program may expect to complete the bachelor's and master's degrees in one additional year of full-time study.

To be eligible, applicants must have completed a minimum of ninety credits of course work applied towards the engineering degree and be accepted in the professional program of their major. The minimum grade point averages for acceptance into the program are a 3.3 g.p.a. overall and a 3.45 g.p.a. for courses in their department of specialization, as computed by the rules of the Division of Engineering. See the departmental academic advisor for further details.

Only those AGRADE-approved courses in which the student has earned a grade of "B" or higher will transfer to the graduate transcript. AGRADE courses with an earned grade of "B-" or below may not be applied to the graduate program.

AGRADE credit may not be applied to both a master's and PhD program. Students considering a PhD program should consult with their designated department.

Student Conduct

Each student is subject to official regulations governing student activities and student behavior. Furthermore, it is the responsibility of each student to adhere to the principles of academic integrity. Thus, a student should not falsely claim the work of another as his/her own, or misrepresent him/herself so that the measures of his/her academic performance do not reflect his/her own work or personal knowledge.

If there are reasonable grounds to believe that a student has violated the regulations or student responsibilities, he or she may be disciplined. Such discipline may include failure in the course, suspension or dismissal from the program. A description of the University's Student Due Process Policy and a discussion of academic integrity can be found at the Dean of Students Office (http://www.doso.wayne.edu/assets/codeofconduct.pdf).

Engineering Division Rules for Calculating Grade Point Average

The Division of Engineering computes Departmental and College grade point averages using rules that differ from those used to compute the cumulative grade point average on the official University transcript: the College g.p.a. is calculated based on all engineering and technical courses, as well as required English courses (Students should consult their academic advisors for details). The Departmental g.p.a. includes all courses taken within the major department. The College g.p.a. includes all engineering courses and those courses that are prerequisite to an engineering course. The preprofessional g.p.a. is calculated to determine eligibility for admission to the professional program. Preprofessional requirements that have been satisfied through transfer credit will be included in the assessment of the pre-professional g.p.a.; however, they will not be included in the official University g.p.a. or final calculation of the College or Department g.p.a.

Substandard Academic Performance

If a grade below 'C-minus' is received in any course to be applied towards the degree, the student will be required to repeat that course in the next semester in which it is available. The course must be repeated and a satisfactory grade earned before the next course in the sequence is taken. Students will be administratively withdrawn from courses for which they have not satisfied course prerequisites. General education and technical elective courses, which are not specifically required for the degree, may be repeated or a different course may be chosen to satisfy that requirement. If a different course is selected, the first grade will not be replaced in the calculation of the g.p.a.

A course in which a grade below 'C-minus' has been earned may not be subsequently passed by special examination.

Auditing Courses

Undergraduate students may elect to formally audit a course that interests them. In order to audit a course, a student must register for the class and pay the appropriate tuition. However, this course will not apply towards any degree requirements. Any course that has been completed for audit may not be subsequently enrolled in for credit, nor may credit be obtained by special examination.

Courses used to satisfy engineering program requirements my not be taken on a Pass-Fail basis, except for industry sponsored project courses taken for elective credit (maximum of 3 credit hours). Capstone design

courses, even if they include an industry sponsored project, may not be taken on a Pass-Fail basis.

Repeating Courses

Courses in which a grade lower than a 'C-minus' is earned must be repeated in the next regular (i.e., fall or winter) semester in which the course is offered. Exceptions to this rule must be approved by the Undergraduate Program Director, Department Chair, or the Associate Dean for Academic Affairs. If a student receives a substandard grade in a course at Wayne State University, they will be required to repeat that course at Wayne State University. Exceptions to this policy require prior written approval from the Associate Dean for Academic Affairs in order to take the course at another designated institution.

Students are directed to Repeating Courses — The mark of R (p. 42) for University policies related to repeating courses and credit by special examination. See also 'Division of Engineering Rules for Calculating Grade Point Average,' above.

Exclusion from the James and Patricia Anderson College of Engineering

Students failure to pass a course with at least a 'C-minus' grade after three attempts constitutes grounds for exclusion from the James and Patricia Anderson College of Engineering. Prerequisite math and science courses that do not count for degree credit, but are required if students did not place into MAT 2010 and CHM 1125, are also counted towards exclusion from the College. Students who elect to repeat a course to improve their understanding of the material even though a satisfactory ('C-minus' or higher) grade was received will not have this counted towards the number of allowed repeats.

Following exclusion from the James and Patricia Anderson College of Engineering, the privilege of registering in the College will be withheld for at least one calendar year.

A student who has been refused the privilege of registering in the James and Patricia Anderson College of Engineering may request a re-consideration of his or her status by the Academic Standards Committee (ASC) after the one-year exclusionary period. He or she should not make the request, however, unless evidence can be provided of changes in academic preparation or circumstances that will substantially increase the likelihood of academic success. A formal written request for reconsideration must be presented to the Associate Dean for Academic Affairs. Students who plan to petition for readmission are encouraged to meet with their academic advisor as early as possible during the exclusion period to discuss what changes may provide an opportunity for readmission. In no case is readmission to the James and Patricia Anderson College of Engineering guaranteed.

Academic Probation

A student is considered to be on academic probation from the University whenever his or her cumulative grade point average falls below 2.0. All students on academic probation are required to meet with their academic advisor to discuss what steps should be taken to remedy the academic deficiencies. While on probation, a student may not represent the James and Patricia Anderson College of Engineering in student activities.

A student on probation is expected to remove the grade point deficiency promptly. If a student's GPA falls below 2.0, they will be placed on academic probation for two consecutive semesters—referred to as Probation #1 and Probation #2—to provide an opportunity to improve their performance. If, after these two semesters, the GPA remains below 2.0, the student may be eligible for an additional semester to meet the 2.0 requirement, provided they have earned a term GPA above 2.0 or demonstrated steady overall improvement. If not, the student will be excluded from the College.

If the student's cumulative g.p.a. reaches at least 2.0 by the end of the first semester after being placed on probation, they will be returned to regular status. Multiple occurrences of probation in non-consecutive semesters may also result in the student's exclusion from the College. A student may also be refused the privilege of registering in the James and Patricia Anderson College of Engineering for irresponsible attendance and performance in class, regardless of any probationary status.

For complete information regarding academic rules and regulations of the University, students should see the Academic Regulations (p. 40) section of this bulletin.

Withdrawal From Courses

General rules governing withdrawal from courses and changes of program can be found on Drop/Add — Adjusting Your Schedule. (p. 55) When a student withdraws from courses, resulting in a transcript displaying a mark of W, these instances are considered attempts at the course and are factored into the assessment of permissible repeats. If a student believes that factors beyond their control, such as a family emergency or a shift in work schedule, warrant the withdrawal, they have the option to submit a written petition to the Associate Dean for Academic Affairs before the conclusion of the semester in which the course was undertaken. Approval of the petition will be documented in the student's advising record, ensuring that the course does not contribute to the Engineering repeat allowances.

Graduation

Students must apply for graduation at the beginning of the semester in which they plan on completing their degree requirements. At graduation, the University requires a minimum 2.0 grade point average in the total residence credit.

Graduates with a minimum of sixty credits in residence at Wayne State University and a grade point average of at least 3.0 may qualify for a special diploma under the following conditions:

> *Summa Cum Laude:* Student must have a grade point average in the 95th percentile of the James and Patricia Anderson College of Engineering graduating class.
> *Magna Cum Laude:* Student must have a grade point average in the 90th percentile of the graduating class.
> *Cum Laude:* Student must have a grade point average in the 80th percentile of the graduating class.

Commencement: Each year, commencement exercises are held May and December. College *Order of the Engineer* and *Professional Order of Engineering Technology* ceremonies will be held in May to induct graduates into these organizations.

Guest Students

A student attending another engineering college who wishes to take course work at Wayne State for the purpose of credit transfer to the home institution may be admitted as a guest student for one term. This is done by applying through the University Office of Admissions using either the Application for Undergraduate Admission or the Graduate Guest Application. These applications require certification by an official of the home institution. For information on graduate guest admission and visiting doctoral guests, see the Wayne State University Graduate Bulletin. Guest students are expected to have met the listed prerequisite requirements for courses in which they wish to enroll. Students wishing

to register for 3000- or 4000-level engineering classes must first receive permission from the department that teaches the course.

Second and Concurrent Degree

In accordance with the University requirements, students may earn a Bachelor of Science in engineering concurrently with or subsequent to another bachelor's degree at Wayne State University. Such students must satisfy applicable departmental and college requirements; consult an Engineering academic advisor to review these requirements.

Engineering: Minor Options

A number of undergraduate programs within the University allow students to pursue a minor in the field. Engineering students may elect to complete a minor through another school or college in conjunction with their Bachelor of Science in Engineering. This minor will generally require course credit in addition to that required for the engineering degree.

Grade Appeal

If a student believes the final grade does not accurately reflect the performance or that the grading criteria were misapplied, the first step is to speak directly with the instructor. The student should schedule an informal meeting to discuss any concerns and seek clarification on how the work was evaluated. This initial discussion provides an opportunity to understand the grading process and address any discrepancies before further action is taken.

If concerns remain unresolved after speaking with the instructor, the student should submit a formal written appeal within 30 calendar days of receiving the official grade notification. The written appeal must clearly outline the objections and include any supporting documentation. A written response will be provided within 10 days, and if dissatisfaction persists, the appeal may be escalated by contacting the department chair or program director, and ultimately the Dean. Throughout the process, the student is encouraged to seek additional guidance or support from the Ombudsperson.

Bachelor of Science: Engineering Division

Undergraduate Program Goals

The overall goal of the undergraduate engineering degree programs at Wayne State University is to prepare students for success in their immediate and long-term professional careers as engineering practitioners as well as for pursuing graduate and professional studies and lifelong learning.

Undergraduate programs in the James and Patricia Anderson College of Engineering are divided into three phases. All students must complete the professional program in order to earn their Bachelor of Science degree. The majority of students begin their engineering curriculum through the pre-professional program, which allows them to complete a limited number of courses while demonstrating their academic preparedness for the professional program. Students who require additional background in math and science before entering the pre-professional program enter the College through the Eos Program and progress to the pre-professional program upon successful completion of a defined set of foundational courses.

Recommended High School Preparation

In order to place sufficient emphasis on the English, mathematics, physics, and chemistry required for normal progress in engineering, the recommended high school preparation for admission to the James and Patricia Anderson College of Engineering is:

Algebra	2 units
Chemistry	1 unit
English	4 units
Physics	1 unit
Plane and Solid Geometry	1.5 units
Social Science or Foreign Language	2 units
Trigonometry	0.5 unit
Electives	3 units

An incoming freshman with this background enters the pre-professional program if he or she earns satisfactory scores on the placement examinations in mathematics, chemistry and English (see below).

Students who are interested in pursuing a degree in engineering but who may not have the requisite background in science and mathematics, as demonstrated by their high school record, ACT or SAT scores, or placement exam results, will be admitted to the Eos Program (p.). This program is designed to provide students with the necessary background to proceed into and succeed in the pre-professional and professional programs in the engineering major of their choice.

Admission

Admission to the undergraduate programs in the James and Patricia Anderson College of Engineering is dependent upon high school grade point average (g.p.a.) and ACT or SAT scores for those students entering directly from high school, and upon grade point average and level of curriculum completion for transfer students from community colleges or other universities. The following admissions criteria cite minimum values used to place students in the professional, pre-professional, and Eos programs. Admission to all of these programs is contingent upon satisfaction of the general undergraduate admission requirements (p. 34) of the University. (p. 34)

Admission: Professional Engineering Program

Upon Successful completion of all departmental Pre-professional course requirements, students will be admitted into the Professional Level program of their Engineering Major.

Code	Title	Credits
BE 1200	Basic Engineering I: Design in Engineering	3
BE 1300	Basic Engineering II: Materials Science for Engineering Applications	3
BE 1310	Materials Science for Engineering: Laboratory	1
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
CHM 1125 & CHM 1130	General Chemistry I for Engineers and General Chemistry I Laboratory	4
ENG 1020	Introductory College Writing	3
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2180	University Physics II for Scientists and Engineers	4

Students who do not meet the minimum requirements for admission to the professional program may be admitted to the pre-professional program as follows.

Admission: Pre-professional Engineering Program

Students entering the College directly from high school will be admitted to the pre-professional program if they have earned at least a 3.0 overall g.p.a. and placement into MAT 1800 or higher (score of 26 on the Math ACT or 620 on the Math SAT).

Students who have completed at least twelve credits of college-level coursework may be admitted to the pre-professional program if they have a minimum of a 3.0 overall g.p.a.. Students must also have placed into, or transferred the equivalent of, MAT 1800 and ENG 1020 (see below for descriptions of placement exam requirements). If fewer than twelve credits of college-level work have been completed, students must also submit their high school transcripts and ACT or SAT results.

Matriculation

Entering Freshmen

Students should plan on attending an Engineering Orientation session, scheduled in concordance with University Orientation, as early as possible to allow maximum flexibility in course scheduling. Students must take their placement exams and receive their results before attending an orientation session - allow at least seven days for the test results to post following the exam.

Transfer Students

For the student who has attended another institution and been admitted to the James and Patricia Anderson College of Engineering, the amount of advanced standing will be determined by the College and will depend upon the quantity and quality of the degree work completed prior to enrollment in this institution. Whether all, or only in part, such transferred credit may be applied toward a degree at Wayne State depending on the requirements of the curriculum chosen. No grade below a 'C' may be transferred into the College to satisfy a degree requirement. The student should consult the department academic advisor if he or she has any questions on their transfer status.

Course equivalency tables (http://www.transfercredit.wayne.edu) are designed to provide initial guidance. The decision of the Department and the College regarding the acceptance of transfer credit to be applied to the undergraduate degree in engineering is final and supersedes the published transfer tables. Any request for reconsideration of the evaluation of transfer credits accepted by the James and Patricia Anderson College of Engineering should be made in writing within one year of the date of the student's first enrollment in the College of Engineering, or within one year of the date of the evaluation if the latter is made subsequent to the student's enrollment in the College of Engineering.

Pre-professional Engineering Programs

Students in the pre-professional programs complete thirty-five to forty-five credits of their engineering curriculum, depending on their intended major. This program consists of the following courses that are required of all Division of Engineering students:

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
BE 1200	Basic Engineering I: Design in Engineering	3
CHM 1125 & CHM 1130	General Chemistry I for Engineers and General Chemistry I Laboratory	4
CHM 1130	General Chemistry I Laboratory	1
BE 1500	Introduction to Programming and Computation for Engineers	3
or BE 1600	Introduction to Programming and Computation: Python	
ENG 1020	Introductory College Writing	3
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2180	University Physics II for Scientists and Engineers	4

[1] PHY 2170 & PHY 2171 for ECE majors

Most departments also require that students complete one or more 2000-level courses within their department (contact the academic advisor for more information).

In order to be admitted to the professional program of their choice, a student must complete the pre-professional courses with no grade lower than a 'C-minus' and a College grade point average for these courses of at least 2.5. Calculation of this pre-professional g.p.a. will include the grades earned in all courses listed above in addition to departmental pre-professional requirements. The required courses may have been completed at Wayne State or transferred from another institution. If a course was completed at Wayne State, the highest WSU grade will be included in this g.p.a. calculation. For courses taken only outside of WSU, the highest grade earned at another institution will be factored into the College's calculation of the pre-professional g.p.a. (transfer grades are not included in the calculation of the official University g.p.a.). Students in the pre-professional program may opt to complete MAT 2150 and BE 2100, or defer them until after acceptance into the professional program; however, they will not be included in the calculation of the pre-professional grade point average.

Students who do not satisfy these pre-professional requirements will become ineligible to enter the professional program and are prohibited from enrolling in professional level (3000- and 4000-level) engineering courses. Students enrolled in the pre-professional program who fail to meet the 2.5 g.p.a. requirement after completion of the pre-professional courses will be subject to exclusion from the James and Patricia Anderson College of Engineering.

Professional Engineering Programs

Students must qualify for the professional program in order to complete their advanced engineering courses and apply for their bachelor's degrees. Only students in the professional program in Engineering may register for 3000- and 4000-level engineering courses and, as an undergraduate, 5000-level technical electives. Exceptional students may be granted direct admission to the professional program – the majority of students will progress through the pre-professional program first.

Honors Options

Students who qualify, either as incoming freshmen or continuing students, may opt to pursue Engineering Honors and/or University Honors as they complete their Bachelor of Science degree. Students interested in pursuing University Honors will be enrolled in both the James and Patricia Anderson College of Engineering (primary College) and the Irvin D. Reid Honors College (secondary College). Students should work closely with both their Engineering and Honors advisor to select courses. In order to graduate with University Honors, students must maintain a cumulative g.p.a. of 3.3 or higher and must complete at least twenty-eight credits of honors designated courses (please refer to the University Honors College (p. 229) requirements). To qualify for Engineering Honors in addition to University Honors, twenty-four credits of this coursework must include the following:

Code	Title	Credits
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
BE 5998	Engineering Honors Thesis	4
HON 42XX	Honors Seminar that will satisfy General Education Requirements	3-4
Eight credits of honors designated courses within the major department. Students should consult their department advisor for more information.		8
Total Credits		**18-19**

The additional credits of honors courses can be taken in any department, either as honors designated or honors option sections. Students can obtain a list of courses that will also satisfy College requirements (such as MAT 2010 or ECO 2010) from their advisor. Students may elect to pursue only Engineering Honors through the listed twenty-four credits of requirements without completing the requirements for University Honors.

Cooperative Education Program

Students who wish to enrich their education with on-the-job engineering experience may enroll in the Cooperative Education Program. In this program, full-time study terms are alternated with full-time work assignments in cooperating industries. The program may be entered at the beginning of the junior year. Special cooperative programs are available on a limited basis and provide special arrangements in the definition of the work-study period. Most of the work assignments are in the Metropolitan Detroit area on a commuting basis; however, job opportunities are available in other cities and states. The Co-op program is available in all undergraduate engineering curricula.

Each Co-op student may enroll for one academic course while on work assignment. This must be done with the approval of the student's advisor and Co-op supervisor. Following each work assignment, the student may elect to enroll in BE 3510 or CHE 3510 for one credit. Election of the course requires the completion of a report on the work experience to the department advisor and to the Co-op Coordinator. This credit for work will not be counted toward graduation unless permission is specifically recommended by the department chairperson. Students are automatically enrolled for a zero credit course (BE 3500) each term that they are on a Co-op assignment to insure that the experience appears on their transcript. A brief evaluation report covering each work assignment is to be submitted to the Co-op Coordinator, whether there has been enrollment in the above one credit courses or not. The student's performance on the job is rated by his/her industrial supervisor. Salaries and other benefits are paid for the time spent on each work assignment. For details and enrollment procedures, contact the Co-op Coordinator in the Career Planning and Placement Office.

Degree Requirements

The normal program of study for each of the degrees awarded in the James and Patricia Anderson College of Engineering requires from 120 to 136 credits. Of the total credits for the degree, at least thirty-four credits must be completed as resident credits in the degree program of the College. Departments may impose additional requirements.

Although the curriculum plans of the departmental sections which follow indicate a four-year program, many students will require additional time to complete all degree requirements. The national average time required for students to complete an engineering degree is approximately 4.5 years after beginning the calculus sequence (MAT 2010). Completion of the degree requirements in four years requires the election of an average of seventeen credits each term during the academic year. A student who participates in the Cooperative Education Program will require longer. Students may attend the University on either a full-time or part-time basis (twelve credits are considered by the University as a minimum full-time load).

Students who pursue degrees on a part-time basis may require much more than 4.5 years to complete all degree requirements. The actual amount of time required will depend upon the student's academic preparedness and the amount of time available for academic activities. The maximum load that a student carries should be consistent with the student's ability and available time. However, since a credit is defined as one class hour requiring about two hours of preparation per week carried through a semester, the fifteen to twenty-one credit programs shown in the curricular plans represent a full forty-hour academic work week. A three-hour laboratory period is generally regarded as the equivalent of one credit. Students who wish to graduate in four calendar years but who wish to schedule sixteen or fewer credits per semester may accomplish this by deferring certain courses until the spring or summer term. Students should check with their advisors regarding the courses that can best be taken in Spring/Summer term. Students who do not follow the sequence as outlined by their department must make sure that all course prerequisites are satisfied.

Specific requirements for these bachelors degrees may be found in the departmental sections for this College. These requirements are in effect as of the publication date of this bulletin; however, students should consult an academic advisor for verification of current requirements. The following discussion concerns generic aspects common to all Bachelor of Science engineering programs with the exception of Computer Science.

Basic Science Requirement

In order to meet accreditation requirements, all undergraduate engineering students are required to complete at least fifteen credits of basic science courses, including CHM 1125 and CHM 1130andPHY 2170andPHY 2180. These courses are required in all of the engineering curricula (with the exception of computer science), and it should be noted that certain curricula require the completion of prescribed science laboratories and/or additional chemistry and physics courses.

In addition, each student must elect a basic or advanced science course. Students should consult with their advisor for the current list of acceptable courses.

Mathematics Requirement

Engineering students use mathematics as a tool in all engineering and science courses in their college curricula, as well as later upon entry into the engineering profession. All prospective engineering students are encouraged to complete the number of units of mathematics stipulated in the section entitled Recommended High School Preparation, see High School Preparation, Recommended. Ideally, engineering students elect the first course in calculus (MAT 2010) in their first freshman term; however, many incoming students are not prepared to begin the mathematics program with calculus, and additional foundational coursework is necessary to strengthen the student's background. This foundational coursework is not included in the total credits required for an engineering degree. All students entering the Division of Engineering with no transfer credit in calculus must take the Mathematics Placement Examination (see above).

General Education Requirements

All students must satisfy the General Education Requirements (p. 24) of the University. In some cases, the College prescribes a more limited set of alternatives than permitted by the University in order to meet accreditation requirements while optimizing a path towards the degree. Students are cautioned to observe the following College requirements when selecting courses to satisfy General Education Requirements.

Communication Skills

In addition to the basic composition course ENG 1020 (BC), six credits in communication skills (ENG 3050 and ENG 3060) are required of all Engineering students, and these satisfy the Intermediate Composition (IC) and Oral Communication (OC) requirements of the University.

Inquiries

Engineering today extends far beyond technical decisions. Far-reaching effects of man-made technology require the engineer to be aware of and sensitive to his or her social responsibilities. Courses involving the engineer in sociological, economic, and aesthetic study are incorporated into the engineering program in order to insure an understanding beyond technical problems, which will enable the complete engineer to make value judgments concerning the impact of this technology upon society.

The College has, therefore, included a program in the social sciences and the humanities as a part of all engineering curricula. This program is integrated with the non-science portion of the University's General Education Program, which requires a student to elect one course from each of six categories. The Engineering Division imposes requirements in addition to the University-wide restrictions on some of the courses that satisfy General Education Requirements. These restrictions are described above and are shown in the degree requirements for each engineering program.

Technical Electives

Technical electives may be chosen from a selection of course offerings of the James and Patricia Anderson College of Engineering and the advanced science and mathematics courses of the College of Liberal Arts and Sciences. Other courses, such as advanced courses in the Mike Ilitch School of Business, may be elected with the prior approval of the undergraduate program director. The purpose of the technical elective is to increase the depth or breadth of one's professional knowledge. Courses should be selected so as to meet this objective. Engineering courses elected as technical electives are normally selected at the 5000-level. These courses are open to both undergraduate and graduate students. Technical electives require the approval of a student's department and should be discussed with his or her academic advisor.

Placement and Qualifying Examinations

All entering freshmen must take the placement examinations in mathematics, chemistry and English. Transfer students who do not have transfer credit equivalent to MAT 2010, CHM 1125/CHM 1130, and ENG 1020 (with a grade of 'C' or higher) must take the appropriate placement examination. Consult the Office of Testing, Evaluation, and Student Life Research Services (http://www.testing.wayne.edu) for information regarding the schedule for the examinations.

Chemistry (Qualification Exam)

The sequence of chemistry courses for the engineering student normally begins with CHM 1125 and CHM 1130. Qualification for CHM 1125 and CHM 1130 requires a satisfactory score on the Chemistry Placement Examination. If a student is not properly prepared to consider placement in CHM 1125 and CHM 1130, direct entry into CHM 1040 is permissible.

English (Placement Exam)

All entering freshmen and transfer students shall determine their aptitude in English composition by completing the directed self-placement (https://testing.wayne.edu/students/tests/placement-competency/english) process unless they have earned credit equivalent to ENG 1020 through transferred courses, AP examinations, or the CLEP program.

Mathematics (Qualification Exam)

The sequence of mathematics courses for the engineering student normally begins with MAT 2010. For admission to MAT 2010, a qualifying examination must be passed. The placement examination must be taken by all students who have not transferred in the equivalent of MAT 2010, completed with at least a grade of 'C', or through AP credit. Students may apply to take the placement examination for either MAT 1800 or MAT 2010 depending upon their preparation in mathematics. The MAT 1800 Placement Examination is based upon one and one-half years of high school algebra and one year of high school geometry. The MAT 2010 Placement Examination is based upon a total of three and one-half to four years of college preparatory mathematics covering algebra, plane and solid geometry and trigonometry.

Failure to qualify for MAT 2010 may result in the student being placed in a lower level course such as MAT 1010, MAT 1070, or MAT 1800 depending upon the student's performance. Engineering students who do not take the Mathematics Placement Examination prior to registration for the first semester of the freshman year must enroll in MAT 1010 .

Emerging Scholars and Rising Scholars Programs

All engineering students who place into MAT 1070, MAT 1800 or MAT 2010 are encouraged to apply to the Emerging Scholars Program. Students who place into MAT 1010 are required to apply to the Rising Scholars Program. These are enhanced mathematics programs that provide additional experience in mathematical applications and problem solving, better preparing students for engineering problem solving. Contact the Department of Mathematics for more information: 1150 Faculty/Administration Building; 313-577-2479.

BE 1050 Career Readiness for Engineering Students Cr. 1

The design of the Career Readiness for Engineering Students series is set to help you identify and apply the steps necessary to reaching your goals related to your career and professional development. The materials & activities provided throughout the course will help you define your career goals, build your personal career materials, identify and apply the skills that are most sought after by employers to prepare you for success at your co-op and throughout your career. Offered Fall.

BE 1060 Building a Foundation for College Success Cr. 1
Satisfies General Education Requirement: Wayne Experience
This course is designed to expose students to the Wayne State University undergraduate experience. Students will gain an understanding of campus resources, institutional values, and the merits of a liberal arts education from an urban research one university. This course will aid in the development of critical and analytical thinking skills necessary for college success while determining one's academic and professional goals. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Freshman.
Equivalent: FPC 1020, RSE 1010

BE 1101 Introduction to Officership Cr. 1
Classroom introduction to leadership, and the experiential examination of leadership, followership, decision-making, and group accomplishment of tasks. Offered Every Other Year.

BE 1102 Introduction to Leadership Cr. 1
Continuation of B E 1101; focus on communications, leadership, and problem-solving. The light infantry platoon and the troop leading process. Offered Every Other Year.
Prerequisite: BE 1101 with a minimum grade of C-

BE 1200 Basic Engineering I: Design in Engineering Cr. 3
Core principles of engineering practice: design, teamwork, professional ethics. Offered Fall, Winter.
Prerequisites: MAT 1050 with a minimum grade of C (may be taken concurrently), MAT 1070 with a minimum grade of C (may be taken concurrently), MAT 1800 with a minimum grade of C (may be taken concurrently), MAT 2010 with a minimum grade of C- (may be taken concurrently), MAT 2020 with a minimum grade of C- (may be taken concurrently), or MAT 2030 with a minimum grade of C- (may be taken concurrently)
Fees: $50

BE 1300 Basic Engineering II: Materials Science for Engineering Applications Cr. 3
Fundamentals of materials science; emphasis on how material properties and behavior affect engineering applications. Offered Every Term.
Prerequisites: (CHM 1125 with a minimum grade of C- or CHM 1100 with a minimum grade of C-), CHM 1130 with a minimum grade of C-, BE 1200 with a minimum grade of C- (may be taken concurrently), (PHY 2170 with a minimum grade of C- (may be taken concurrently) or PHY 2175 with a minimum grade of C- (may be taken concurrently)), and MAT 2020 with a minimum grade of C- (may be taken concurrently)
Corequisite: BE 1310

BE 1310 Materials Science for Engineering: Laboratory Cr. 1
Laboratory component of B E 1300. Offered Every Term.
Corequisite: BE 1300
Fees: $35

BE 1500 Introduction to Programming and Computation for Engineers Cr. 3
Use of computational tools, such as Excel and MATLAB, to solve engineering problems. Topics include general engineering problem solving, algorithm development, programming, and computational analysis. Offered Fall, Winter.
Prerequisites: MAT 2010 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BE 1600 Introduction to Programming and Computation: Python Cr. 3
An introduction to programming using Python for students with no programming experience. Basic control structures (sequence, selection, repetition) and all core data types using objects. Practice on core data structures (string, list, tuple, dictionary, and set). Design, implementation and testing of programs to solve problems with an emphasis on data manipulation using real world, practical examples. Offered Fall, Winter.

BE 2100 Basic Engineering III: Probability and Statistics in Engineering Cr. 3
An introduction to application of probability theory and statistical methods in engineering, including design and manufacturing. Offered Every Term.
Prerequisites: MAT 2020 with a minimum grade of C- (may be taken concurrently)

BE 2201 Innovative Tactical Leadership Cr. 1
Military organizational leadership with focus on leadership development and interpersonal group dynamics. Offered Every Other Year.
Prerequisite: BE 1102 with a minimum grade of C-

BE 2202 Leadership in Changing Environments Cr. 2
Challenges of leading in complex contemporary operational environments. Cross-cultural challenges of leadership applied to practical Army leadership tasks and situations. Offered Every Other Year.
Prerequisite: BE 1102 with a minimum grade of C-

BE 2600 Global Tech Internship Cr. 3
The Global Tech Experience is a virtual, equity-driven experiential learning program that enables undergraduate students from all backgrounds to build career-focused intercultural and technical skills. Offered Every Term.

BE 3000 Engineering Bridge Mentorship Program Leader Cr. 0
Documentation of mentor participation in Engineering Bridge Program. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

BE 3301 Leading Small Organizations I Cr. 2
Leadership development and interpersonal and group dynamics. Methods of visualizing, planning and leading organizations to achieve set goals. Offered Every Other Year.

BE 3302 Leading Small Organizations II Cr. 2
Offered Every Other Year.
Prerequisite: BE 3301 with a minimum grade of C-

BE 3500 Co-Op Record Cr. 0
Engineering practice under supervision in cooperative education program. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Information Technology, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

BE 3510 Internship Experience Cr. 1-3
Engineering practice under supervision in cooperative/internship education program. Written report required. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Industrial Engineering, BS in Information Technology, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Repeatable for 6 Credits

BE 3900 National Design Competition Participant Cr. 0
For engineering undergraduates who are active team members in national engineering design competition projects. Satisfactory completion of this course will document active participation throughout the semester. Offered Every Term.

BE 4401 Leadership and Management Cr. 3
Multiple styles and theories of leadership; ethical decision making, especially as relating to changing organizational and individual behavior; accomplishing goals in resource-constrained environments. Offered Every Other Year.
Prerequisite: BE 3302 with a minimum grade of D-

BE 4402 Military Professionalism and Professional Ethics Cr. 3
Evaluation and assessment of needs of subordinate units and individuals; near-term and short-term plans to address these needs. Analysis of a historical battle as well as analysis of moral and leadership dilemmas in history. Offered Every Other Year.
Prerequisite: BE 4401 with a minimum grade of C-

BE 5900 National Design Competition Projects Cr. 1-4
Primarily for engineering undergraduates who are dedicating a substantial amount of effort towards college-sponsored national design competition projects. Offered Every Term.
Repeatable for 99 Credits

BE 5998 Engineering Honors Thesis Cr. 1-4
Completion of required Honors Thesis. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.
Repeatable for 4 Credits

EGR 3995 College-to-Career Seminar Cr. 1
This seminar course introduces engineering students to a diverse spectrum of engineering careers through interactive discussions with industry professionals, academic experts, and accomplished alumni. The course aims to enhance student engagement and foster a strong sense of belonging in their chosen engineering majors by providing in-depth insights into various career paths, current industry demands, and future trends. Through a combination of guest lectures, panel discussions, and networking opportunities, students will gain valuable perspectives on the practical applications of their studies, potential career trajectories, and the skills necessary for success in the rapidly evolving field of engineering. This course is designed to help students align their academic focus with their career aspirations and develop a broader understanding of the engineering profession's impact on society. Offered Fall, Winter.

EGR 5000 Innovation and Entrepreneurship Cr. 3
This project-based course guides students through the process of developing an innovation idea from concept through iterative refinement, leveraging interdisciplinary expertise and industry mentorship. Students engage in ongoing dialogue with faculty and professionals to deepen understanding, improve feasibility, and advance their projects. The course features a strong emphasis on real-world application, communication, and documentation through midterm and final written reports. Successful completion enables students to join the Anderson Venture Institute community, offering further opportunities for funding, mentorship, and collaboration to accelerate their innovation's impact. Offered Yearly.

EGR 5655 Innovation & Entrepreneurship I Cr. 3
Provides education and hands-on experience in innovation and entrepreneurship applied to enterprise, product and service design and delivery. The first of a 2-semester sequence, this course teaches methods and tools to find, formulate, and develop engineering innovation and entrepreneurship, leading to practical, relevant, and productive new commercial and social enterprises. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Engineering.

EGR 5656 Innovation & Entrepreneurship II Cr. 3
Provides education and hands-on experience in innovation and entrepreneurship applied to enterprise, product and service design and delivery. This course is the second of a 2-semester sequence. This course teaches methods and tools to find, formulate and develop engineering innovation and entrepreneurship, leading to practical, relevant, and productive new commercial and social enterprises. Offered Winter.
Restriction(s): Enrollment limited to students in the College of Engineering.

EGR 5657 Innovation & Entrepreneurship Lab Cr. 1
Provides hands-on application of Lean LaunchPad principles in innovation and entrepreneurship applied to enterprise, product and service and delivery. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Engineering.
Repeatable for 2 Credits

EGR 5658 Global Collaborative Projects Involving Sustainability, Innovation and Cultural Diversity Cr. 3
Participate in an authentic, global project experience that replicates how you will work in your career. This course, is designed for senior and graduate engineering students from diverse backgrounds. It aims to foster global collaboration, emphasizing sustainability, innovation, and building cross-cultural awareness and diversity. Students will engage in collaborative engineering projects, case studies, presentations, and discussions while gaining insights into different cultures, sustainable engineering practices, innovation, and global sustainability challenges. Offered Spring/Summer.

EGR 5990 Competition Team Cr. 2
This course is based on the students' contribution to a team participating in reputed regional/national/international competitions. Participation in the competition gives students a unique, multifaceted learning opportunity entirely led and run by students under the supervision of faculty member. Project teams collaboratively solve the complex engineering problems while gaining real-world experience. Participation in the competition provides students with hands-on laboratory learning experience and gives opportunities to hone leadership and professional skills. The faculty advisor is expected to provide technical and administrative support to the team and the overall program. Offered Every Term.
Repeatable for 4 Credits

EGR 5995 Special Topics in Engineering Cr. 1-4
State of the art research, development and practice topics from across the fields of engineering; emphasis on interdisciplinary topics. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Engineering.
Repeatable for 4 Credits

General Engineering (B.S.)

The Bachelor of Science in General Engineering program is an interdisciplinary, broadly focused major studying concepts related to several engineering disciplines.

For admission to the B.S. in General Engineering, students must satisfy the admission criteria of the University (p. 34) and the bachelor of science programs in the James and Patricia Anderson College of Engineering (p. 144).

The Bachelor of Science in General Engineering requires the completion of 120-123 credits total credits, depending on the selection of directed electives. The first two years of the B.S. in General Engineering will follow the general education, basic engineering, mathematics, and science curriculum of the James and Patricia Anderson College of Engineering. Students can choose a minor in the third year of the program from various engineering programs, business, law, and entrepreneurship.

Students can go deeper within a selected area of specialization together with industry internships in the fourth year of the program in areas such as Data Analytics, Systems Engineering, AI, Mechatronics, etc.

Biomedical Engineering

Office: 818 W. Hancock; 313-577-1344
Chairperson: Cynthia Bir
http://engineering.wayne.edu/bme/

Biomedical engineering (BME) is one of the fastest growing disciplines in engineering. This field has developed from the knowledge that engineering principles can be applied to better understand how the human body functions as well as the effect that outside forces have on it, whether they be diagnostic or traumatic. A biomedical engineer brings together traditional engineering principles with the life sciences in a completely integrated fashion. The result is an engineer who views the human body as a complex system, its diseases and injuries as breakdowns in that system, and medical interventions as design alternatives for the repair of the system. As the population ages and medical costs increase, biomedical engineers are required both to understand the mechanistic causes of injury and disease and to design and implement interventions to prevent and mitigate the suffering of individuals and to reduce the cost of medical care to society.

Wayne State has a long history with respect to biomedical engineering research. In 1939, faculty from the James and Patricia Anderson College of Engineering and School of Medicine began collaborating to investigate the mechanisms of injuries to the human body, and educational programs in the area of biomedical engineering have existed at Wayne State since the 1950s. They have developed from a few courses taken within traditional engineering departments to the graduate degree program in biomedical engineering, introduced in 1998. The Department of Biomedical Engineering, interdisciplinary between the James and Patricia Anderson College of Engineering and the School of Medicine, was established in 2002. Drawing upon the strengths of the biomedical engineering graduate program, the Department has established a new undergraduate program that accepted its first students for the Fall 2010 semester.

- Biomedical Engineering (B.S.) (p. 150)

Biomedical Engineering (B.S.)

Wayne State's undergraduate program in biomedical engineering is built upon a strong foundation of engineering that integrates biomedical sciences early in the curriculum and continuously throughout subsequent coursework. To prepare students for careers and/or further education, traditional lectures are combined with problem-based and project-based learning to allow students to immediately apply their foundational knowledge to biomedical engineering challenges. From the first week of the program, through an ongoing partnership with the Medical School and affiliated hospitals, students are introduced to real-world biomedical engineering problems and tools to develop a thorough understanding of the challenges faced in clinical medicine. All students are also encouraged to become actively involved in one of the research groups of the Department for which opportunities are available as early as freshman year. Before the junior year, all biomedical engineering students must select one of three concentrations: biomaterials, biomechanics, or bio-medical instrumentation.

The program's objectives are to prepare graduates who, within a few years of graduation, will be able to

1. Work in multidisciplinary teams to translate biomedical science into applications that will improve people's quality of life

2. Utilize and advance engineering, mathematical, and biomedical tools to solve biomedical engineering problems and design biomedical engineering systems

3. Continue the practice of lifelong learning in engineering and/or biomedical fields based on a strong underlying foundation in both areas of study

The B.S.B.M.E. program is coordinated by the Undergraduate Program Chairperson with the assistance of the Departmental academic advisor. These individuals are available to support students in selecting courses, identifying research and internship opportunities, and discussing plans for after graduation. Students are encouraged to join and actively participate in the campus chapter of the Biomedical Engineering Society (BMES) for networking and professional development opportunities.

Admission Requirements

Students qualifying for admission to the James and Patricia Anderson College of Engineering must select the B.S.B.M.E. program in the online application. The applicant must provide supporting documentation as instructed. Due to the challenging nature of biomedical engineering, the undergraduate program is highly selective and admits students who have a demonstrated ability in math and science. In addition, the program is structured as a cohort-based program. Therefore, admission for transfer students requires completion of a minimum set of prerequisite courses. They must complete all of the first-year coursework to join the second-year program. Students are only able to join the second-year program as transfer students regardless of transfer credits.

Freshman Admission

Students wishing to enter the program immediately following high school are expected to have a minimum high school g.p.a. of 3.2 and a minimum Math ACT/SAT score of 23/620. Students who have completed college-level coursework through dual enrollment programs will still be considered freshmen. For full consideration for fall admission, including all scholarship opportunities, students should apply to the University and the Biomedical Engineering Program by December 1. Following admission, students must confirm placement into Calculus I (MAT 2010) and General Chemistry + lab (CHM 1125 and CHM 1130) through either testing (ACT/SAT, AP, Placement Exams) or transfer credit. Admitted students who do not meet these criteria will be admitted as Pre BME.

Transfer Admission

Students may apply to transfer into the program after completing college-level coursework at Wayne State or at another post-secondary institution. Transfer students may apply to join the program as part of a first-year or second-year cohort depending on the coursework that they have previously completed. Students wishing to join the program in the second year are required to complete the program's first-year coursework. The following classes should be completed, or in progress, for transfer students to be considered to join each cohort:

Code	Title	Credits
First Year Cohort		
Placement into Calculus I, General Chemistry (with lab), and Basic Composition		
Second Year Cohort		
Mathematics: Calculus I and Calculus II		
English: Basic Composition		
The following Basic Engineering coursework		
BE 1200	Basic Engineering I: Design in Engineering	3
BE 1300	Basic Engineering II: Materials Science for Engineering Applications	3
BE 1310	Materials Science for Engineering: Laboratory	1
BE 1500	Introduction to Programming and Computation for Engineers	3

Applicants without all of the expected placement or coursework will be required to complete the missing items during the spring/summer term. Transfer students are accepted on a space-available basis. Prospective students are expected to have earned a minimum math/science g.p.a. of 3.2 in their college coursework.

Candidates for the Bachelor of Science degree must complete 121 credits of coursework, including the University General Education (p. 24) requirements. A maximum of 35 credits shall comprise the General Education Program. Forty-five credits of coursework must be in engineering sciences or engineering design. Most courses offered by other engineering departments count toward this forty-eight engineering credit requirement. Note: BME 2050, BME 4010, and BME 5070 count as life science courses and not engineering courses. All coursework must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarships and degrees. All prerequisite coursework must be completed; any waivers to listed prerequisite courses must be approved by the Undergraduate Program Chairperson. In compliance with the academic requirements of the College of Engineering, students must earn a grade of C- or higher in all courses applied to the B.S.B.M.E. degree requirements. The 8-semester curriculum for the program is provided below. Students interested in attending medical or dental school after graduation may add any remaining pre-professional requirements into their curriculum with minimal difficulty.

Biomedical Engineering Curriculum

First Year		
First Semester		**Credits**
BE 1200	Basic Engineering I: Design in Engineering (Biomedical and Chemical)	3
CHM 1125	General Chemistry I for Engineers	3
CHM 1130	General Chemistry I Laboratory	1
ENG 1020	Introductory College Writing	3
MAT 2010	Calculus I	4
BME 1900	Biomedical Engineering Freshmen Seminar	1
	Credits	**15**
Second Semester		
BE 1300	Basic Engineering II: Materials Science for Engineering Applications	3
BE 1310	Materials Science for Engineering: Laboratory	1
BE 1500	Introduction to Programming and Computation for Engineers	3
MAT 2020	Calculus II	4
PHY 2170	University Physics I for Scientists and Engineers	4
	Credits	**15**
Second Year		
First Semester		
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BME 2910	Biomedical Engineering Design Lab I	1
MAT 2030	Calculus III	4
ME 2410	Statics	3
	Credits	**15**
Second Semester		
BME 2050	Introduction to Anatomy and Physiology for Biomedical Engineers	4
BME 2920	Biomedical Engineering Design Lab II	1
MAT 2150	Differential Equations and Matrix Algebra	4
ME 2420	Elementary Mechanics of Materials	3
PHY 2180	University Physics II for Scientists and Engineers	4
	Credits	**16**

Third Year		
First Semester		
BME 3470	Biomedical Signals and Systems	3
BME 3910	Biomedical Engineering Design Lab III	1
BME 3010	Biomedical Transport	3
ENG 3050	Technical Communication I: Reports	3
ECE 3300	Introduction to Electrical Circuits	4
General Education Course		3
	Credits	**17**
Second Semester		
BME 3920	Biomedical Engineering Design Lab IV	2
BME 4010	Engineering Physiology Laboratory	2
BME 4X10- First Course in Concentration Elective		3
ENG 3060	Technical Communication II: Presentations	3
General Education Course		3
	Credits	**13**
Fourth Year		
First Semester		
BME 4910	Biomedical Engineering Capstone Design I	3
Concentration Electives		8
General Education Course		3
	Credits	**14**
Second Semester		
BME 4920	Biomedical Engineering Capstone Design II	3
BME 4X10—Second course in Concentration Elective		3
Concentration Elective		4
General Education Courses		6
	Credits	**16**
	Total Credits	**121**

Honors and Accelerated Master's AGRADE Program

All students in the B.S.B.M.E. program are encouraged to pursue their degree with Engineering and/or University Honors. Students can complete their requirements for Honors within the 125 credits required for the program. The required Honors thesis will satisfy the requirement for one of the concentration electives.

Students who have earned at least a 3.45 g.p.a. through their junior year may apply to the AGRADE Program. Through this program, students may earn their M.S. in biomedical engineering with one additional year of coursework (18 credits).

Chemical Engineering and Materials Science

Office: 1100 W. Engineering Building; 313-577-3800
Chairperson: Jeffrey Potoff
http://engineering.wayne.edu/che/

Chemical engineering applies the sciences of chemistry, biology, physics and mathematics in a synergistic way to develop new or improved technologies, products and processes for the benefit of mankind. The chemical engineering B.S. degree provides a strong technical background, from which graduates may enter into professional careers in fields such as petrochemical processing, energy, pharmaceuticals, medical devices, advanced materials, semiconductor processing, biotechnology, environmental control, natural and synthetic rubbers and plastics, surface coatings, food processing, cosmetics, and consumer products. Many chemical engineering undergraduates continue their studies in graduate programs (M.S. or Ph.D.) in chemical engineering, or in related disciplines such as materials science and biomedical engineering, in preparation for careers in research and development. Chemical engineering also provides excellent undergraduate preparation for professional programs in medicine (M.D.), law (J.D.), and business (M.B.A.).

The undergraduate program in chemical engineering includes studies in chemistry, mathematics, and physics, as well as an understanding of physical, biological and chemical systems and processes. Engineering science courses cover material and energy balances, transport phenomena, thermodynamics, reaction kinetics, separation processes, and dynamics, simulation, and control of systems and processes.

In addition to the Undergraduate Program Goals, the specific objectives of the chemical engineering B.S. program are:

1. *Engineering Practice.* Graduates of the B.S. in Chemical Engineering program will have the ability to successfully pursue professional employment in an entry-level position in chemical engineering or related disciplines.
2. *Graduate Education.* Graduates of the B.S. in Chemical Engineering program will be academically well-prepared to pursue graduate study in chemical engineering and related disciplines.
3. *Science and Mathematics.* Graduates of the B.S. in Chemical Engineering program will be able to apply fundamental knowledge in chemistry, physics, biology, mathematics, and engineering to practical problems in chemical engineering, and related disciplines.
4. *Engineering Analysis.* Graduates of the B.S. in Chemical Engineering program will be able to apply theoretical, computational, and experimental methods to solve engineering problems.
5. *Design.* Graduates of the B.S. in Chemical Engineering program will be able to apply principles and methods of chemical engineering to the design of chemical processes and products.
6. *Communications.* Graduates of the B.S. in Chemical Engineering program will be able to communicate effectively in oral and written technical presentations and reports.
7. *Professionalism.* Graduates of the B.S. in Chemical Engineering program will be aware of the social responsibility of engineers and the importance of ethics in the engineering profession.
8. *Self-learning.* Graduates of the B.S. in Chemical Engineering program will be able to acquire new knowledge through self-learning and continuing education, as needed in their professional careers.
9. *Co-op and Undergraduate Research Experience.* Graduates of the B.S. in Chemical Engineering program will have received opportunities to enrich their preparation for professional practice and/or graduate

studies through co-op experience and internships, and through undergraduate research experiences.

10. *Advanced Technical Knowledge.* Through the program's curriculum options, graduates of the B.S. in Chemical Engineering program will have acquired in-depth knowledge in one of the following areas: Product and Process Engineering; Biological Engineering; Molecular Engineering and Nanotechnology.

- Chemical Engineering (B.S.) (p. 153)

Chemical Engineering (B.S.)

Chemical engineering applies the sciences of chemistry, biology, physics and mathematics in a synergistic way to develop new or improved technologies, products and processes for the benefit of mankind. The chemical engineering B.S. degree provides a strong technical background, from which graduates may enter into professional careers in fields such as petrochemical processing, energy, pharmaceuticals, medical devices, advanced materials, semiconductor processing, biotechnology, environmental control, natural and synthetic rubbers and plastics, surface coatings, food processing, cosmetics, and consumer products. Many chemical engineering undergraduates continue their studies in graduate programs (M.S. or Ph.D.) in chemical engineering, or in related disciplines such as materials science and biomedical engineering, in preparation for careers in research and development. Chemical engineering also provides excellent undergraduate preparation for professional programs in medicine (M.D.), law (J.D.), and business (M.B.A.).

The undergraduate program in chemical engineering includes studies in chemistry, mathematics, and physics, as well as an understanding of physical, biological and chemical systems and processes. Engineering science courses cover material and energy balances, transport phenomena, thermodynamics, reaction kinetics, separation processes, and dynamics, simulation, and control of systems and processes.

Admission Requirements

Admission is contingent upon satisfaction of the general undergraduate admission requirements of the University (p. 34) and the bachelor of science programs in the James and Patricia Anderson College of Engineering (p. 144).

Program Requirements

Candidates for the Bachelor of Science degree must complete 128-129 credits of coursework, including the University General Education (p. 24) requirements. Forty-eight credits of coursework must be in engineering sciences or engineering design. All course work must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees. Non-engineering entries, cited below by subject rather than individual course number, indicate courses to be selected in fulfillment of the University General Education Requirements. Degree requirements shown in the curricula below are in effect as of the publication date of this Bulletin. Students should consult their advisors for verification of current requirements.

First Year		
First Semester		**Credits**
BE 1200	Basic Engineering I: Design in Engineering	3
MAT 2010	Calculus I	4
CHM 1125	General Chemistry I for Engineers	3
CHM 1130	General Chemistry I Laboratory	1
ENG 1020	Introductory College Writing	3
	Credits	**14**
Second Semester		
BE 1600	Introduction to Programming and Computation: Python	3
MAT 2020	Calculus II	4
CHM 1145	General Chemistry II for Engineers	3
CHM 1150	General Chemistry II Laboratory	1
PHY 2170	University Physics I for Scientists and Engineers	4
	Credits	**15**
Second Year		
First Semester		
BE 1300	Basic Engineering II: Materials Science for Engineering Applications	3
BE 1310	Materials Science for Engineering: Laboratory	1
MAT 2030	Calculus III	4
CHM 1240	Organic Chemistry I	4
CHM 1250	Organic Chemistry I Laboratory	1
CHE 2800	Material and Energy Balances	4
	Credits	**17**
Second Semester		
MAT 2150	Differential Equations and Matrix Algebra	4
CHM 2225	Organic Chemistry II for Engineers	3
PHY 2180	University Physics II for Scientists and Engineers	4
CHE 3300	Thermodynamics: Chemical Equilibria	4
(SI) Social Inquiry		3
	Credits	**18**
Third Year		
First Semester		
CHE 3100	Transport Phenomena I	3
CHE 3400	Kinetics and Reactor Design	4
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
ENG 3050	Technical Communication I: Reports	3
PHI 1120	Professional Ethics	3
	Credits	**16**
Second Semester		
CHE 3220	Measurements Laboratory	2
CHE 3600	Transport Phenomena II	3
CHE 3800	Separation Processes	3
CHE 4260	Chemical Engineering Seminar I	0
CHM 5440	Physical Chemistry II	4
ENG 3060	Technical Communication II: Presentations	3
	Credits	**15**
Fourth Year		
First Semester		
CHE 3820	Chemical Engineering Laboratory	2
CHE 4200	Product and Process Design	3
CHE 4600	Process Dynamics and Simulation	3
CHE 4860	Chemical Engineering Seminar II	1
Chemical Engineering Technical Elective		2-3
(CIV) Civic Literacy		3
	Credits	**14-15**
Second Semester		
CHE 4800	Chemical Process Integration	3
CHE 6570	Safety in the Chemical Process Industry	3
Chemical Engineering Technical Electives		6
(GL) Global Learning		3
(DEI) Diversity, Equity and Inclusion		3
	Credits	**18**
	Total Credits	**127-128**

[1] Elect either CHM 5440 and 8 Technical Elective Credits, or CHM 5600 and 9 Technical Elective Credits.

Technical Electives for Chemical Engineering

- Chemical Engineering students are required to complete 8 or 9 credits from the list below, or other courses with the approval of the undergraduate program coordinator.
- Combination of BE 1050 and BE 3510 may be counted as technical elective credit; BE 1050 must be completed first in the sequence
- A maximum of 2 credits of BE 3510 can be taken as technical electives
- No more than 1 credit per semester of BE 3510

Code	Title	Credits
CHE 4990	Directed Study	1-3
CHE 5050	Statistics and Design of Experiments	3
CHE 5100	Quantitative Physiology	4
CHE 5110	Fundamental Fuel Cell Systems	4
CHE 5120	Fundamentals of Battery Systems for Electric and Hybrid Vehicles	4
CHE 5350	Polymer Science	3
CHE 5360	Polymer Processing	3
CHE 5995	Special Topics in Chemical Engineering I	1-4
CHE 5996	Chemical Engineering Research	1-3
CHE 6100	Introduction to Sustainable Engineering	3
CHE 6450	Biochemical Engineering	3
MSE 5650	Surface Science	3
BME 5370	Introduction to Biomaterials	4
IE 6560	Deterministic Optimization	3
IE 6611	Fundamentals of Six Sigma	3
IE 6310	Lean Operations and Manufacturing	3
IE 6840	Project Management	3
CHM 6240	Organic Spectroscopy	3
PHY 6450	Introduction to Material and Device Characterizations	4
BE 1050	Career Readiness for Engineering Students	1
BE 3510	Internship Experience	1

Mission Statement

As an urban research university, our mission is to discover, examine, transmit, and apply knowledge that contributes to the positive development and well-being of individuals, organizations, and society. Wayne State University is a national research institution dedicated to preparing students to excel in an increasingly advanced and interconnected, global society.

Program Educational Objectives

1. The overall objective of the BS CHE program at Wayne State University is to prepare students for a) success in their immediate and long-term careers as practicing chemical engineers; and b) success in continuing education in graduate and professional schools.

2. The program supports the university's urban mission by promoting diversity and encouraging disadvantaged and nontraditional students to enter the engineering profession.

3. We utilize our faculty's strengths in research to enrich undergraduate education through: a) individual undergraduate research experiences; and b) we engage in educational partnerships with our industrial constituents in southeastern Michigan through an active undergraduate coop program.

Student Outcomes

The Student Outcomes are described below, and the contribution of each Program Outcome to the ABET Criterion 3, components 1-7 is explained. ABET Criterion 3 1-7 can be found at: https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-engineering-programs-2025-2026/

1. **Chemistry.** Graduates of the BS CHE program will possess a strong grounding in Chemistry, together with a working knowledge of organic chemistry and materials science. Graduates will possess a working knowledge of either physical chemistry or biochemistry, depending on their choice of Curriculum Options. Contributes to the Science portion of Criterion 3 component (1).

2. **Math and Science.** Graduates of the BS CHE program will possess a working knowledge of mathematics, including calculus through differential equations, and they will be able to apply modern mathematical and computational techniques to the solution of engineering problems. Graduates will be well grounded in physics. Contributes to the Math and Science parts of Criterion 3, component (1).

3. **Chemical Engineering Fundamentals.** Graduates of the BS CHE program will possess a working knowledge of material and energy balances applied to chemical processes; thermodynamics of physical and chemical equilibrium; fluid flow and heat transfer; chemical reaction kinetics and reaction engineering; mass transfer and separation processes, and they will be able to apply this knowledge to identify, formulate, and solve engineering problems. Contributes to Criterion 3, components (1) and (7).

4. **Chemical Process Engineering.** Graduates of the BS CHE program will possess a working knowledge of process dynamics and control and product and process design. Contributes to the Engineering part of Criterion 3, component (1). Contributes intensively to Criterion 3, components (2), (4), and (6) through the design project in CHE 4200 (Product and Process Design).

5. **Design Experience.** Graduates of the BS CHE program will develop skills in engineering design via content throughout the curriculum that includes identification, formulation, and solution of open-ended problems, scale-up concepts, consideration of safety and environmental issues, and understanding of economic factors. Contributes to the engineering part of Criterion 3, component (1). Contributes intensively to Criterion 3, components (2), (3), (4), (5), and (7) through the capstone design projects in CHE 4200 (Product and Process Design) and CHE 4800 (Chemical Process Integration) .

6. **Laboratory Experience.** Graduates of the BS CHE program will develop experimental skills via laboratory experiences relevant to chemical engineering principles, covering design of appropriate experiments for measurement of engineering properties and process variables, the analysis and interpretation of data, written and oral presentation of results, and teamwork skills including project management and multidisciplinary team functions. Contributes broadly to Criterion 3, component (1). Contributes intensively to Criterion 3, components (5), (6), and (7)

7. **Advanced Technical Knowledge.** Graduates of the BS CHE program will develop in-depth knowledge of an advanced area of chemical engineering through a variety of technical elective course options. Contributes to Criterion 3, component (1).

8. **Communication Skills.** Graduates of the BS CHE program will be able to communicate effectively in oral presentations, electronic

communications, and written technical reports. Contributes to Criterion 3, component (3).

9. **Professionalism.** The BS CHE program will develop awareness in staying current with the changing chemical engineering profession through lifelong learning and continuing professional development. The BS CHE program will foster the development of professional conduct through awareness of the importance of ethics, safety, environmental issues, and sustainability to the practice of chemical engineering. Contributes to Criterion 3, components (4), and (7).

Chemical Engineering (CHE) Honors requirements:

CHE department requirements (24 credits total):

- Need a minimum GPA of 3.5 and 3.3 Honors GPA
- 11 credits must be in Engineering Honors courses including the following:
  - BE 2100 Honors Basic Engineering III: Probability and Statistics in Engineering (3 cr.)
  - BE 5998 Engineering Honors Thesis (4 cr.)
  - One Honors Option in a 5000 level or higher Engineering Technical Elective (4 cr.)
  - At least one HON 42XX Honors seminar (3 cr.).

The additional 10 credits required for graduation with Honors may be taken in any department, including additional Engineering courses.

Suggestions include: approved AGRADE courses, BIO 1510, CHM 1225/1230, ECO 2010 or ECO 2020, ENG 1050 (in place of ENG 1020), MAT 2010, MAT 2020

Civil and Environmental Engineering

Office: 2100 E. Engineering Building; 313-577-3789
Chairperson: Shawn McElmurry
http://www.engineering.wayne.edu/cee

Civil and environmental engineers apply the principles and techniques of engineering to the analysis, design, and integration of complex infrastructure and environmental systems. They have traditionally been leaders in many aspects of urban development, and aid in addressing uniquely urban issues associated with providing critical services to residents. We respond to crises like ageing infrastructure, and how to sustain critical services without undue pressure on the environment at large. The civil and environmental engineer is trained to be a leader in such diverse areas as:

- the design and control of structural systems, including tall buildings, bridges and transportation systems necessary for urban development and redevelopment, demolition, commerce and industry;
- water resources planning and management;
- fate, transport, and remediation of contaminants in water, soil resources;
- design of collection and treatment systems for sanitary sewage and stormwater management;
- integrated waste management;
- drinking water treatment and distribution systems;
- construction engineering and management; and
- the integration and management of public works projects designed to improve equity and availability in municipal services.

In these ways, the responsibilities of the civil and environmental engineer directly involve sustaining the health, safety and welfare of the public.

The Civil and Environmental Engineering Department maintains laboratories for teaching and research with facilities for testing structural components under static and dynamic loads; strain measurement; transportation network sensing and assessment, traffic simulation; environmental microbiological, biogeochemical characterization; air quality sampling and characterization; and hydraulic, hydrologic assessments. The Department and the University maintain excellent computer facilities for data acquisition and analysis.

- Civil Engineering (B.S.) (p. 155)

Civil Engineering (B.S.)

The mission of the Civil and Environmental Engineering Department is to provide high-quality, state-of-the-art educational and research programs. The Department strives for excellence in its academic programs, its research endeavors, and its university, community and professional service activities. The program is designed to prepare graduates for success in their immediate, as well as long-term, professional careers as practitioners, for obtaining a professional license, and for pursuing advanced studies and lifelong learning.

Admission Requirements

Admission is contingent upon satisfaction of the general undergraduate admission requirements of the University (p. 34) and the bachelor of science programs in the James and Patricia Anderson College of Engineering (p. 144).

Program Requirements

Candidates for the Bachelor of Science degree must complete 124 credits of coursework, including the General Education (p. 24) requirements. All course work must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees. Non-engineering entries, cited below by subject rather than individual course number, indicate courses to be selected in fulfillment of the University General Education Requirements. The degree requirements shown in the curriculum below are in effect as of the publication date of this bulletin. Students should consult their advisors for verification of current requirements.

The Bachelor of Science in Civil Engineering degree program is built on a strong core of common courses. In the junior and senior years, students must also select a concentration, listed below.

Major Requirements

Students pursuing a B.S. in Civil Engineering must complete all major requirements, university general education requirements and courses listed under a selected concentration.

Code	Title	Credits
Pre-professional Requirements		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
CHM 1125	General Chemistry I for Engineers	3
CHM 1130	General Chemistry I Laboratory	1
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2180	University Physics II for Scientists and Engineers	4
BE 1200	Basic Engineering I: Design in Engineering	3

BE 1500	Introduction to Programming and Computation for Engineers	3
or BE 1600	Introduction to Programming and Computation: Python	
CE 2410	Statics	3
ENG 1020	Introductory College Writing	3
Specific Engineering Requirements		
MAT 2150	Differential Equations and Matrix Algebra	4
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
ENG 3050	Technical Communication I: Reports	3
ENG 3060	Technical Communication II: Presentations	3
Select one of the following:		**3**
BIO 1050	An Introduction to Life	
BIO 1500	Basic Life Diversity	
BIO 1510	Basic Life Mechanisms	
ESG 1010	Geology: The Science of the Earth	
ESG 1500	Introduction to Environmental Science	
Civil Engineering Core Requirements		
CE 2420	Elementary Mechanics of Materials	3
CE 3250	Applied Fluid Mechanics	4
CE 3450	Civil Engineering Materials	4
CE 4020	Introduction to Construction Engineering and Management	3
CE 4210	Introduction to Environmental Engineering	3
CE 4230	Environmental Engineering Laboratory	1
CE 4400	Structural Analysis	4
CE 4420	Reinforced Concrete Design	3
CE 4510	Introduction to Geotechnical Engineering	4
CE 4600	Transportation Engineering	3
CE 4985	Fundamentals of Civil Engineering	1
CE 4995	Senior Design Project	3
Total Credits		**88**

Concentration Requirements

Students must complete 21 credits at the advanced level (courses numbered 3000 and above) within a selected concentration. These concentrations are designed to prepare students to specialize in a specific area of Civil Engineering that aligns with their career goals. All work within the following Concentration Requirements (21 credit hours) must be completed in addition to the courses from the Major Requirements. Required courses in each concentration for the BS in Civil Engineering are listed below; exceptions may be made only with permission from the department chair.

Structural and Materials Engineering

Code	Title	Credits
CE 4410	Steel Design	3
CE 5370	Finite Element Analysis Fundamentals	3
CE 5390	Design of Prestressed Concrete Structures	3
CE 5995	Special Topics in Civil Engineering I (Masonry Design OR Timber Design)	3
Select one of the following:		**3**
CE 6340	Bridge Design and Evaluation	
CE 6370	Advanced Reinforced Concrete Design	
Electives: ET 2140, IE 4850, GPH 3600 or CE 4000-level or above: 6 credits [2]		6
Total Credits		**21**

Transportation and Mobility Engineering

Code	Title	Credits
CE 4610	Highway Design	3
CE 4640	Transportation Systems Design and Operation	3
CE 5620	Intelligent Transportation Systems	3
CE 6650	Pavement Design	3
One other transportation-orientated course (e.g., CE 5080, CE 6660)		3
Electives: ET 2140, IE 4850, GPH 3600 or CE 4000-level or above: 6 credits [2]		6
Total Credits		**21**

Construction Engineering & Management

Code	Title	Credits
IE 4850	Engineering Economy	3
CE 4410	Steel Design	3
Select 3 of the following courses:		**9**
CE 5995	Special Topics in Civil Engineering I (Construction Saftey, Construction Accounting and Financial Management, and/or Construction Planning and Scheduling)	
CE 6050	Construction Cost Estimating	
CE 6060	Construction Techniques and Methods	
CE 6880	Building Information Modeling (BIM)	
Electives: ET 2140, GPH 3600 or CE 4000-level or above: 6 credits [2]		6
Total Credits		**21**

Environmental and Sustainability Engineering

Code	Title	Credits
CE 4240	Environmental Engineering Design	3
Select 4 of the following courses:		**12**
CE 5220	Environmental Chemistry	
CE 5230	Water Supply and Wastewater Engineering	
CE 5240	Air Pollution Engineering	
CE 5995	Special Topics in Civil Engineering I (Wastewater Treatment and Recovery and/or Urban Hydrology)	
Electives: ET 2140, IE 4850, GPH 3600 or CE 4000-level or above: 6 credits [2]		6
Total Credits		**21**

Civil Engineering

Code	Title	Credits
CE 4240	Environmental Engineering Design	3
CE 4410	Steel Design	3
CE 4610	Highway Design	3
or CE 4640	Transportation Systems Design and Operation	
Electives: ET 2140, IE 4850, GPH 3600 or CE 4000-level or above: 12 credits [2]		12
Total Credits		**21**

Sample Four-Year Plan

First Year		
First Semester		**Credits**
MAT 2010	Calculus I	4
CHM 1125	General Chemistry I for Engineers	3
CHM 1130	General Chemistry I Laboratory	1
BE 1200	Basic Engineering I: Design in Engineering	3
ENG 1020	Introductory College Writing	3
Wayne Experience (WE) - Suspended as of Fall 2023		
	Credits	**14**
Second Semester		
MAT 2020	Calculus II	4
PHY 2170	University Physics I for Scientists and Engineers	4
BE 1500 or BE 1600	Introduction to Programming and Computation for Engineers or Introduction to Programming and Computation: Python	3
Civic Literacy (CIV) course		3
Social Inquiry (SI) course		3
	Credits	**17**
Second Year		
First Semester		
MAT 2030	Calculus III	4
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
PHY 2180	University Physics II for Scientists and Engineers	4
CE 2410	Statics (ME 2410)	3
	Credits	**14**
Second Semester		
MAT 2150	Differential Equations and Matrix Algebra	4
CE 2420	Elementary Mechanics of Materials	3
CE 3450	Civil Engineering Materials	4
CE 4020	Introduction to Construction Engineering and Management	3
Physical Science Elective [1]		3-4
	Credits	**17-18**
Third Year		
First Semester		
CE 3250	Applied Fluid Mechanics	4
CE 4400	Structural Analysis	4
CE 4510	Introduction to Geotechnical Engineering	4
ENG 3050	Technical Communication I: Reports	3
	Credits	**15**
Second Semester		
CE 4210	Introduction to Environmental Engineering	3
CE 4230	Environmental Engineering Laboratory	1
CE 4600	Transportation Engineering	3
CEE Concentration Course #1		3
CEE Concentration Course #2		3
Cultural Inquiry (CI) course		3
	Credits	**16**
Fourth Year		
First Semester		
CE 4420	Reinforced Concrete Design	3
Diversity, Equity, and Inclusion (DEI) course		3
CEE Concentration Course #3		3
CEE Concentration Course #4		3
CEE Concentration Course #5		3
	Credits	**15**
Second Semester		
CE 4995	Senior Design Project	3
CE 4985	Fundamentals of Civil Engineering	1
CEE Concentration Course #6		3
CEE Concentration Course #7		3
ENG 3060	Technical Communication II: Presentations	3
Global Learning (GL) course		3
	Credits	**16**
	Total Credits	**124-125**

1 Students may select from BIO 1050, BIO 1500 ,BIO 1510, ESG 1500, or ESG 1010 to meet the Physical Science elective requirement.

2 Students may also elect to take BE 1050 plus BE 3510 for 2 separate semesters of 1 credit each, OR BE 3510 and/or CE 4990 (Research) for 3 separate semesters of 1 credit each to count towards one of the 3-credit electives.

Program Educational Outcomes

Within 3 to 5 years of graduation, BSCE graduates will: 1) Apply their knowledge and skills as effective, productive civil or environmental engineers designing innovative engineered systems for private corporations, consulting firms, constructors, or government agencies; 2) Work and communicate effectively with others on multidisciplinary teams to develop practical, technically sound, sustainable, cost-effective solutions to complex and diverse civil and/or environmental engineering problems; 3) Build upon the knowledge gained during undergraduate study for personal and professional development, including preparation for licensure and obtaining advanced degrees; 4) Engage in the profession in an ethical, equitable, and responsible manner that will protect human health and welfare and the environment; 5) Acquire leadership skills that will empower their ascension to leadership roles as practitioners; and 6) Be active members of professional and technical societies, engage in community service, and/or advocate for policies that advance the profession and society.

Student Outcomes

Graduates of the Civil and Environmental Engineering Department will demonstrate the following skills and attributes when they receive their B.S. degrees:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The civil engineering curriculum has been designed to provide a broad education in the basic sciences, mathematics, and engineering sciences, civil engineering analysis and design, and their application to civil engineering practice. The courses in civil engineering may be considered as an array of groups, each representing an area of concern to contemporary society and industry. Technical electives may be selected from one of these major areas according to the student's

particular interest or may be chosen from several areas in order to broaden one's knowledge. A student who contemplates continuing study at the graduate level should seek the advice of his/her faculty counselor in the selection of elective courses. Realizing the social implications of the practice of civil engineering, the program provides for the development of a background in economics, the social sciences, humanities, communication skills, ethics, and related non-technical areas.

Civil Engineering (CE) Honors requirements:

CE department requirements (22 credits total):

- Need a minimum GPA of 3.5 and 3.3 Honors GPA
- 9 credits minimum must be in Engineering Honors courses including the following:
  - BE 5998 Engineering Honors Thesis (3 cr.)
  - CE 4995 Senior Design Project (WI) (3 cr.)
  - Engineering Honors course (3 cr.)
  - At least one HON 42XX Honors seminar (3 cr.). *Select Honors seminars may fulfill University Group requirements

The additional 10 credits required for graduation with Honors may be taken in any department, including additional Engineering courses.

Suggestions include: approved AGRADE courses, CHM 1225/1230, ECO 2010 or ECO 2020, ENG 1020, MAT 2010, MAT 2020.

Computer Science

Office: 5057 Woodward, Suite 3010; 313-577-2477

Interim Chairperson: Farshad Fotouhi

Academic Advisors:

Computer Science: Colleen McKenney, Kimberly Swisher, Sam Elliott

https://engineering.wayne.edu/computer-science

Mission Statement

The mission of the Department of Computer Science at Wayne State University is to provide excellence in teaching, research, public service, and leadership in the computer science profession and the community. The Department provides a high-quality, innovative, baccalaureate and graduate education that emphasizes the fundamentals of computer science as well as the most recent technological innovations, preparing students for employment and advanced studies. Students are encouraged to become involved in research programs to enhance their education and their employment opportunities. Through the use of our state-of-the-art laboratory facilities, students can conduct basic and applied research of high quality, influence, visibility, and potential community impact. The Department continues to develop cooperative research relationships within and outside the computer science discipline, as well as with industry, government and alumni, and local community organizations. This worldwide interaction with professional organizations provides our students with the highest standards, goals, and professional practices.

Research and Instructional Laboratories

The Department of Computer Science operates a number of teaching and research laboratories. Research laboratories are organized around individual fields of research interest. The teaching laboratories are supported by the Department and are available to all students for class work and research.

- Computer Science (B.S.) (p. 158)
- Computer Science Minor (p. 161)
- Cybersecurity Minor (https://bulletins.wayne.edu/undergraduate/college-engineering/computer-science/cybersecurity-minor/)
- Information Technology (B.S.) (p. 161)

Computer Science (B.S.)

The mission of the Computer Science B.S. program is to provide undergraduate students with a strong foundation in both Computer Science theory and programming practice that is necessary to solve real-world engineering problems. Through the use of state of the art software and hardware, students will learn to develop their theoretical and programming skills in order to allow them to apply these learned techniques to analyze a problem, evaluate possible solutions, and create a solution as part of a program development team. The program prepares students for engineering careers in software design, intelligent systems, big data systems and analytics, computer systems and network design, software system security, and bioinformatics. Graduates will be prepared to take positions in these areas in academia, industry and government, the local community, and will be prepared for graduate studies in Computer Science as well. In addition the program provides students with opportunities to interact with other professional institutions and exhibit the highest ethical standards in the practice of their profession.

Admission Requirements

For admission to the Bachelor of Science program, students must satisfy the admission criteria of the Division of Engineering, James and Patricia Anderson College of Engineering (p. 144). Students planning to major in computer science should consult with a departmental advisor as soon as possible prior to enrolling in courses. In general, the requirements in effect when a student declares a major in computer science will be those that the student must satisfy. Students should check with the department for the latest information concerning the program and requirements.

Admission following an interruption in enrollment: A student attempting to complete a computer science major after a prolonged interruption of his/her education may find that some of his/her course work in computer science is out of date. In this case, the student's record will be reviewed and the Department may require the student to fulfill additional computer science course requirements existing at the time of his/her return, and/or to retake some courses previously taken.

Transfer students should consult with an undergraduate departmental academic advisor prior to their transfer. Determination of course equivalency will be made by the Transfer Credit Evaluation Unit in conjunction with the Undergraduate Committee. The Department reserves the right of final determination of course equivalency.

Introductory Course Work

The Department of Computer Science offers a number of courses introducing students to basic computer and computing concepts. Some of these courses also serve as prerequisites for more advanced study in computer science. Some introductory courses require mathematics preparation equivalent to MAT 2010. (See course descriptions regarding the required prerequisite math courses.) CSC 1000, offered as computer-based instruction, is for non-majors who desire to learn basic computing concepts. Students who intend to major or minor in computer science will not normally take this course

Academic Regulations

Academic Probation

A student is considered to be on academic probation whenever his or her cumulative grade point average, or his or her cumulative grade point average falls below 2.0. All students on academic probation are required to meet with their academic advisor to discuss what steps should be taken to remedy the academic deficiencies. While on probation, a student may not represent the James and Patricia Anderson College of Engineering in student activities.

A student on probation is expected to remove the grade point deficiency promptly. A student on probation is expected to remove the grade point deficiency promptly. If a student's GPA falls below 2.0, they will be placed on academic probation for two consecutive semesters—referred to as Probation #1 and Probation #2—to provide an opportunity to improve their performance. If, after these two semesters, the GPA remains below 2.0, the student may be eligible for an additional semester to meet the 2.0 requirement, provided they have earned a term GPA above 2.0 or demonstrated steady overall improvement. If not, the student will be excluded from the College.

If the student's cumulative GPA reaches at least 2.0 by the end of the first semester or second semester after being placed on probation, they will be returned to regular status. Multiple occurrences of probation in non-consecutive semesters may also result in the student's exclusion from the College. A student may also be refused the privilege of registering in the James and Patricia Anderson College of Engineering for irresponsible attendance and performance in class, regardless of any probationary status.

Students who have earned 90 or more credits toward their degree and meet the exclusion criteria will remain enrolled at the college if they follow an academic recovery plan.

For complete information regarding academic rules and regulations of the University, students should see the Academic Regulations (https://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) section of this bulletin.

Exclusion

Following exclusion from the James and Patricia Anderson College of Engineering, the privilege of registering in the College will be withheld for at least one calendar year.

A student who has been refused the privilege of registering in the James and Patricia Anderson College of Engineering may request a re-consideration of his or her status by the Academic Standards Committee (ASC) after the one-year exclusionary period. He or she should not make the request, however, unless evidence can be provided of changes in academic preparation or circumstances that will substantially increase the likelihood of academic success. A formal written request for reconsideration must be presented to the Associate Dean for Academic Affairs. Students who plan to petition for readmission are encouraged to meet with their academic advisor as early as possible during the exclusion period to discuss what changes may provide an opportunity for readmission. In no case is readmission to the James and Patricia Anderson College of Engineering guaranteed.

Repeated Courses and Substandard Grades

Students that fail to pass a course with at least a 'C-minus' grade (or a grade of "C" for CSC 1100, CSC 1500, CSC 2110 and CSC 2200) after three attempts constitutes grounds for exclusion from the James and Patricia Anderson College of Engineering. Prerequisite math and science courses that do not count for degree credit, but are required if students did not place into MAT 2010 (https://bulletins.wayne.edu/search/?P=MAT%202010) are also counted towards exclusion from the College.

Bachelor of Science Degree Requirements

Candidates for the Bachelor of Science degree must complete 120 credits of coursework, including the University General Education (p. 24) requirements. All course work must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees.

Code	Title	Credits
Mathematics		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
Total Credits		**15**

Code	Title	Credits
Basic Engineering Courses		
BE 1200	Basic Engineering I: Design in Engineering	3
BE 1600	Introduction to Programming and Computation: Python	3

BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
Total Credits		**9**

Code	Title	Credits
Computer Science		
CSC 1100	Problem Solving and Programming	4
CSC 1500	Fundamental Structures in Computer Science	4
CSC 2110	Computer Science I	4
CSC 2200	Computer Science II	4
CSC 3010	Ethics in Computer Science	3
CSC 3020	Java Programming	3
CSC 3100	Computer Architecture and Organization	4
CSC 3110	Algorithm Design and Analysis	3
CSC 4110	Software Engineering	4
CSC 4420	Computer Operating Systems	4
CSC 4500	Introduction to Theoretical Computer Science	3
CSC 4710	Introduction to Database Management Systems	3
CSC 4996	Senior Capstone Project	4
Four additional Computer Science courses numbered 3000 or above, of at least three credits each [1]		12
Total Credits		**59**

[1] excluding CSC 4990 and CSC 4995

Code	Title	Credits
Program Requirements		
ENG 3050	Technical Communication I: Reports	3
or ENG 3010	Intermediate Writing	
ENG 3060	Technical Communication II: Presentations	3
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2180	University Physics II for Scientists and Engineers	4
PHY 2171	University Physics I Experimental Laboratory	1
or PHY 2181	University Physics II Experimental Laboratory	
Total Credits		**15**

(Please note that the four-credit core CSC courses include mandatory instructional labs linked to the lecture course. These laboratories must be taken concurrently with their corresponding lecture.)

A minimum of twenty-eight credits in computer science must be earned at Wayne State University. A minimum grade of 'C' is required in CSC 1100 , CSC 1500 , CSC 2110 , and CSC 2200 . All other courses including CSC, MAT, BE, and courses within the General Education program must adhere to the requirements of the Engineering Division as stated above.

Students declaring their major must consult with a departmental academic advisor about their individual plan of work and degree requirements

Cooperative Work-Study Program

Students who wish to enrich their education with on-the-job engineering experience may enroll in a zero credit course (BE 3500) with approval from their academic advisor (http://engineering.wayne.edu/cs/students/advising.php#undergraduate) and the Engineering Career Resource Center (http://engineering.wayne.edu/career/co-ops.php). Registration in BE 3500 allows the university to provide additional support services and safe guards to students. BE 3500 registration also ensures that the co-op experience is well documented to employers when students apply for their first job after graduation. At the end of the semester, students will submit a final report or PowerPoint showcasing co-op activities to the Assistant Dean of Student Services. Student's performance on the job is rated by his/her industrial supervisor. Salaries and other benefits are paid for the time spent on each work assignment. For details and enrollment procedures, contact the Engineering Career Resource Center (http://engineering.wayne.edu/career/contact.php). Students interested in registering for Professional Practice in Computer Science (CSC 4995) for academic credits should consult with their departmental academic advisor.

'AGRADE' Program (Accelerated Graduate Enrollment)

Accelerated Graduate Enrollment: This program enables qualified seniors to enroll simultaneously in the undergraduate and graduate programs and apply a maximum of 16 credits towards both the bachelor's and master's degrees. Students electing the 'AGRADE' Program may expect to complete the bachelor's and master's degrees in five years of full-time study.

Admission Requirements: An 'AGRADE' applicant may petition the Graduate Committee of the Computer Science Department for acceptance into the program no earlier than the first semester in which ninety credits will be completed. Following Departmental Graduate Committee approval, students must seek the approval of the Graduate Officer of the College. Applicants must have an overall grade point average (g.p.a.) of 3.3 or better and a 3.45 g.p.a. or better in the major courses already completed. If the student's petition is accepted, the student shall submit a graduate Plan of Work, specifying 'AGRADE' courses to be included in subsequent semesters.

Departmental Honors

Candidates for the Bachelor of Science degree must complete 120 credits of coursework, including the University General Education (p. 24) requirements. All course work must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees.

Code	Title	Credits
Mathematics		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
Computer Science Honors		
BE 1200	Basic Engineering I: Design in Engineering	3
BE 1600	Introduction to Programming and Computation: Python	3
CSC 1100	Problem Solving and Programming	4
CSC 1500	Fundamental Structures in Computer Science	4
CSC 2110	Computer Science I	4
CSC 2200	Computer Science II	4
CSC 3010	Ethics in Computer Science	3
CSC 3020	Java Programming	3
CSC 3100	Computer Architecture and Organization	4
CSC 3110	Algorithm Design and Analysis	3
CSC 4110	Software Engineering	4
CSC 4420	Computer Operating Systems	4

CSC 4500	Introduction to Theoretical Computer Science	3
CSC 4710	Introduction to Database Management Systems	3
CSC 4996	Senior Capstone Project	4
Four additional Computer Science courses numbered 3000 or above, of at least three credits each (excluding CSC 4990 and CSC 4995)		12
(Please note that the four-credit core CSC courses include mandatory instructional labs linked to the lecture course. labs. These laboratories must be taken concurrently with their corresponding co-requisite lecture.)		
Program Requirements		
ENG 3050	Technical Communication I: Reports	3
or ENG 3010	Intermediate Writing	
ENG 3060	Technical Communication II: Presentations	3
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2180	University Physics II for Scientists and Engineers	4
PHY 2171	University Physics I Experimental Laboratory	1
or PHY 2181	University Physics II Experimental Laboratory	
Departmental Honors Requirements		
Department Honors Thesis		
CSC 4999	Honors Thesis	3-6
One semester of an Honors Program 4000 level seminar		
HON 4200	Seminar in Philosophy and Letters	3
or HON 4230	Seminar in Physical Science	
or HON 4250	Seminar: Global Perspectives on Historical Studies	
or HON 4260	Seminar in Foreign Culture	
or HON 4280	General Honors Seminar	
3-6 additional honors credits in Computer Science courses depending on thesis credits		
Total Honors Credits		**12**

A minimum of twenty-eight credits in computer science must be earned at Wayne State University. A minimum grade of 'C' is required in CSC 1100, CSC 1500, CSC 2110, and CSC 2200 .

All other courses including CSC, MAT, BE, and courses within the General Education program must adhere to the requirements of the Engineering Division as stated above.

The Honors Thesis is a paper presenting the results of the student's independent research. The length of the thesis may vary according to the nature of the topic and method of approach, but is typically a minimum of 20 pages in length. A minimum of two semesters should be allowed for completion of all of the thesis requirements. It is expected that the Honors Thesis will conform to the University master's thesis format requirements (copies available from the Graduate School).

Students are responsible for identifying their own research project and full-time faculty member. Students must submit a completed and signed Honors Thesis Registration form to their departmental academic advisor before registration overrides will be provided. At the end of the first semester a deferred grade of Y will be assigned, with a grade change processed at the completion of the thesis in a subsequent semester. A grade is awarded for CSC 4999 after approval of the thesis by the faculty advisor and one other full-time faculty member.

An overall Wayne State University cumulative grade point average of at least 3.3.

Students should consult with the Honors College (https://honors.wayne.edu/) regarding additional honors-designated course work available each semester.

Computer Science Minor

The Minor Program provides a background in computer science for students who are majoring in other fields of study at Wayne State University.

Code	Title	Credits
Mathematics		
MAT 2010	Calculus I	4
STA 2210	Probability and Statistics	3-4
or BE 2100	Basic Engineering III: Probability and Statistics in Engineering	
Total Credits		**7-8**

Code	Title	Credits
Computer Science		
BE 1600	Introduction to Programming and Computation: Python	3
CSC 1100	Problem Solving and Programming [1]	4
CSC 1500	Fundamental Structures in Computer Science [1]	4
CSC 2110	Computer Science I [1]	4
CSC 2200	Computer Science II [1]	4
Two additional Computer Science courses numbered 3000 or above. [2]		6
(Please note that the four-credit core CSC courses include mandatory instructional labs linked to the lecture course. labs. These laboratories must be taken concurrently with their corresponding co-requisite lecture.)		
Total Credits		**25**

1 A minimum grade of 'C' is required in these courses. For all other MAT, BE and CSC courses, a minimum grade of 'C-' is required.

2 excluding CSC 3010, CSC 4990 and CSC 4995

A minimum of twelve credits in computer science must be earned at Wayne State University.

Students may wish to modify the minor program to fit their special needs. For any changes or adjustments to the above course requirements, students should contact the computer science undergraduate academic advisors for approval. Students declaring their minor should consult an advisor for the most recent requirements and plan of work.

Information Technology (B.S.)

This program prepares the student for a challenging workplace with an enhanced knowledge of business applications. The curriculum for the degree is designed to provide students with a solid foundation in computer and information systems and business administration.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Academic Regulations

Academic Probation

A student is considered to be on academic probation whenever his or her cumulative grade point average, or his or her cumulative grade point average falls below 2.0. All students on academic probation are required to meet with their academic advisor to discuss what steps should be taken to remedy the academic deficiencies. While on probation, a

student may not represent the James and Patricia Anderson College of Engineering in student activities.

A student on probation is expected to remove the grade point deficiency promptly. A student on probation is expected to remove the grade point deficiency promptly. If a student's GPA falls below 2.0, they will be placed on academic probation for two consecutive semesters—referred to as Probation #1 and Probation #2—to provide an opportunity to improve their performance. If, after these two semesters, the GPA remains below 2.0, the student may be eligible for an additional semester to meet the 2.0 requirement, provided they have earned a term GPA above 2.0 or demonstrated steady overall improvement. If not, the student will be excluded from the College.

If the student's cumulative GPA reaches at least 2.0 by the end of the first semester or second semester after being placed on probation, they will be returned to regular status. Multiple occurrences of probation in non-consecutive semesters may also result in the student's exclusion from the College. A student may also be refused the privilege of registering in the James and Patricia Anderson College of Engineering for irresponsible attendance and performance in class, regardless of any probationary status.

Students who have earned 90 or more credits toward their degree and meet the exclusion criteria will remain enrolled at the college if they follow an academic recovery plan.

For complete information regarding academic rules and regulations of the University, students should see the Academic Regulations (https://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) section of this bulletin.

Exclusion

Following exclusion from the James and Patricia Anderson College of Engineering, the privilege of registering in the College will be withheld for at least one calendar year.

A student who has been refused the privilege of registering in the James and Patricia Anderson College of Engineering may request a re-consideration of his or her status by the Academic Standards Committee (ASC) after the one-year exclusionary period. He or she should not make the request, however, unless evidence can be provided of changes in academic preparation or circumstances that will substantially increase the likelihood of academic success. A formal written request for reconsideration must be presented to the Associate Dean for Academic Affairs. Students who plan to petition for readmission are encouraged to meet with their academic advisor as early as possible during the exclusion period to discuss what changes may provide an opportunity for readmission. In no case is readmission to the James and Patricia Anderson College of Engineering guaranteed.

Repeated Courses and Substandard Grades

Students that fail to pass a course with at least a 'C-minus' grade (or a grade of "C" for CSC 1100 and CSC 2110) after three attempts constitutes grounds for exclusion from the James and Patricia Anderson College of Engineering. Prerequisite math and science courses that do not count for degree credit, but are required if students did not place into MAT 2010 (https://bulletins.wayne.edu/search/?P=MAT%202010) are also counted towards exclusion from the College.

Degree Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24), as well as the departmental major and business administration minor requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees.

Students are strongly encouraged to meet with their assigned academic advisor (http://engineering.wayne.edu/cs/students/advising.php#undergraduate) to discuss degree requirements as soon as possible after admittance into the program.

Code	Title	Credits
Mathematics Courses		
MAT 2010	Calculus I	4
ET 3850	Reliability and Engineering Statistics	3
Total Credits		**7**

Code	Title	Credits
Professional Communication Courses		
ENG 3050 or ENG 3010	Technical Communication I: Reports Intermediate Writing	3
ENG 3060	Technical Communication II: Presentations	3
Total Credits		**6**

Code	Title	Credits
Computer Science Courses		
CSC 1002	Personal Digital Security	3
CSC 1050	Introduction to C and Unix	2
BE 1600	Introduction to Programming and Computation: Python	3
CSC 1100	Problem Solving and Programming [1]	4
CSC 2110	Computer Science I [1]	4
CSC 3010	Ethics in Computer Science	3
CSC 3020	Java Programming	3
CSC 3400	Human-Computer Interaction	3
CSC 3750	Introduction to Web Technology	3
CSC 4190	Computer Network Systems and Applications	3
CSC 4310	IT Software Management	3
CSC 4320	Systems Administration	3
CSC 4330	Mobile Application Development	3
CSC 5272	Principles of Cyber Security	3
CSC 5290	Cyber Security Practice	3
CSC 5750	Principles of Web Technology	3
Total Credits		**49**

[1] CSC 1100 and CSC 2110 include a required linked lab that corresponds to the lecture.

Code	Title	Credits
Engineering Technology Courses		
EET 2720	Microprocessor Fundamentals	3
ET 4999	Senior Design Project	3
Total Credits		**6**

Business Administration Minor

The Mike Ilitch School of Business offers a minor in business for undergraduate students majoring in other disciplines. The Business Minor consists of six courses, totaling eighteen credits. Students must also complete prerequisite courses with a minimum grade of C (2.0 g.p.a.) for each course. The minor provides an excellent opportunity for non-business majors to broaden their knowledge of the business

disciplines. In addition, the program enhances career prospects and establishes a solid business base for pursuing a Master of Business Administration degree. To be eligible to apply for the Business Minor, students must have a minimum overall grade point average of 2.5.

Information Technology students must meet with a business advisor to officially declare a minor.

Code	Title	Credits
Prerequisite Courses (11 credits)		
TIS 2300	Quantitative Methods I: Probability and Statistical Inference	3
or ET 3850	Reliability and Engineering Statistics	
ECO 2010	Principles of Microeconomics ((Social Inquiry))	4
ECO 2020	Principles of Macroeconomics ((Social Inquiry))	4
Required Courses (18 credits)		
ACC 3010	Introduction to Financial Accounting	3
MGT 2530	Management of Organizational Behavior	3
MKT 2300	Marketing Management	3
TIS 3630	Business Information Systems	3
Two electives from Mike Ilitch School of Business ISM courses		6
Total Credits		**29**

A minimum grade of C is required for the following respectively:

Code	Title	Credits
CSC 1100	Problem Solving and Programming	4
CSC 2110	Computer Science I	4

All other courses including CSC, MAT, BE, EET, ET, and courses within the General Education program must adhere to the requirements of the Engineering Division (grades of C-minus or better, unless otherwise specified).

Information Technology Honors

To qualify for Departmental Honors, students must maintain a cumulative g.p.a. of 3.3 or higher and must complete the following coursework:

Code	Title	Credits
Department Honors Thesis (BE 5998)		3
One semester of an Honors Program 42XX level seminar		3
Six additional honors credits in Computer Science or Engineering Technology (CSC, EET, and ET) courses		6
Total Credits		**12**

Students should consult with the Honors College (https://honors.wayne.edu/) regarding additional honors-designated course work available each semester.

Electrical and Computer Engineering

Office: 3101 W. Engineering Building; 313-577-9046
Chairperson: Mohammed Ismail Elnaggar
http://engineering.wayne.edu/ece/

In the field of electrical and computer engineering, basic physical and mathematical principles are utilized to develop new devices, technologies, and techniques of constantly broadening application. Examples are the development of smaller, cheaper, and more powerful computers, microprocessors, and other data processors, stemming from advances in solid-state and integrated circuit technology, and their utilization in a growing range of system applications; the growing use of data communications and sophisticated communication networks; the use of lasers, and the development of fiber optic and integrated optical devices for various applications ranging from optical data processing to communication; development of sophisticated control techniques, smart sensors, and transducers for advanced automation and electric power systems; the application of electronics to health care and diagnostics (such as noninvasive measurements and ultrasound imaging); and energy conversion devices.

The areas of study available in the Department include: solid-state devices, lasers, smart sensors, information sciences, digital circuits, computer engineering, analog and mixed signal integrated circuits, semiconductor and nanotechnology, biomedical electronics and systems, image processing, neural networks, machine learning, artificial intelligence, robotics and modern control systems.

Programs of both experimental and theoretical study are available in all these areas, as well as other interdisciplinary programs through the Electrical and Computer Engineering Department.

A more detailed exposition of the Department's research activities is available on our website. Senior students are encouraged to participate in research activities by means of independent study projects and student assistantships. Graduate students normally participate in the research program as graduate teaching assistants and research assistants.

The James and Patricia Anderson College of Engineering laboratory building contains seven instructional laboratories for experimental work in control systems, analog circuits, digital systems, microcomputers, instrumentation, optics, and communication systems; these laboratories are an integral part of the instructional program. In addition, the Departmental faculty have eight research laboratories dealing with computer systems, multi-media systems, semiconductor device materials including a clean-room facility, opto-electronics, computation and neural networks, image processing, nanotechnology, telematics, and embedded systems. Computer facilities are available for student use; the College Computer Center as well as the University Computing Services Center are available to all students through individual student accounts.

- Electrical and Computer Engineering (B.S.) (p. 163)
- Electrical and Computer Engineering Minor (p. 165)

Electrical and Computer Engineering (B.S.)

In addition to the Undergraduate Program Goals for the James and Patricia Anderson College of Engineering, the specific objectives of the Bachelor of Science program in Electrical Engineering include the following:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Admission Requirements

For admission to the Bachelor of Science program, students must satisfy the admission criteria of the Division of Engineering, James and Patricia Anderson College of Engineering (p. 144).

Program Requirements

Candidates for the Bachelor of Science degree must complete **127-130 credits of coursework**, including the University General Education (p. 24) requirements. All course work must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees. The degree requirements shown in the curriculum below are in effect as of the publication date of this bulletin. However, students should consult an academic advisor for verification of current requirements.

In the freshman and sophomore years, the student acquires a foundation in the principles of science and mathematics required for the study of engineering. In addition, general education studies are provided to ensure a well-rounded education. Basic concepts of electrical circuits, electronics, computers and electromagnetic fields are studied after prerequisite mathematics and science backgrounds are mastered. In the senior year, a choice of electrical and computer engineering electives permits the student to specialize in one or more areas.

Electrical and Computer Engineering Curriculum

First Year		
First Semester		**Credits**
BE 1200	Basic Engineering I: Design in Engineering	3
CHM 1125	General Chemistry I for Engineers	3
CHM 1130	General Chemistry I Laboratory	1
ENG 1020	Introductory College Writing	3
MAT 2010	Calculus I	4
	Credits	**14**
Second Semester		
BE 1500	Introduction to Programming and Computation for Engineers	3
ECE 2050	Object-Oriented Programming for Electrical and Computer Engineering	3
MAT 2020	Calculus II	4
PHY 2170	University Physics I for Scientists and Engineers *	4
Any (CIV) Course		3
	Credits	**17**
Second Year		
First Semester		
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
ECE 2610	Digital Logic Design	4
MAT 2030	Calculus III	4
PHY 2180	University Physics II for Scientists and Engineers *	4
PHY 2181	University Physics II Experimental Laboratory *	1
	Credits	**16**
Second Semester		
ECE 3040	Numerical Methods for Engineers	3
ECE 3300	Introduction to Electrical Circuits	4
MAT 2150	Differential Equations and Matrix Algebra	4
MAT 2860	Discrete Mathematics	3
Any (DEI) Course		3
	Credits	**17**
Third Year		
First Semester		
ECE 3330	Electrical Circuits II	3
ECE 3570	Electronics	4
ECE 3620	Introduction to Microcomputers	4
ECE 4050	Algorithms and Data Structures	3
ENG 3050	Technical Communication I: Reports	3
	Credits	**17**
Second Semester		
ECE 4330	Linear Systems and Signals	4
ECE 4570	Fundamentals of Microelectronic Devices	3
ECE 4680	Computer Architecture	3
ENG 3060	Technical Communication II: Presentations	3
Any (GL) Course - Global Learning		3
	Credits	**16**
Fourth Year		
First Semester		
ECE 4470	Control Systems I	3
ECE 4700	Introduction to Communication Theory	4
PHI 1120 or PHI 2320	Professional Ethics or Introduction to Ethics	3
ECE 4800	Electromagnetic Fields and Waves I	3
ECE Elective		3-4
	Credits	**16-17**
Second Semester		
ECE 4600	Capstone Design I	4
ECO 2010 or ECO 2020 or ECO 1000	Principles of Microeconomics or Principles of Macroeconomics or Survey of Economics	4
2 ECE Electives		6-8
	Credits	**14-16**
	Total Credits	**127-130**

* Students are required to take either PHY 2170 along with PHY 2171 **OR** take PHY 2181 along with PHY 2180. The Electrical Engineering department recommends taking PHY 2181.

Substitution of a course not on this list requires approval of the department chairperson or delegated faculty advisor.

Course Material Fee

A course material fee is charged for laboratory courses using expendable materials.

Electrical and Computer Engineering (ECE) Honors requirements:

ECE department requirements (16-17 credits total):

- Need a minimum GPA of 3.5 and 3.3 Honors GPA
- ECE Engineering Honors courses:
  - BE 2100 Honors (3 cr.)
  - ECE 3040 Numerical Methods of Engineers Honors Option (3 cr.)
  - ECE 4000+ level course with an Honors Option (3-4 cr.)
  - Honors 42xx seminar (3 cr.)
  - BE 5998 Engineering Honors Thesis (4 cr.)

Electrical and Computer Engineering Minor

The Minor in Electrical and Computer Engineering requires a minimum of 15-16 credits as outlined below.

Code	Title	Credits
Mathematics Prerequisite: Differential Equations		
ECE 2050	Object-Oriented Programming for Electrical and Computer Engineering	3
or ECE 4050	Algorithms and Data Structures	
ECE 2610	Digital Logic Design	4
ECE 3300	Introduction to Electrical Circuits (preferred)	4
or ECE 3320	Introduction to Electrical Circuits	
Select one elective course from the following:		3-4
ECE 3620	Introduction to Microcomputers	
ECE 3570	Electronics	
ECE 3040	Numerical Methods for Engineers	
Any course ECE 4000-5999 *		
Total Credits		**14-15**

* Students are responsible for completing any prerequisite coursework associated with these courses. Students should ensure they have the correct background as these courses may be on the challenging side.

Industrial and Systems Engineering

Office: 2143 Manufacturing Engineering Building, 4815 Fourth St.; 313-577-3821
Chairperson: Ratna Babu Chinnam
https://engineering.wayne.edu/industrial-systems

The industrial engineer is a broadly-trained integration engineer, concerned with enabling complex systems to function effectively. Managing the inventory of a production facility, for example, involves issues of production and stocking policy, manufacturing equipment, human resources, customer demand, and supplier relationships. The industrial engineer must understand the interaction of the components of a system, and coordinate the flow of materials and information to effectively manage the operation. The industrial engineer plays an important role in defining information needs and developing strategies for decision-making based on incomplete knowledge. However, the skills of the industrial engineer have much greater application than to traditional production environments. In a growing service sector of the economy including health care delivery, public safety, air transportation, and banking, for example, issues of resource management, scheduling, quality of service, and systems design are important.

Traditionally, the manufacturing engineer was responsible for developing the process capability to realize the output of design engineering. Today the boundary between design and manufacturing engineering is becoming blurred; both groups work together in teams to assure the soundness of design and production capability. The manufacturing engineer must have an understanding of the design process, but the manufacturing engineer's special expertise is the knowledge of the production process.

Today's production is computer-based and provides flexibility through computer control. The manufacturing engineer is responsible for designing and implementing the cells and production lines which become the basic units of manufacturing. Increasingly, such production units are becoming parts of an integrated factory system, not simply islands of automation. The manufacturing engineer must understand the multi-layered control architecture of the integrated factory, and the computer-based technologies which enable it.

The Department maintains laboratories in systems simulation, computer-aided manufacturing, human systems, and concurrent engineering design.

- Industrial Engineering (B.S.) (p. 165)
- Industrial Engineering Minor (p. 167)

Industrial Engineering (B.S.)

Program Mission: The mission of the undergraduate program in Industrial Engineering is to educate our students for leadership positions in a broad spectrum of employment including: manufacturing, supply chain management and logistics, health care, banking, information management, and related disciplines.

Program Vision: The Department of Industrial and Systems Engineering offers the B.S. in Industrial Engineering to prepare students for a broad range of employment opportunities that include operations management, manufacturing, and healthcare. Our vision is to produce graduates who will lead their organizations to competitive advantage by applying the tools and techniques of industrial engineering. We believe that exposing students to diverse industries in our educational program will enhance their professional skills.

Program Educational Objectives: Building on skills developed in the academic program, and extended by experience and personal self-improvement, the graduates of our program have the ability to:

1. Utilize technical know-how and apply practical problem-solving to deliver significant organizational value as recognized via promotions, raises, awards, publications, inventions, patents, and/or leadership positions.
2. Demonstrate commitment to industrial engineering as a global service profession and practice with integrity, innovation, and objectivity as indicated by professional affiliations, public speaking, thought leadership, publishing, reputation, volunteering, public recognitions, and other related activities.
3. Display the know-how and motivation for continual development by enhancing personal and professional skills via self-study, post-undergraduate degrees, professional certificates, and various other life-long learning experiences.

Admission Requirements

For admission to the Bachelor of Science program, students must satisfy the admission criteria of the Division of Engineering, (p. 144) James and Patricia Anderson College of Engineering (p. 144).

Program Requirements

Candidates for the Bachelor of Science degree must complete 122 credits of coursework, including the University General Education (p. 24) requirements. All course work must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees. Non-engineering courses, cited below by subject rather than by individual course numbers, indicate courses to be selected in fulfillment of University General Education Requirements. The degree requirements shown in the curriculum below are in effect as of the publication date of this bulletin. However, students should consult an academic advisor for verification of current requirements.

The Bachelor of Science degree programs are built on a strong core of common courses. In the junior and senior years, students must choose an area of study leading to the industrial engineering degree. These options are described below, including the Data Science and Analytics concentration (p. 167).

The directed elective must be approved by the program director or undergraduate advisor. A list of courses appropriate for the directed elective is available from the Department.

Engineering Breadth Options: In the following curricula engineering Breadth Options are courses selected from an approved list of those deemed most suitable as contributing to the industrial engineering degree program. In the sophomore year these options are limited to courses numbered below 3000 for all students who have NOT completed their preprofessional coursework.

The Engineering Design Project course sequence (IE 4800 and IE 4880) is a capstone endeavor and is intended to build on and integrate the knowledge that the student has accumulated throughout the undergraduate program. It is intended to be taken in the student's last academic year, within forty credits of graduation. This sequence is a year-long undertaking. Students enroll in IE 4800 (two credits) in their last Fall semester, and spend the term building their teamwork skills and selecting and planning their project. Practical, professionally-relevant projects are usually selected in concert with the Department's industrial partners. In the Winter semester, students enroll in IE 4880 (2 credits) and engage in an intensive effort to bring their industrial engineering skills and knowledge to bear on the problem. Students who intend to take the capstone sequence should first consult their academic advisor.

Project Requirements: In order to qualify to take IE 4800, students must be in the last year of his/her program (within forty credits of graduating). To enroll in IE 4800, the student must have taken and passed IE 3120, IE 4250, IE 4850, and should have taken and passed or be taking at least two of the IE 4420, IE 4330, IE 4560 in the same semester of IE 4800.

In order to register for IE 4880, students must have taken IE 4800 in the immediately previous term they must be finished with all eight IE core courses by the end of the semester in which they take IE 4880. Students are encouraged to meet with the industrial engineering program academic advisor for a plan of work to ensure they meet these requirements.

First Year		
First Semester		**Credits**
IE 1000	Industrial Engineering & Systems Thinking	3
BE 1200	Basic Engineering I: Design in Engineering	3
CHM 1125	General Chemistry I for Engineers	3
CHM 1130	General Chemistry I Laboratory	1
MAT 2010	Calculus I	4
	Credits	**14**
Second Semester		
BE 1300	Basic Engineering II: Materials Science for Engineering Applications	3
BE 1310	Materials Science for Engineering: Laboratory	1
ENG 1020	Introductory College Writing	3
MAT 2020	Calculus II	4
PHY 2170	University Physics I for Scientists and Engineers	4
	Credits	**15**
Second Year		
First Semester		
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
MAT 2030	Calculus III	4
PHI 1120	Professional Ethics	3
PHY 2180	University Physics II for Scientists and Engineers	4
	Credits	**14**
Second Semester		
ECO 2010	Principles of Microeconomics	4
BE 1600	Introduction to Programming and Computation: Python	3
MAT 2150	Differential Equations and Matrix Algebra	4
Diversity, Equity and Inclusion (DEI) course		3
IE Technical Elective		3
	Credits	**17**
Third Year		
First Semester		
ENG 3050	Technical Communication I: Reports	3
IE 3120	Work Design	3
IE 4850	Engineering Economy	3
Global Learning (GL) course		3
IE Technical Elective		3
IE Technical Elective		3
	Credits	**18**
Second Semester		
ENG 3060	Technical Communication II: Presentations	3
IE 4420	Systems Simulation	3
IE 4250	Data Science and Analysis	3
Engineering Breadth Option		3
Civic Literacy (CIV) course		3
	Credits	**15**

Fourth Year		
First Semester		
IE 4260	Principles of Quality Control	3
IE 4560	Operations Research	3
IE 4800	Engineering Design I: Project Management	2
IE Technical Elective		3
Engineering Breadth Option		3
	Credits	**14**
Second Semester		
IE 4310	Production Control	3
IE 4330	Facilities Design	3
IE 4880	Engineering Design II	2
IE Technical Elective		3
IE Technical Elective		3
	Credits	**14**
	Total Credits	**121**

Data Science and Analytics Concentration

The Data Science and Analytics concentration is designed to give industrial engineering undergraduate students a core of data science related skills to identify, analyze, and solve problems in manufacturing and service domains.

The program requires students to complete a minimum of **nine credits** in course work, **at least one** course from Data Science and Analytics (DSA), **at most one** course from Data Science for Business (DSB), and **at most one** course from Data Science for Engineering (DSE). All DSA, DSB, and DSE courses are three credits each and are offered in the M.S. in Data Science and Business Analytics program, which is offered by The Mike Ilitch School of Business and Industrial and Systems Engineering and Computer Science Departments in the James and Patricia Anderson College of Engineering. This curriculum will give students an integrated breadth of industrial engineering tailored to their specific interests and career goals in the field of data science. A minimum 2.50 grade point average among the courses taken towards data science concentration is required to complete the program.

IE 3120	Work Design	
IE 4250	Data Science and Analysis	
IE 4260	Principles of Quality Control	
IE 4310	Production Control	
IE 4330	Facilities Design	
IE 4420	Systems Simulation	
IE 4560	Operations Research	
IE 4850	Engineering Economy	
IE 6210	Applied Engineering Statistics	
IE 6560	Deterministic Optimization	
IE 6611	Fundamentals of Six Sigma	
IE 6840	Project Management	
DSA 6100	Statistical Learning for Data Science and Analytics	
DSA 6200	Operations Research	
Select 3 additional IE courses numbered 3000 or above.		9
Total Credits		**18**

All course work must be completed in accordance with the academic procedures of the University (https://bulletins.wayne.edu/undergraduate/general-information/) and the James and Patricia Anderson College of Engineering (https://bulletins.wayne.edu/undergraduate/college-engineering/academic-regulations/) governing undergraduate scholarship and degrees.

Industrial Engineering (IE) Honors requirements

Students in the B.S.I.E. program are encouraged to pursue their degree with Engineering and/or University Honors. Honors requirements for the ISE Department include the following:

- Must establish and maintain a cumulative 3.3 overall GPA and 3.45 Honors GPA
- Meet the minimum requirement of 16 credits, including the following courses:
  - HON 42XX –Honors Seminar (3 cr.)
  - BE 5998 – Engineering Honors Thesis (4 cr.)
  - Honors Option in IE 4310 (3 cr.)
  - Two IE graduate level courses (IE 5000-6999) (6 cr.)

Industrial Engineering Minor

The minor in IE will provide an integrated breadth of industrial engineering tailored to students' specific interests and career goals. The program requires students to complete a minimum of eighteen credits in course work, including the following:

Code	Title	Credits
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
Select two IE core courses from the following list:		6

Mechanical Engineering

Office: 2100 Engineering Building; 313-577-3843
Chairperson: Nabil G. Chalhoub; ab9714@wayne.edu
Director of Undergraduate Studies: Omid Samimi-Abianeh; eg8067@wayne.edu
Undergraduate Academic Advisor: Keith L. Wadley; ab8541@wayne.edu
https://engineering.wayne.edu/mechanical

The opportunities and challenges in the field of mechanical engineering are many and diverse. The broad variety of career possibilities includes research and development, design analysis and synthesis, manufacturing and production engineering, testing, sales engineering, maintenance and administration. The challenge of a mechanical engineer may lie in the perfection of a device that will be duplicated a million-fold or in the control optimization of a single complex system of unique design. To prepare undergraduate students for these opportunities, the Wayne State University Mechanical Engineering curriculum is designed to give a basic core education in the humanities, mathematics, natural sciences, basic applied sciences, engineering fundamentals, and to provide advanced electives in many applied fields.

Fields of departmental expertise include such important areas as biomimetic soft robots, artificial muscles, advanced materials and manufacturing, nonlinear dynamics, vehicle dynamics and controls, autonomous vehicles and marine surface vessels, combustion, multi-phase flow, computational fluid dynamics (CFD), topological acoustics, wave propagation, noise control, metamaterials, nanomaterials, energy storage, conversion and harvesting, thermal management, mechanisms, design, machine tool design, manufacturing, laser diagnostics, and mechanics of composite materials. Research and teaching is carried out in all of these areas.

- Mechanical Engineering (B.S.) (p. 168)
- Mechanical Engineering Minor (p. 170)

Mechanical Engineering (B.S.)

The Bachelor of Science in Mechanical Engineering program (https://engineering.wayne.edu/mechanical/academics/bs) at Wayne State University is accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org/, under the commission's General Criteria and Program Criteria for Mechanical Engineering.

Mechanical engineering B.S. graduates will be able to apply basic engineering principles to identify and solve problems, and to design, specify the manufacturing of, and evaluate the performance of mechanical systems and processes.

Admission Requirements

For admission to the Bachelor of Science program, students must satisfy the admission criteria of the Division of Engineering, (p. 144) James and Patricia Anderson College of Engineering (p. 144). The Department has an Academic Advisor and a Director of Undergraduate Studies. The former is responsible for assisting students with course selections and maintaining academic progress, and the latter is responsible for enforcing Departmental academic policy. Students are encouraged to meet with the Academic Advisor once every semester, for up-to-date feedback on their academic progress and a review of course plans for the next semester or two. The student and advisor together plan a complete program of study, including electives, which meet Departmental requirements and the interests of the individual student.

Mechanical Engineering Curriculum

Candidates for the Bachelor of Science degree must complete 123 credits of coursework, including the University General Education (p. 24) requirements. All course work must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees.

Evening courses and cooperative programs allow professionals working in local industry to pursue an undergraduate degree while continuing employment. The degree requirements shown in the curriculum below are in effect as of the publication date of this bulletin; however, students should consult an academic advisor for verification of current requirements.

First Year		
First Semester		**Credits**
BE 1200	Basic Engineering I: Design in Engineering	3
CHM 1125	General Chemistry I for Engineers	3
CHM 1130	General Chemistry I Laboratory	1
ENG 1020	Introductory College Writing (BC)	3
MAT 2010	Calculus I (QE)	4
FYS 1010	Introduction to University Life and College Success (WE)	1
	Credits	**15**
Second Semester		
BE 1300	Basic Engineering II: Materials Science for Engineering Applications	3
BE 1310	Materials Science for Engineering: Laboratory	1
MAT 2020	Calculus II	4
BE 1500	Introduction to Programming and Computation for Engineers	3
PHY 2170	University Physics I for Scientists and Engineers	4
	Credits	**15**
Second Year		
First Semester		
MAT 2030	Calculus III	4
ME 2410	Statics	3
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	3
PHY 2180	University Physics II for Scientists and Engineers	4
	Credits	**14**
Second Semester		
MAT 2150	Differential Equations and Matrix Algebra	4
ME 2500	Numerical Methods Using MATLAB	2
ME 2420	Elementary Mechanics of Materials	3
ME 2200	Thermodynamics	3
Any Civic Literacy (CIV) course		3
	Credits	**15**
Third Year		
First Semester		
ME 3300	Fluid Mechanics: Theory and Laboratory	4
ENG 3050	Technical Communication I: Reports (IC)	3
ME 3400	Dynamics	3
ME 3450	Manufacturing Processes I	3
ECE 3320	Introduction to Electrical Circuits	4
	Credits	**17**
Second Semester		
ME 4210	Heat Transfer: Theory and Laboratory	4
ME 4150	Design of Machine Elements	4
ME 4410	Vibrations: Theory and Laboratory	4
PHI 1120	Professional Ethics (CI)	3
ENG 3060	Technical Communication II: Presentations (OC)	3
	Credits	**18**

Fourth Year		
First Semester		
ME 4300 or ME 5330	Thermal Fluid Systems Design (ME 5330 AGRADE) [1] or Advanced Thermal Fluid System Design	4
ME 4420	Dynamic Modeling and Control of Engineering System	4
ME Technical Elective (ME 5XXX)		4
Any Diversity, Equity, and Inclusion (DEI) course		3
	Credits	**15**
Second Semester		
ME 4500 or ME 5500	Mechanical Engineering Design II (ME 5500 AGRADE) [2] or Advanced Engineering Design	4
ME Technical Elective (ME 5XXX)		4
Any Social Inquiry (SI) course		3
Any Global Learning (GL) course		3
	Credits	**14**
	Total Credits	**123**

[1] may not be taken concurrently with ME 4500 or ME 5500
[2] May not be taken concurrently with ME 4300 or ME 5330.

Coherent Technical Electives

Two technical electives must be chosen from among the 5000-level courses offered by the Mechanical Engineering Department. Coherent Technical Electives are as follows:

Code	Title	Credits
Vibrations and Acoustics		
ME 5440	Industrial Noise Control	4
ME 5460	Fundamentals in Acoustics and Noise Control	4
Control and Dynamics		
ME 5115	Fundamentals of Electric-drive Vehicle Modeling	4
ME 5400	Dynamics II	4
ME 6550	Modeling and Control of Dynamic Systems	4
Biomedical Engineering		
ME 5100	Quantitative Physiology	4
ME 5160/ BME 5210	Musculoskeletal Biomechanics	4
ME 5180/ BME 5370	Introduction to Biomaterials	4
Solid Mechanics and Design		
ME 5040	Finite Element Methods I	4
ME 5620	Fracture Mechanics in Engineering Design	4
ME 5720	Mechanics of Composite Materials	4
Design and Manufacturing		
ME 5453	Product and Manufacturing Systems and Processes	4
ME 5580	Computer-Aided Mechanical Design	4
Thermal/Fluid Science		
ME 5110/ EVE 5130/ AET 5110/CHE 5110	Fundamental Fuel Cell Systems	4
ME 5115/ EVE 5110	Fundamentals of Electric-drive Vehicle Modeling	4
ME 5215/ EVE 5120/ AET 5310/ CHE 5120	Fundamentals of Battery Systems for Electric and Hybrid Vehicles	4
ME 5300	Intermediate Fluid Mechanics	4
ME 5800	Combustion Engines	4
ME 5810	Combustion and Emissions	4

In addition, students may choose to do directed study and research in an area of mutual interest to the student and a faculty member.

Program Educational Objectives

Program Educational Objectives are broad in scope and describe the expected accomplishments of our graduates during the first few years after graduation, while Student Outcomes are narrower and describe what our students are expected to know and be able to do by the time of graduation. The objectives of the undergraduate program in Mechanical Engineering at Wayne State University are to provide the education and training that will enable its graduates to:

1. successfully pursue intermediate level engineering positions or additional degrees;
2. demonstrate technical competency in applying broad, fundamental-based knowledge and up-to-date skills to perform professional work in mechanical engineering related disciplines;
3. demonstrate competency in applying comprehensive design methodology pertaining to mechanical engineering, incorporating the use of the economic, environmental, and social impact of design;
4. engage in professional societies, and to always apply best practices in professional ethics; and
5. be committed to life-long learning activities through self-reliance, creativity and leadership.

ABET Student Outcomes (as revised on October 20, 2017)

It is expected that by the time of graduation, our B.S.M.E. students will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

In support of these educational objectives, faculty members will seek outstanding levels of achievement in their research and engineering practices. To further foster professionalism, the Department encourages students to be active participants in ASME, Pi Tau Sigma, Tau Beta Pi, SAE and other student professional organizations.

The Bachelor of Science in Mechanical Engineering program (https://engineering.wayne.edu/mechanical/academics/bs) at Wayne State University is accredited by the Engineering Accreditation Commission

of ABET, https://www.abet.org/, under the commission's General Criteria and Program Criteria for Mechanical Engineering.

Mechanical Engineering (ME) Honors requirements:

Mechanical Engineering undergraduate students must be either a University Honors student or participating in AGRADE (https://engineering.wayne.edu/academics/programs/undergrad-experience/agrade) and complete a Thesis to be considered for Mechanical Engineering departmental honors. Courses and credits to satisfy the Mechanical Engineering departmental honors requirements are listed below. This information does not contain all of the degree requirements to graduate.

ME department requirements (26 credits total):

- Need a minimum GPA of 3.4 and 3.6 Honors GPA
- 23 credits must be in Engineering Honors courses including the following:
  - BE 5998 Engineering Honors Thesis (4 cr.)
  - BE 2100 Basic Engineering III: Probability and Statistics in Engineering (3 cr.)
  - ME 5330 Advanced Thermofluid Design (4 cr.)
  - ME 5500 Advanced Engineering Design (WI) (4 cr.)
  - 2 ME courses at either the 5000 or 6000 level
- At least one HON 42XX Honors seminar (3 cr.)

Mechanical Engineering Minor

The minor in mechanical engineering provides students enrolled in the General Engineering program with an opportunity to specialize in either solid mechanics and design or in thermal-fluid system design.

Students are required to successfully complete 14 credits in the mechanical engineering curriculum. Students must satisfy the math prerequisites prior to registering.

Code	Title	Credits
ME 2200	Thermodynamics	3
ME 3300	Fluid Mechanics: Theory and Laboratory	4
ME 3450	Manufacturing Processes I	3
Select one of the following courses:		4
ME 4150	Design of Machine Elements	
ME 4210	Heat Transfer: Theory and Laboratory	
Total Credits		**14**

All course work must be completed in accordance with the academic procedures of the University (p. 14) and the James and Patricia Anderson College of Engineering (p. 142) governing undergraduate scholarship and degrees.

Engineering Technology Division

Office: 4855 Fourth Street; 313-577-0800
Chairperson: Ece Yaprak
http://www.engineering.wayne.edu/et/

The Division of Engineering Technology was founded in 1973 and offers both undergraduate (upper-division: junior and senior level) and graduate programs. It stresses the application of current technology to typical industrial problems. Entering students in the upper division program are assumed to have a background equivalent to an associate degree in engineering technology or in a related discipline. The program complements a community college education by providing more application-oriented analytical techniques. In the curriculum a close relationship is maintained between the theoretical principles taught in the classroom and their applications in corresponding laboratories.

Engineering technology is a profession closely related to engineering and deals with the application of knowledge and skill to industrial processes, production, and management. Technologists are organizers of people, materials, and equipment for the effective planning, construction and maintenance of technical facilities and operations. They are responsible for work requiring technical and practical knowledge. They can apply their abilities in using technical equipment, selling technical products, serving as manufacturers' technical representatives, or supervising varied construction projects and manufacturing processes. They work with engineers in many aspects of project development, production planning, and final testing of industrial, military, or consumer products. Their talents are used in virtually every activity where technical expertise is required. They may be involved with electronic and mechanical instruments, experimental equipment, computing devices, tool design, manufacturing, or drafting.

Technical skills in the use of electronic equipment, machinery, tools, and drafting instruments are characteristic of this type of work. Thus, engineering technology students can find challenging employment in business and industry. Graduates of Wayne State's Engineering Technology program have been employed in areas such as manufacturing engineering, engineering production, marketing, maintenance, quality control, product testing, field engineering, consulting engineering, design, and technical supervision. Baccalaureate engineering technology graduates are often called technologists to distinguish them from baccalaureate graduates of engineering programs. However, the National Bureau of Labor Statistics does not have a category called 'technologist,' and consequently, many industrial job titles show little distinction between technologists and engineers. Graduates of Engineering Technology and Engineering programs complement each other in their skills and interests, and together with technicians and scientists, they form a technological team which has been able to produce an ever-increasing rate of technological advancement.

For complete information regarding academic rules and regulations of the University, students should consult the Academic Regulations (p. 40) section of this bulletin. The following additions and amendments pertain to the Division of Engineering Technology.

Undergraduate Registration

Engineering Technology students are required to meet with their academic advisor a minimum of once per academic year in order to discuss their academic progress and curriculum. It is strongly recommended that these meetings take place before each semester's registration. Special attention should be paid to course pre- and co-requisites requirements in prerequisites. It is the student's responsibility to ensure that all pre-requisite and co-requisite requirements are satisfied. Students will be removed from courses entered without satisfying these

requirements. The Division will adhere strictly to this established policy, and waivers may be considered for truly exceptional cases only.

Some courses may be offered only once a year; others may have multiple sections running every semester. The University Schedule of Classes (http://www.classschedule.wayne.edu/?_gl=1*1ajwq5r*_ga*MTgyNTYxMzc4NS4xNjkzNDAyOTAy*_ga_ZYEBRZJFL1*MTY5NTkxODkzNy41NicuMS4xNjk1OTE5NDg3LjAuMC4w) published prior to each semester, shows when and where the classes will meet and outlines registration procedures and times.

Attendance Policy

Regular attendance in classes is necessary for success in college work. Excessive unexcused absences may result in a student failing a course. The student should arrange with the course instructor in advance for all predictable absences. Absences due to illness or conditions beyond the student's control should be reported in writing to the instructor as soon as possible, and substantiating documentation provided upon the student's return to class.

Dean's List of Honor Students

A student who achieves a term grade point average of 3.5 or more, based on a load of twelve credits or more, is cited by the Dean for distinguished scholarship and is included on the Dean's List of Honor Students.

AGRADE Program (Accelerated Graduate Enrollment)

The Engineering Technology Division allows academically superior undergraduate seniors to enroll simultaneously in undergraduate and graduate programs and apply a maximum of sixteen credits toward both an undergraduate and graduate degree in the student's major field. Students who elect the AGRADE Program may expect to complete the bachelor's and master's degrees in one additional year of full-time study.

To be eligible, applicants must have completed a minimum of ninety credits of course work applied towards the engineering technology degree and be accepted in the professional program of their major. The minimum grade point averages for acceptance into the program are a 3.3 g.p.a. overall and not less than a 3.45 g.p.a. in their program of specialization, as computed by the rules of the Division of Engineering Technology. See the academic advisor for further details.

Student Conduct

Each student is subject to official regulations governing student activities and student behavior. Furthermore, it is the responsibility of each student to adhere to the principles of academic integrity. Thus, a student should not falsely claim the work of another as their own or misrepresent themselves so that the measures of their academic performance do not reflect their own work or personal knowledge.

If there are reasonable grounds to believe that a student has violated the regulations or student responsibilities, they may be disciplined. Such discipline may include failure in the course, suspension or dismissal from the program. A description of the University's Student Due Process Policy and a discussion of academic integrity can be found at the Dean of Students Office (http://www.doso.wayne.edu/assets/codeofconduct.pdf).

Division of Engineering Technology Rules for Calculating Grade Point Average

Engineering Technology computes grade point averages of major requirement courses using rules that differ from those used to compute the cumulative grade point average on the official University transcript: Engineering Technology g.p.a. is calculated based on all upper division courses (3000 level or higher) required for the program of study. For students admitted to the James and Patricia Anderson College of Engineering for the Winter 2004 semester or later, repeated courses will not be included in the grade point average calculations (following standard University regulations). The new grade will replace the old grade in the g.p.a. calculation, but only a maximum of five repeated courses will be allowed.

For students admitted to the James and Patricia Anderson College of Engineering prior to Winter 2004, the inclusion of repeated courses in the grade point calculation follows different rules. When a course is repeated, the new grade will replace the previous grade unless the student exceeds the maximum number of repeats: one repeat for each thirty-four credits completed at Wayne State University. After the maximum number of repeats is exceeded, both grades are used in computing the student's grade point average.

Substandard Performance

A minimum grade of C- is required for all courses. If a grade below C- is received in any course to be applied towards the degree, the student will be required to repeat that course in the next semester in which it is available. The course must be repeated, and a satisfactory grade earned before the next course in the sequence is taken. **Students will be administratively withdrawn from courses for which they have not satisfied course prerequisites.** A course in which a grade below C- has been earned cannot be subsequently passed by special examination. When repeating a course, failure for the third time to pass it with a grade satisfactory to the Division constitutes grounds for denying a student further registration in the Division of Engineering Technology.

For part-time students, a semester will be considered to consist of twelve consecutive credits.

A student may be refused the privilege of registering in the Division if, at any time, their grade point average falls below 2.0. A student may also be refused the privilege of registering in the Division for irresponsible attendance and performance in class, regardless of any probationary status.

A student who has been refused registration may request that the Division Head or Academic Standards Committee reconsider their status. Such request should only be made when evidence of extenuating circumstances can be provided.

Auditing Courses

Undergraduate students may elect to formally audit a course that interests them. In order to audit a course, a student must register for the class and pay the appropriate tuition. However, this course will not apply towards any degree requirements. Any course that has been completed for audit may not be subsequently enrolled in for credit, nor may credit be obtained by special examination.

Courses used to satisfy program requirements may not be taken on a Pass-Fail basis, except for industry sponsored project courses taken for elective credit (maximum of 3 credit hours). Capstone design course, even if they include an industry sponsored project, may not be taken on a Pass-Fail basis.

Repeating Courses

If a student receives a substandard grade in a course at Wayne State University, they will be required to repeat that course at Wayne State University. Exceptions to this policy require prior written approval from

the Associate Dean for Academic Affairs in order to take the course at another designated institution.

Students are directed to Repeating Courses — The mark of R (https://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/#repeats) for University policies related to repeating courses and credit by special examination. See also 'Division of Engineering Rules for Calculating Grade Point Average', above.

General education and technical elective courses, which are not specifically required for the degree, may be repeated or a different course may be chosen to satisfy that requirement. If a different course is selected, the first grade will not be replaced in the calculation of the g.p.a.

Exclusion from the James and Patricia Anderson College of Engineering

Students may repeat up to five courses in which they obtained a grade below C-. Should a student need to retake a sixth course to fulfill degree requirements, they will face exclusion from the James and Patricia Anderson College of Engineering. Moreover, failing to achieve a grade of at least 'C-minus' after three attempts in a course will serve as grounds for exclusion from the James and Patricia Anderson College of Engineering. Prerequisite math courses, although not credited towards the degree, become part of the exclusion count if students didn't place into MAT 1800. It's important to note that repeating a course for a better understanding, even if a satisfactory grade ('C-minus' or higher) was initially earned, will not contribute to the tally of permitted repeats.

Following exclusion from James and Patricia Anderson College of Engineering, the privilege of registering in the College will be withheld for at least one calendar year.

A student who has been denied the opportunity to enroll in the James and Patricia Anderson College of Engineering may seek a review of their status by the Academic Standards Committee (ASC) following a one-year exclusionary period. However, such a request should only be made if there is supporting evidence of academic preparation or circumstantial changes that significantly enhance the chances of academic success. To initiate the reconsideration process, a formal written request must be submitted to the Associate Dean for Academic Affairs. Students planning to petition for readmission are advised to consult with their academic advisor early in the exclusion period to explore potential changes that could facilitate readmission. It is important to note that readmission to the James and Patricia Anderson College of Engineering is not guaranteed in any circumstance.

Probation Policy

A student enters probationary status when their cumulative grade point average (g.p.a.) falls below 2.0 or when their academic performance is considered unsatisfactory. During this period, the student must meet with their academic advisor to address academic deficiencies and devise an academic recovery plan for the next two semesters. While on probation, participation in student activities representing the Division of Engineering Technology is not allowed. The Academic Standards Committee of the Division establishes probationary regulations and reviews exception requests.

A student is granted two consecutive terms on probation. If, after these terms, the cumulative g.p.a. remains below 2.00, the student faces exclusion from their program. At the end of the initial semester on probation, if the cumulative grade point average has not improved to at least 2.0, the student is prohibited from applying to the Division of Engineering Technology for readmission or reinstatement for a minimum of one calendar year.

Changes of Election and Withdrawal

In addition to the University policies regarding changes of program and withdrawal from courses (https://bulletins.wayne.edu/undergraduate/general-information/records-registration/), the following additions and amendments apply to the Division of Engineering Technology:

Registration and Adding Courses

A student may register for courses through the last day of the second week of classes for fifteen-week courses. A registered student may add a course through the last day of the second week of classes by submitting a completed Drop/Add form. Students are not permitted to add courses after the first week of the term without instructor and departmental permission.

A student may not change from one section of a course to another section of the same course after the fourth week of classes. Drop/Add forms will be valid for ten calendar days from the date of the earliest signature of approval. Once a student is admitted to Wayne State University, he/she does not have to go through the admissions procedure again. If a student does not register for two or more terms, he/she must first have his/her status upgraded at the University Records Office.

Withdrawals

Courses from which a student withdraws, such that a mark of W appears on the transcript, are counted as an attempt at the course and are taken into account when assessing the allowed number of repeats. If a student feels that circumstances beyond their control (e.g., family emergency, change of work schedule) justify the withdrawal, a written petition may be submitted to the Associate Dean for Academic Affairs before the end of the semester in which the course was taken. If the petition is approved, it will be noted in the student's advising record that the course will not be counted towards Engineering repeat allowances.

Transfer Credit Policy

There is no limit to the number of credits a student can transfer in. However, the applicability of transfer credits to specific programs in the Division will vary with the **articulation agreements/transfer pathways** with the individual institutions. For more information on transferring credits, see the following link:

Transferring credit - Transfer to Wayne State University - Wayne State University

Students must take a minimum of 34 credit hours from WSU, including 24 hours, which must be delivered by the Division of Engineering Technology. In order for a transfer course to be utilized in a student's plan of study, it cannot be lower than a C. (In other words, C-, D+, D, D-, and F are considered unsuitable for transfer).

Course Prerequisite Policy

The Division of Engineering Technology has instituted a system of prerequisites and co-requisites for technical courses. These requirements are designed to ensure that students have the necessary background knowledge for the subsequent courses. Thus, the Division will adhere strictly to this established policy, and waivers may be considered for truly exceptional cases only.

Request to petition any established Division or College rules must be submitted to the academic advisor in writing.

Although we rely primarily on the Banner system for prerequisite checks, students will be administratively withdrawn at any time during the term if through any other means we find them lacking the necessary requirements.

Graduation

Students must apply for graduation at the beginning of the semester in which they plan on completing their degree requirements. At graduation, the University requires a minimum 2.0 grade point average in the total residence credit. Additionally, Engineering Technology programs require a minimum 2.0 grade point average in the Division. The student's total g.p.a., as well as division grade point average, is calculated using the Division of Engineering Technology rules as described above.

Students must take a minimum of 34 credit hours from WSU, including 24 hours, which must be delivered by the Division of Engineering Technology. And a grade point average of at least 3.0 may qualify for a special diploma under the following conditions:

Summa Cum Laude: Student must have a grade point average in the 95th percentile of the James and Patricia Anderson College of Engineering graduating class.

Magna Cum Laude: Student must have a grade point average in the 90th percentile of the graduating class.

Cum Laude: Student must have a grade point average in the 80th percentile of the graduating class.

Commencement

Each year, commencement exercises are held in both May and December. College Order of the Engineer and Professional Order of Engineering Technology ceremonies will be held in May to induct graduates into these organizations. Students who are graduating in December are eligible to participate in the induction ceremony for the following May.

Guest Students

A student attending another engineering college who wishes to take course work at Wayne State for the purpose of credit transfer to the home institution may be admitted as a guest student for one term. This is done by applying through the University Office of Admissions using either the Application for Undergraduate Admission or the Graduate Guest Application. These applications require certification by an official of the home institution. For information on graduate guest admission and visiting doctoral guests, see the Wayne State University Graduate Bulletin. Guest students are expected to have met the listed prerequisite requirements for courses in which they wish to enroll. Students wishing to register for 3000- or 4000-level engineering classes must first receive permission from the department that teaches the course.

Second and Concurrent Degree

In accordance with the University requirements, students may earn a Bachelor of Science in one of the Division programs concurrently with or subsequent to another bachelor's degree at Wayne State University. Such students must satisfy applicable departmental and college requirements; consult an academic advisor to review these requirements.

- Advanced Energy Storage Systems (Undergraduate Certificate) (p. 173)
- Computer Technology (B.S.) (p. 174)
- Construction Management (B.S.) (p. 175)
- Electrical/Electronic Engineering Technology (B.S.) (p. 176)
- Electromechanical Engineering Technology (B.S.) (p. 178)
- Mechanical Engineering Technology (B.S.) (p. 179)
- Welding and Metallurgical Engineering Technology (B.S.) (p. 181)

Advanced Energy Storage Systems (Undergraduate Certificate)

An admissions moratorium is currently in effect for this program.

The alternative energy economy relies heavily on advanced energy storage systems to prolong the life of energy generated by solar and wind systems. The changing nature of energy resources will increase the need for energy storage in both supply and demand. Energy storage facilities hold a key position in energy supply systems; the benefits of electric energy storage include increasing grid reliability, reducing system transmission congestion, helping manage load, and making renewable electricity sources more suitable as base load providers. Energy storage technologies are also critical to the future of the automotive industry, which is innovating rapidly around vehicle electrification.

The Undergraduate Certificate Program in Advanced Energy Storage Systems provides technically-oriented education that emphasizes the application of advanced technology to solve problems, design and develop products, and improve processes, procedures, equipment, and facilities. This program aims to prepare students for application-oriented careers in Advanced Energy Storage System industry, including storage in automotive, consumer, nuclear and green industries; advanced battery systems and hydrogen electro-chemical cells; mechanical energy storage; thermal and chemical storage; inductive storage based on superconducting magnetic field; and, social and economical aspects of storage technology.

Students must be concurrently enrolled in or have completed an undergraduate degree (B.S.) in Engineering, Engineering Technology, Chemistry, or Physics. Students who are currently pursuing a B.S. must have completed at least sixty credits of undergraduate engineering, engineering technology, chemistry, or physics coursework with a minimum of a 2.0 cumulative major g.p.a. Students must document satisfactory completion of all prerequisite courses (or their equivalent) with a grade of C- or higher.

Students interested in earning an Undergraduate Certificate in Advanced Energy Storage Systems must complete five courses:

Code	Title	Credits
ETT 4150		3
ETT 4310		3
ETT 4410		3
MCT 4150	Applied Thermodynamics	3
MCT 5210	Energy Sources and Conversion	3
Total Credits		**15**

Program Standards

All students must earn at least a C grade in each of the courses to be applied towards the Certificate and complete the coursework with an overall g.p.a. of at least 2.0. Students concurrently enrolled in an engineering or engineering technology undergraduate program will be governed by overall policy on substandard grades for students pursuing a B.S. degree (one substandard grade allowed for every twenty-four credits completed at WSU). Students who have completed a B.S. degree and are pursuing only the Certificate will be allowed one substandard grade, with a subsequent successful repeat of the course, during completion of this academic program.

Computer Technology (B.S.)

The Bachelor of Science in Computer Technology (B.S.C.T.) prepares students for professional work relating advancements in basic science to practical computer applications. This degree is an interdisciplinary program of study which provides a combination of professional courses in computer science, information systems, electronics, and information technology. The particular strengths of the program include:

- applied hands-on curriculum;
- hardware oriented laboratory experiences;
- scientific advancement merged with applications; and
- the various skills and knowledge required for the enhanced job market in this field.

The computer technology program offers excellent prospects for professional positions in both business and industry where the sophistication and implementation of computers dominate a broad spectrum of employment opportunities. This region of the state has a large concentration of technology firms that employ information system designers and application integrators. Classes are usually offered both during the day and in the evening.

Admission Requirements

The B.S.C.T. degree program is designed to admit students who satisfy the general undergraduate admission (p. 34) requirements of the University and have an associate degree or equivalent course work in preparatory programs such as computer information systems, computer technology, data processing or closely related disciplines. A minimum grade point average (g.p.a.) of 2.5 is required for admission into the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as Pre-Engineering Technology students, and may be transferred into the B.S.C.T. program upon successful completion of pre-calculus (MAT 1800) and physical science courses, with a g.p.a. of 2.5 or above.

A Mathematics Placement Examination is required of entering students who have not already earned advanced credit in pre-calculus.

Program Requirements

Candidates for the B.S.C.T. degree must earn a minimum of 124 credits, as outlined in one of the following major programs and including the University General Education Requirements (p. 24). A minimum of thirty semester credits must be earned from Wayne State, at least twenty-four of which must be in Division of Engineering Technology courses. All coursework must be completed in accordance with the academic procedures of the University (p. 40) and the College (p. 142) and must conform to Division (p. 170) academic standards.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total resident credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education Requirements.

Plan of Study: Due to wide variation in backgrounds of associate degree holders, as well as differing rates of progress of full- or part-time students, an individually-tailored plan of study will be developed for each student, in conjunction with a faculty advisor. Courses will be selected based on the student's academic preparation, course prerequisites, and proposed scheduling of courses.

Required Background: Any student deficient in any courses listed under Lower Division (Community College) Technical Transfer Credit will be required to remove the deficiency before completion of fifteen credits in basic science/mathematics and technical core courses.

The Bachelor of Science in Computer Technology requires at least 124 credits as outlined below:

Code	Title	Credits
Basic Science and Mathematics		
CSC 1100	Problem Solving and Programming	4
MAT 1800	Elementary Functions (QE)	4
ET 3430	Applied Differential and Integral Calculus	4
(NSI) Natural Science Inquiry Courses (minimum 2)		6
(NSI) Natural Science Inquiry Lab		1
B.S.C.T. Technical Core		
CSC 3750	Introduction to Web Technology	3
CSC 4110	Software Engineering	4
CSC 4420	Computer Operating Systems	4
CSC 4710	Introduction to Database Management Systems	3
ET 3850	Reliability and Engineering Statistics	3
ET 3870	Engineering Economic Analysis	3
or ET 5870	Engineering Project Management	
ET 4999	Senior Design Project	3
EET 3100	Advanced Digital Design	3
EET 3720	Micro and Programmable Controllers	3
EET 4100	Computer Hardware Design	3
EET 5720	Computer Networking Applications	4
CSC/EET Upper Division Technical Electives		6
Lower Division Technical Transfer Credit		
CSC 2110	Computer Science I	4
CSC 2200	Computer Science II	4
EET 2100	Principles of Digital Design	3
EET 2720	Microprocessor Fundamentals	3
Lower Division Tech Electives		25
Communication Requirements		
(BC) Basic Composition courses		3
(IC) Intermediate Composition course (ENG 3050 required)		3
(OC) Oral Communication course		3
Other General Education Requirements		
(CI) Cultural Inquiry		3
(SI) Social Inquiry		3
(DEI) Diversity, Equity and Inclusion		3
(GL) Global Learning		3
(CL) Civic Literacy		3
Total Credits		**124**

Engineering Technology Honors

Engineering Technology Honors demands a higher level of performance and offers more personal supervision by faculty than the regular curriculum. It is recommended for qualified students who have an interest in research and plan to go on to graduate or professional schools. The Honors Program is open to students seeking the Bachelor of Science in Computer Technology, Electrical/Electronic Engineering Technology, Electromechanical Engineering Technology, and Mechanical Engineering Technology. A cumulative grade point average of at least 3.3 is required for consideration for admission to and continuance in the program. Students are admitted on the recommendation of the Departmental Honors Program advisor. Interested students should contact the advisor and complete the Honors Plan of Work form when declaring their engineering technology major or at the beginning of the senior year. If a student has declared a major in engineering technology prior to entering

the Honors Program, a new Declaration of Major must be completed for the Bachelor of Science with Honors.

Department Honors Requirements (12 credits minimum)

- Students must meet all the ordinary requirements of the Engineering Technology major, and must have a 3.3 GPA overall
- One 42XX honors seminar (HON 4200-4280) (Cr. 3)
- Thesis-Honors Option with ET 4999 (Cr. 3)
- Two Honors Options courses within the engineering technology major, taught by full-time faculty member (Cr. 3-4 each)

Construction Management (B.S.)

A professional construction manager is someone who coordinates all that goes into a construction project. The overall goal of a construction manager is to produce a financially sound project that is completed on time and meets the specific needs of the client as well as the codes put forth by governmental agencies. Responsibilities of a construction manager are project planning, cost, time, safety, quality, and contracts.

Working professionals seeking to advance their education, students interested in construction management, or seasoned employees looking to start their own companies often choose construction management to help achieve career goals. People with construction management degrees often work as project managers, superintendents, estimators, schedulers, or green construction/LEED specialists. Many people in the construction industry own and operate their own businesses.

The program offered in construction management specialization includes course work on construction project management, estimating, scheduling, safety, legal and professional aspects, specifications, computer applications and a capstone project. Additional courses from the Business School on accounting, marketing, and management complement the program. Co-op and internship opportunities are available to the students in summers as well as the academic year.

Admission Requirements

This program is designed to admit students who satisfy the general undergraduate admission (p. 34) requirements of the University and have an associate degree or equivalent course work in architectural technology, construction technology, and civil technology. A minimum grade point average (g.p.a.) of 2.5 is required for admission into the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as pre-engineering technology students, and may be transferred into the B.S.C.M. program upon successful completion of pre-calculus (MAT 1800) and physical science courses, with a g.p.a. of 2.5 or above.

A Mathematics Placement Examination is required of entering students who have not already earned advanced credit in pre-calculus.

Program Requirements

Candidates for the B.S.C.M. degree must earn a minimum of 120 credits, as outlined in one of the following major programs and including the University General Education Requirements (p. 24). A minimum of thirty semester credits must be earned from Wayne State, at least twenty-four of which must be in Division of Engineering Technology courses. All coursework must be completed in accordance with the academic procedures of the University (p. 40) and the College (p. 142) and must conform to Division (p. 170) academic standards.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total resident credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education Requirements.

The Bachelor of Science in Construction Management degree requires a minimum of 120 credits as outlined in the following curriculum.

Code	Title	Credits
Basic Sciences and Mathematics		
MAT 1800	Elementary Functions (QE)	4
ET 3430	Applied Differential and Integral Calculus	4
CHM 1020	Survey of General Chemistry (NSI)	4
PHY 2130	Physics for the Life Sciences I (NSI)	4

PHY 2131	Physics for the Life Sciences Experimental Laboratory (NSI)	1
Business and Management		
CMT 3050	Construction Accounting and Financial Management	3
CMT 5030	Facilities and Management Principles	3
ECO 2020	Principles of Macroeconomics (SI)	4
or ECO 2010	Principles of Microeconomics	
ET 3870	Engineering Economic Analysis	3
PHI 1120	Professional Ethics (CI)	3
Approved Business Elective		6
Construction Science and Construction Management		
CMT 3000	Construction Estimating and Bidding	3
CMT 3010	Introduction to Construction Management	3
CMT 3020	Residential and Commercial Land Development and Design	3
CMT 3030	Construction Safety Management	3
CMT 3040	Building Codes	3
CMT 3070	Introduction to Green Construction	3
CMT 3080	Advanced Computers in Construction	3
CMT 4050	Construction Methods	3
CMT 5060	Planning and Scheduling	3
CMT 5070	Mechanical and Electrical Systems in Buildings	3
CMT 4200	Senior Project	3
CMT Elective (3000 or higher course work)		3
Lower Division Technical Transfer Credit		
Introduction to 2D and 3D CAD		3
Soils and Foundations		3
Lower Division Tech Electives		21
Communication Requirements		
(BC) Basic Composition course		3
(IC) Intermediate Composition course (ENG 3050 required)		3
(OC) Oral Communication course		3
General Education Requirements		
(DEI) Diversity, Equity and Inclusion		3
(GL) Global Learning		3
(CIV) Civic Literacy		3
Total Credits		**120**

Electrical/Electronic Engineering Technology (B.S.)

The Bachelor of Science in Electrical/Electronic Engineering Technology (B.S.E.T.E.E.) Program prepares students for diverse and dynamic careers in industry. Electrical/Electronic Engineering Technologists use the principals of science and math to solve problems in industry and business. The B.S.E.T.E.E. program emphasizes hands-on laboratory experiences, and courses stress the practical application of mathematics, science, and engineering to solve real world problems. Possible applications for this degree include: the automotive industry, business machines/professional and scientific equipment, computers and electronics, defense, and electronic utilities. Electrical/Electronic Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org (http://www.abet.org/).

Admission Requirements

This program is designed to admit students who satisfy the general undergraduate admission (p. 34) requirements of the University and have an associate degree and a minimum grade point average (g.p.a.) of 2.50. Students with a g.p.a. of 2.0 to 2.5 may be admitted as pre-engineering technology students, and may be transferred into the engineering technology program upon successful completion of MAT 1800 and PHY 2130 with a g.p.a. of 2.50.

Required Background: Any student deficient in any courses listed under Lower Division Technical Transfer Credit will be required to remove the deficiencies before electing any EET courses

A Mathematics Placement Examination is required of entering students who have not already earned advanced credit in pre-calculus.

Program Requirements

This program extends the practical and applied base of the associate degree program with theoretical courses in electrical engineering and engineering technology, and additional courses in mathematics, science, and socio-humanities. Candidates for the B.S.E.T.E.E. degree must earn a minimum of 124 credits, as outlined in one of the following major programs and including the University General Education Requirements (p. 24). A minimum of thirty semester credits must be earned from Wayne State, at least twenty-four of which must be in Division of Engineering Technology courses. All coursework must be completed in accordance with the academic procedures of the University (p. 40) and the College (p. 142) and must conform to Division (p. 170) academic standards.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total resident credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education Requirements.

Plan of Study: Due to the various educational backgrounds of associate degree graduates and the different rates of progress of full-time and part-time students, individual plans of study are developed for students in conjunction with faculty advisors.

NOTE: A student who, after receiving one undergraduate degree at Wayne State University, wishes to obtain a second bachelor's degree must complete at least thirty credits beyond those applied toward the first degree.

The Bachelor of Science in Electrical/Electronic Engineering Technology requires a minimum of 124 credits as outlined in the following curriculum.

Code	Title	Credits
Basic Science and Mathematics		
MAT 1800	Elementary Functions (QE)	4
ET 3430	Applied Differential and Integral Calculus	4
ET 3450	Applied Calculus and Differential Equations	4
CHM 1020	Survey of General Chemistry (NSI)	4
PHY 2130	Physics for the Life Sciences I (NSI)	4
PHY 2131	Physics for the Life Sciences Experimental Laboratory (NSI)	1
PHY 2140	Physics for the Life Sciences II	4
PHY 2141	Physics for the Life Sciences Laboratory	1
EET Technical Core		
ET 3850	Reliability and Engineering Statistics	3
ET 3870	Engineering Economic Analysis	3
ET 5870	Engineering Project Management	3
EET 3100	Advanced Digital Design	3
EET 3150	Network Analysis	4
EET 3180	Analog Electronics	4
EET 3300	Applied Signal Processing	3
EET 3500	Electrical Machines and Power Systems	3
EET 3720	Micro and Programmable Controllers	3
EET 4200	Control Systems	4
EET Upper Division Technical Electives		6
ET 4999	Senior Design Project	3
Lower Division Technical Transfer Credit		
ET 2160	Computer Applications for Engineering Technology	2
EET 2000	Electrical Principles	3
EET 2100	Principles of Digital Design	3
EET 2720	Microprocessor Fundamentals	3
Lower Division Tech Electives		21
Communication Requirements		
(BC) Basic Composition course		3
(IC) Intermediate Composition course (ENG 3050 required)		3
(OC) Oral Communication course		3
Other General Education Requirements		
(CI) Cultural Inquiry (PHI 1120 required)		3
(SI) Social Inquiry		3
(DEI) Diversity, Equity and Inclusion		3
(GL) Global Learning		3
(CIV) Civic Literacy Inquiry		3
Total Credits		**124**

Engineering Technology Honors

Engineering Technology Honors demands a higher level of performance and offers more personal supervision by faculty than the regular curriculum. It is recommended for qualified students who have an interest in research and plan to go on to graduate or professional schools. The Honors Program is open to students seeking the Bachelor of Science in Computer Technology, Electrical/Electronic Engineering Technology, Electromechanical Engineering Technology, and Mechanical Engineering Technology. A cumulative grade point average of at least 3.3 is required for consideration for admission to and continuance in the program. Students are admitted on the recommendation of the Departmental Honors Program advisor. Interested students should contact the advisor and complete the Honors Plan of Work form when declaring their engineering technology major or at the beginning of the senior year. If a student has declared a major in engineering technology prior to entering the Honors Program, a new Declaration of Major must be completed for the Bachelor of Science with Honors.

Department Honors Requirements (12 credits minimum)

- Students must meet all the ordinary requirements of the Engineering Technology major, and must have a 3.3 GPA overall
- One 42XX honors seminar (HON 4200-4280) (Cr. 3)
- Thesis-Honors Option with ET 4999 (Cr. 3)
- Two Honors Options courses within the engineering technology major, taught by full-time faculty member (Cr. 3-4 each)

Electromechanical Engineering Technology (B.S.)

The Bachelor of Science in Electromechanical Engineering Technology (B.S.E.T.E.M.) offers an interdisciplinary education, resulting from the integration of electronics and computers in engineering systems. This major offers an individual plan of study with coursework in electronics, electrical, manufacturing, and mechanical areas, with appropriate prerequisite courses. The program is designed to extend the practical and applied base of the associate degree program with more theoretical and comprehensive engineering technology courses, and additional courses in mathematics, science, and socio-humanities.

Admission Requirements

This program is designed to admit students who satisfy the general undergraduate admission (p. 34) requirements of the University and have an associate degree in electrical, electronics, industrial, manufacturing, mechanical, or related technology from a community college or equivalent college-level course-work. A minimum grade point average (g.p.a.) of 2.50 is required for admission to the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as pre-engineering technology students, and may be transferred into the engineering technology program upon successful completion of MAT 1800 and PHY 2130 with a g.p.a. of 2.50.

Required Background: Any student deficient in any courses listed under Lower Division Technical Transfer Credit will be required to remove deficiencies before completing fifteen credits in basic science/mathematics and technical core courses.

A Mathematics Placement Examination is required of entering students who have not already earned advanced credit in pre-calculus.

Program Requirements

Candidates for the B.S.E.T.E.M. degree must earn a minimum of 124 credits, as outlined in one of the following major programs and including the University General Education Requirements (p. 24). A minimum of thirty semester credits must be earned from Wayne State, at least twenty-four of which must be in Division of Engineering Technology courses. All coursework must be completed in accordance with the academic procedures of the University (p. 40) and the College (p. 142) and must conform to Division (p. 170) academic standards.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total resident credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education Requirements.

The Bachelor of Science in Electromechanical Engineering Technology requires a minimum of 124 credits as outlined in the following curriculum.

Code	Title	Credits
Basic Science and Mathematics		
MAT 1800	Elementary Functions (QE)	4
ET 3430	Applied Differential and Integral Calculus	4
ET 3450	Applied Calculus and Differential Equations	4
CHM 1020	Survey of General Chemistry (NSI)	4
PHY 2130	Physics for the Life Sciences I (NSI)	4
PHY 2131	Physics for the Life Sciences Experimental Laboratory (NSI)	1
PHY 2140	Physics for the Life Sciences II	4
PHY 2141	Physics for the Life Sciences Laboratory	1
EMT Technical Core		
ET 3030	Statics	3
ET 3050	Dynamics	3
ET 3850	Reliability and Engineering Statistics	3
ET 3870	Engineering Economic Analysis	3
or ET 5870	Engineering Project Management	
EET 3150	Network Analysis	4
EET 3500	Electrical Machines and Power Systems	3
EET 3720	Micro and Programmable Controllers	3
EET 4200	Control Systems	4
MCT 3010	Instrumentation	3
MIT 2500	Machine Tool Laboratory	1
EMT Upper Division Technical Electives		9
ET 4999	Senior Design Project	3
Lower Division Technical Transfer Credit		
ET 2140	Computer Graphics	3
ET 2160	Computer Applications for Engineering Technology	2
EET 2100	Principles of Digital Design	3
EET 2000	Electrical Principles	3
EET 2720	Microprocessor Fundamentals	3
Lower Division Tech Electives		18
Communication Requirements		
(BC) Basic Composition course		3
(IC) Intermediate Composition course (ENG 3050 required)		3
(OC) Oral Communication course		3
Other General Education Requirements		
(CI) Cultural Inquiry (PHI 1120 required)		3
(SI) Social Inquiry		3
(DEI) Diversity, Equity and Inclusion		3
(GL) Global Learning		3
(CIV) Civic Literacy		3
Total Credits		**124**

Engineering Technology Honors

Engineering Technology Honors demands a higher level of performance and offers more personal supervision by faculty than the regular curriculum. It is recommended for qualified students who have an interest in research and plan to go on to graduate or professional schools. The Honors Program is open to students seeking the Bachelor of Science in Computer Technology, Electrical/Electronic Engineering Technology, Electromechanical Engineering Technology, and Mechanical Engineering Technology. A cumulative grade point average of at least 3.3 is required for consideration for admission to and continuance in the program. Students are admitted on the recommendation of the Departmental Honors Program advisor. Interested students should contact the advisor and complete the Honors Plan of Work form when declaring their engineering technology major or at the beginning of the senior year. If a student has declared a major in engineering technology prior to entering the Honors Program, a new Declaration of Major must be completed for the Bachelor of Science with Honors.

Department Honors Requirements (12 credits minimum)

- Students must meet all the ordinary requirements of the Engineering Technology major, and must have a 3.3 GPA overall
- One 42XX honors seminar (HON 4200-4280) (Cr. 3)
- Thesis-Honors Option with ET 4999 (Cr. 3)

- Two Honors Options courses within the engineering technology major, taught by full-time faculty member (Cr. 3-4 each)

Mechanical Engineering Technology (B.S.)

The Mechanical Engineering Technology (B.S.E.T.M.E.) Program prepares students for diverse and dynamic careers in industry. B.S.E.T.M.E. graduates work in fields that require understanding of the relationships and dependencies among materials, product development, manufacturing systems and processes, or energy production, transformation and transmission (including alternative energy). The program emphasizes hands-on laboratory experiences, and courses stress the practical application of mathematics, science, and engineering to solve real world problems. The B.S.E.T.M.E. program provides students with a well-rounded education focused on the knowledge of existing and new developments in their technical specialty. The program offers students the opportunity to specialize in one of three tracks: design, energy, or manufacturing. B.S.E.T.M.E. graduates work with their minds as well as their hands to solve problems related to their chosen area of specialization.

The Bachelor of Science in Mechanical Engineering Technology (B.S.E.T.M.E.) program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org (http://www.abet.org/).

Admission Requirements

This program is designed to admit students who satisfy the general undergraduate admission (p. 34) requirements of the University and have an associate degree or equivalent college-level course work in one of the following or related technical areas:

- Aerospace Technology
- Automotive Technology
- Climate Control
- Computer-Aided Design
- Drafting
- Energy Technology
- Fluid Power
- Manufacturing
- Mechanical Design
- Mechanical Technology
- Powerplant

A minimum grade point average (g.p.a.) of 2.50 is required for admission to the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as pre-engineering technology students, and may transfer into the engineering technology program upon successful completion of MAT 1800 and PHY 2130 with a g.p.a. of 2.50.

Required Background: Any student deficient in any course listed under Lower Division Technical Transfer Credit will be required to remove the deficiency before completing fifteen credits in basic science/mathematics and technical core courses.

A Mathematics Placement Examination is required of entering students who have not already earned advanced credit in pre-calculus.

Program Requirements

Candidates for the B.S.E.T.M.E. degree must earn a minimum of 124 credits, which includes University General Education requirements (p. 24). A minimum of thirty semester credits must be earned from Wayne State, and at least twenty-four must be in the Division of Engineering Technology courses. All coursework must be completed in accordance

with the academic procedures of the University (p. 40) and the College (p. 142) and must conform to Division (p. 170) academic standards.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total resident credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education requirements.

The Bachelor of Science in Mechanical Engineering Technology requires a minimum of 124 credits as outlined in the following curriculum.

Code	Title	Credits
Basic Science and Mathematics		
MAT 1800	Elementary Functions (QE)	4
ET 3430	Applied Differential and Integral Calculus	4
ET 3450	Applied Calculus and Differential Equations	4
CHM 1020	Survey of General Chemistry (NSI)	4
PHY 2130	Physics for the Life Sciences I (NSI)	4
PHY 2131	Physics for the Life Sciences Experimental Laboratory (NSI)	1
PHY 2140	Physics for the Life Sciences II	4
PHY 2141	Physics for the Life Sciences Laboratory	1
MCT Upper Division Core		
ET 3030	Statics	3
ET 3050	Dynamics	3
ET 3850	Reliability and Engineering Statistics	3
ET 3870	Engineering Economic Analysis	3
ET 4999	Senior Design Project	3
ET 5870	Engineering Project Management	3
MCT 3010	Instrumentation	3
MCT 3100	Mechanics of Materials	3
MCT 3410	Kinematics and Dynamics of Machines	3
MCT 4150	Applied Thermodynamics	3
MCT 4180	Fluid Mechanics	3
MIT 3520	Manufacturing Processes Theory	3
Focus Elective (select one of the following courses)		**3**
MCT 4400	Design of Machine Elements	
MCT 5210	Energy Sources and Conversion	
MIT 4700	Computer-Aided Design and Manufacturing (Students planning to take MIT 4700 should first take MIT 3600 to satisfy their Upper Division Tech Free Elective.)	
Upper Division Tech Free Elective		**3**
Lower Division Technical Transfer Credit		
ET 2140	Computer Graphics	3
ET 2160	Computer Applications for Engineering Technology	2
ET 2200	Engineering Materials	3
EET 2000	Electrical Principles	3
Hands-on manufacturing course		1
Lower Division Tech Electives		**20**
Communication Requirements		**9**
(BC) Basic Composition course		
(IC) Intermediate Composition course (ENG 3050 required)		
(OC) Oral Communication course		
Other General Education Requirements		**15**
(CI) Professional Ethics (PHI 1120 required)		
(SI) Social Inquiry		
(DEI) Diversity, Equity, Inclusion		
(GL) Global Learning Inquiry		
(CIV) Civic Inquiry		
Total Credits		**124**

Engineering Technology Honors

Engineering Technology Honors demands a higher level of performance and offers more personal supervision by faculty than the regular curriculum. It is recommended for qualified students who have an interest in research and plan to go on to graduate or professional schools. The Honors Program is open to students seeking the Bachelor of Science in Computer Technology, Electrical/Electronic Engineering Technology, Electromechanical Engineering Technology, and Mechanical Engineering Technology. A cumulative grade point average of at least 3.3 is required for consideration for admission to and continuance in the program. Students are admitted on the recommendation of the Departmental Honors Program advisor. Interested students should contact the advisor and complete the Honors Plan of Work form when declaring their engineering technology major or at the beginning of the senior year. If a student has declared a major in engineering technology prior to entering the Honors Program, a new Declaration of Major must be completed for the Bachelor of Science with Honors.

Department Honors Requirements (12 credits minimum)

- Students must meet all the ordinary requirements of the Engineering Technology major, and must have a 3.3 GPA overall
- One 42XX honors seminar (HON 4200-4280) (Cr. 3)
- Thesis-Honors Option with ET 4999 (Cr. 3)
- Two Honors Options courses within the engineering technology major, taught by full-time faculty member (Cr. 3-4 each)

Welding and Metallurgical Engineering Technology (B.S.)

Metallurgy and Welding are two technologies that both have their roots in the Industrial Revolution, where the joining of metals began with the forge welding of pig or wrought iron. Because of their fundamental nature, these technologies are intertwined. The ability to develop and join metals have made immeasurable contribution to the transportation, aerospace, agricultural and defense industries.

The Wayne State University's B.S. in Welding and Metallurgical Engineering Technology (B.S.W.M.E.T.) program will bring together the theoretical and practical aspects of welding and metallurgy to provide industry with engineers proficient in both areas.

Admissions Requirements

The B.S.W.M.E.T. is designed to admit students who satisfy the undergraduate admission (p. 34) requirements of the University and have an associate degree or equivalent course work in preparatory programs such as welding technology or closely related disciplines. A minimum g.p.a. of 2.5 is required for admission into the program. Students with a g.p.a. of 2.0 to 2.5 may be admitted as Pre-Engineering Technology students, and may be transferred into the B.S.W.M.E.T. program upon successful completion of pre-calculus (MAT 1800) and physical science courses, with a g.p.a. of 2.5 or above. A Mathematics Placement Examination is required of students who have not already earned advanced credit in pre-calculus.

Program Requirements

Candidates for the B.S.W.M.E.T. degree must earn a minimum of 121 credits, which includes University General Education requirements (p. 24). A minimum of thirty semester credits must be earned from Wayne State, and at least twenty-four must be in the Division of Engineering Technology courses. All coursework must be completed in accordance with the academic procedures of the University (p. 40) and the College (p. 142) and must conform to Division (p. 170) academic standards.

In order to graduate, the University requires a minimum 2.0 g.p.a. in total resident credit, and the Division a minimum 2.0 g.p.a. in total coursework in the area of specialization; as well as satisfaction of all University Undergraduate General Education requirements.

The Bachelors of Science in Welding and Metallurgical Engineering Technology requires a minimum of 121 credits as outlined in the following curriculum.

Code	Title	Credits
Science Requirements		**17**
MAT 1800	Elementary Functions (QE)	
ET 3430	Applied Differential and Integral Calculus	
CHM 1020	Survey of General Chemistry (NSI)	
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory (NSI)	
Welding and Metallurgy Upper Division Core Courses		**42**
ET 3030	Statics	
ET 3850	Reliability and Engineering Statistics	
ET 3870	Engineering Economic Analysis	
WMT 3200	Thermodynamics of Welding and Metallurgy	
ET 5870	Engineering Project Management	
MCT 3100	Mechanics of Materials	
WMT 3100	Mechanical Metallurgy	
WMT 3451	Mechanical Metallurgy	
WMT 3452	Physical Metallurgy	
WMT 4700	Welding Design	
WMT 4800	Advanced Welding Metallurgy	
WMT 5800	Welding Automation and Robotics	
WMT 4600	Metallurgy of Welding Processes	
ET 4999	Senior Design Project	
Welding and Metallurgy Upper Division Electives (Choose 7 credits from the following courses)		**7**
WMT 5350	Resistance Welding Processes	
WMT 4500	Failure Fracture Analysis	
WMT 3000	Welding Quality and Safety	
ET 4990	Guided Study (1 credit)	
Lower Division Technical Courses		**31**
ET 2200	Engineering Materials	
EET 2000	Electrical Principles	
ET 2140	Computer Graphics	
Hands-on manufacturing course (1 credit)		
Lower Division Technical to be transferred from Community College (21 credits)		
Communication		**9**
Basic Communication (BC)		
Intermediate Communication (IC)		
Oral Communication (OC)		
General Education		**15**
PHI 1120	Professional Ethics (CI)	
Civic Literacy Inquiry (CIV)		
Social Inquiry (SI)		
Diversity, Equity, Inclusion Inquiry (DEI)		
Global Inquiry (GL)		
Total Credits		**121**

College of Fine, Performing and Communication Arts

Interim Dean: Kelly Young

The College of Fine, Performing and Communication Arts at Wayne State University provides the highest quality education for practitioners, scholars, and consumers in art, art history, communication, dance, music and theatre. This education leads to careers, uses for the arts in other disciplines, enhanced critical abilities, the enrichment of everyday life and the building of new generations of artists, professionals and scholars. Programs of study focus on the integration of theory and practice through the creation, discovery, preservation and transmission of knowledge in fine, performing and communication arts.

The College serves the University and the larger community by creating partnerships that emphasize its own rich, diverse curriculum, interdisciplinary studies, reciprocal professional interaction and outreach activities appropriate to each area of work. Special emphasis is placed on forging alliances with local, state and national constituencies such that the College is both a leader and a resource providing expertise, information and guidance.

Within an appropriate and attractive academic environment the College promotes an atmosphere conducive to intellectual and artistic growth, risk-taking and personal and professional development at all levels in both individual and collaborative endeavors. This environment also assists the College in its role as a national center for creative, research and teaching excellence.

As the cultural gateway of the University, the College provides public events and curricular offerings that nurture creative development, enrich aesthetic values and sensitivity, heighten awareness of the arts experience and reflect the disciplinary diversity of its areas of study. Cultural, racial, ethnic and gender diversity is an important commitment in public events and educational efforts.

Ultimately, the mission of the College is the integration of theory and practice through the creation, discovery, preservation and transmission of knowledge in the fine, performing and communication arts.

Campus Resources: Traditional courses of study are augmented by a variety of performance and presentation resources considered integral to many of the creative programs. Included in these are the Hilberry Gateway theatre, the Wayne State University Dance Company, the Wind Symphony and University Symphony Orchestra, the Intercollegiate Debate and Speech Teams, plus exhibitions in the Elaine L. Jacob Gallery and the Art Department Gallery that feature work created by students and studio faculty. These are only a few of the campus resources that are especially important for majors in the College. A more comprehensive listing can be found under each of the specific Departments.

Detroit Resources: The proximity of the Wayne State campus to institutions of the Detroit Cultural Center (which includes the Detroit Institute of Arts, Museum of Contemporary Art Detroit, the Charles H. Wright Museum of African American History, Michigan Opera Theatre and Orchestra Hall, among other institutions) provides further unique and enriching benefits for students. Professional staff members of these institutions often serve as adjunct faculty in College programs. Nearby, too, are major print and electronic communications resources that similarly provide both adjunct faculty and professional assistance to other programs in the College.

Accrediting Agencies: Programs in the Department of Music are accredited by the National Association of Schools of Music. The Public Relations program in the Department of Communication is accredited by the Public Relations Society of America.

Academic Regulations: Fine, Performing and Communication Arts

For complete information regarding academic rules and regulations of the University, students should consult Academic Regulations (p. 40) section of this bulletin. The following additions and amendments apply to the College of Fine, Performing and Communication Arts.

Academic Advising

The College provides comprehensive academic advising for each major in the department in which the major resides. In consultation with their academic advisor, students are expected to create an academic Plan of Work and review their progress with the advisor on a regular basis. Freshmen and sophomores should meet with their academic advisor at least once each semester. Juniors and seniors should meet with their advisor at least once per year and should also be consulting with their faculty mentors. Students should always seek advising immediately if they are having difficulties in their academic work.

Attendance

Regular attendance and performance is necessary for success in college work. Each instructor, at the beginning of the course, will announce attendance requirements.

Normal Program Load

The requirements for graduation are based upon an average program of fifteen credits per semester for eight semesters. The normal load shall not exceed eighteen credits.

Because two hours of outside preparation are normally expected for each class hour in each course, a fifteen credit program calls for approximately forty-five hours of class attendance and study per week. Students who undertake such a program should expect to give it their full time and energy. A few hours of employment a week may be safely added to this program by a capable student.

Extra Credits: Extra credits are any credits taken in excess of the normal load of eighteen credits per term. A student with a 3.0 grade point average may take more than eighteen credits, but not to exceed twenty-one credits, only when the proposed program carries the written approval of the academic advisor.

Retention of Student Records

Term papers and examinations shall either be returned to the student or retained by the instructor for a minimum of six months. Thereafter they may be destroyed. Instructors shall retain grade records for at least five years following the end of a term, and instructors who leave the institution shall give grade records for courses conducted during the past five years to their department chairperson. Five years after the end of a course, grade records may be returned to the instructor or destroyed by the department.

Dean's List

The Dean's List of academically exemplary students is compiled each fall and winter term based on the following criteria: a 3.75 grade point average for students registered for full-time programs of twelve credits or more that contribute to the grade point base; and a 4.0 grade point average for students registered for between six and eleven credits. Students who receive marks of I, or grades of N or U (p. 55) are not eligible.

Academic Probation

Low Grade Point Average

If a student's work averages below 2.0, the student will be placed on academic probation (p. 40). The student will be required to obtain permission from an advisor before registering, as outlined in an email to the student, with instructions for addressing the Probation status. Such permission to register will be granted only after the student meets with his/her departmental advisor and/or the College's Success Coach (https://cfpca.wayne.edu/successcoach.php), depending on the student's level of Probation and the instructions provided in the Probation notification email. The student and advisor/Success Coach will identify previous causes of academic difficulty and will formulate a plan for future academic success.

Registration and Holds on Records

A student on academic probation has an academic probationary 'hold' placed on his/her record, and must obtain a release of this hold each term before being permitted to register. To obtain this release, the student must meet with his/her departmental advisor and/or the College's Success Coach (https://cfpca.wayne.edu/successcoach.php), as indicated above under 'Low Grade Point Average.' The hold will not be released after the last day of the final registration period for the term in which the student intends to register.

Restriction

While on academic probation, a student may not represent the College in student activities.

Removal of Probation

Academic probation will be removed at the end of any term in which the student achieves a cumulative grade point average of 2.0 (C) or higher for all degree work taken at the University.

Exclusion

Low Grade Point Average

A student on academic probation shall be allowed three subsequent terms for enrollment in probationary status. At the conclusion of the three terms, a student who has not achieved a cumulative grade point average of at least 2.0 shall be dismissed from the College. This dismissal may be reviewed by the Reinstatement & Appeals Committee of the College if the student submits appropriate paperwork evidencing his/her eligibility to return and remain successful. A student dismissed from the College may not be reinstated until one calendar year has passed; however, reinstatement paperwork may be submitted as early as one semester prior to the student's eligible reinstatement date. A student may appeal dismissal during the semester following the dismissal notification.

Reinstatement

After one year of exclusion, the student may apply for reinstatement (http://cfpca.wayne.edu/reinstatement.php) to the College. The reinstatement application must be returned to the CFPCA Dean's Office on or before whichever following deadline precedes the student's eligible reinstatement semester: October 15th, February 15th, or June 15th. The decision to reinstate the student will be based upon evidence presented by the student that circumstances have changed and that the probability for success has increased. For further information, visit the College's website (http://cfpca.wayne.edu/reinstatement.php).

Cheating and Plagiarism

The principle of honesty is recognized as fundamental to a scholarly and creative community. Students are expected to honor this principle and instructors are expected to take appropriate action when instances of academic dishonesty are discovered. An instructor, on discovering such an instance, may give a failing grade on the assignment or for the course. Serious acts of dishonesty may lead to suspension or exclusion.

The instructor has the responsibility to notify the student of the alleged violation and the action being taken. Both the student and the instructor are entitled to academic due process in all such cases. Information on procedures is available through the Dean of Students Office.

Grade Appeal Procedure

It is the instructor's prerogative to evaluate student work and assign grades in accordance with his or her academic and professional judgment. Grounds to appeal a final grade include the following:

1. The application of nonacademic criteria in the grading process: race, color, sex (including gender identity), national origin, religion, age, sexual orientation, familial status, marital status, height, weight, disability, or veteran status
2. Evaluation of student work by criteria not directly related to course requirements
3. A miscalculation of the grade according to information contained on the course syllabus or other posted or distributed information

Note: These policy guidelines do not apply to:

1. allegations of academic dishonesty. Academic dishonesty matters should be addressed under Section 10.1 of the (https://doso.wayne.edu/pdf/student-code-of-conduct.pdf)**WSU Student Code of Conduct (https://doso.wayne.edu/pdf/student-code-of-conduct.pdf).**

2. allegations of harassment or discrimination in the learning environment. These matters should be

   addressed to the Office of Equal Opportunity (https://oeo.wayne.edu).

Coursework Grades

Disputes over grades should first be addressed informally between the student and the course instructor. If the student and instructor cannot reach a mutually agreeable resolution, the student can formally appeal the final course grade.

If a student seeks to formally appeal a final course grade, the following steps need to be taken.

Final Grade Appeal - for Undergraduate and Graduate Students

1. The student must initiate any final grade appeal in writing, including any supporting documentation, within thirty (30) days following official notification of grades for the term. The appeal is to be addressed to the course instructor. The instructor is to respond within ten (10) days of receiving the appeal.

• If the instructor notifies the student of the grade to be assigned BEFORE a course is officially concluded, the student can initiate the grade appeal process as soon as they have received the written notification from the instructor of the grade. This written notification of the grade must be given by the student to the Department Chair as part of the appeal documentation.

2. If the student is not satisfied with the response or receives no response from the instructor, the student has ten (10) days to submit a written appeal directed to the Department Chair.

3. The student will be notified in writing of the Department's decision within thirty (30) days of receiving the appeal. Appropriate departmental committees may be consulted for advice in grade appeals and the instructor will be invited to reply to the issues raised by the student. In all cases, appeals at the Department level will result in a written response from the Department Chair that is sent to the student and to the instructor.

4. If the student is not satisfied with the response from the Department level, the student may, within ten (10) days of receiving the Department decision, submit a written appeal directed to the Dean of the College and copy it to the Department Chair. This written appeal is to contain a copy of the written appeal that was directed to the Department Chair and a statement explaining the student's dissatisfaction with the Department level response. The College will provide a written decision within thirty (30) days of receipt of the student's appeal.

5. If the student wishes to continue the final grade appeal, the student may request a formal review by the Provost's office within thirty (30) days of the date of the College's response. Such requests are subject to the university's Academic Appeal Procedure found under "Academic Regulations" in the respective Undergraduate or Graduate Bulletin http://bulletins.wayne.edu. The request should be submitted via the online form located at https://provost.wayne.edu/academic-policy.

6. Any meetings held in relation to the appeal shall provide parties the opportunity to present additional information orally or in writing. No additional persons should be permitted at such meetings without advance approval by the Chair or Dean, as appropriate.

7. Students/faculty may contact Ombuds Services (https://wayne.edu/ombuds) at any time for assistance with any problem associated with a grade decision or grade appeal.

Graduation With Distinction

Wayne State University bestows upon students completing the baccalaureate degree three separate designations for scholastic excellence reflected in the cumulative grade point average: *Cum Laude, Magna Cum Laude*, and *Summa Cum Laude*. Graduation with Distinction will be indicated on the student's diploma and on the transcript.

Graduation with Distinction will recognize at each commencement the top twenty percent of students in the College of Fine, Performing and Communication Arts who have earned the highest grade point average in the College with the following approximate distribution:

Top 5%: Summa Cum Laude
Next 5%: Magna Cum Laude
Next 10%: Cum Laude

The specific minimum grade point average for these distinctions will be determined each year in the following manner (except that it shall not be less than 3.0).

Based on the grade point average distributions of the previous year's senior class, the grade point average cut-offs for the College will be established for the current academic year. The criteria for Graduation with Distinction include:

1. A minimum of fifty-six credits in residence at Wayne State University;
2. A minimum grade point average, as established above, on all work at Wayne State University completed by the end of the term of graduation. (For notation in the Commencement Program, the grade

point average on all work completed prior to the term of graduation will be used.)

Commencement

All students must formally apply for degree certification by the deadline established by the Office of the Registrar for the term of intended graduation.

Information concerning commencement announcements, caps and gowns, invitations, tickets, time and place, assembling and other relevant items will be provided to graduates by the Commencement Office prior to the event.

Bachelor's Degree Requirements: Fine, Performing and Communication Arts

Credits

A candidate for a Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, or Bachelor of Science degree must complete at least 120 credits. Certain curricula may require additional credits. Also see Restrictions on Credit below. Degree components comprising these credits are: 1) General Education Requirements; 2) Department Requirements; and 3) Major Requirements.

General Education Requirements

University-wide General Education Requirements are designed to enhance students' basic skills and the diversity of their intellectual background. These requirements assure minimal competence in those skills needed to succeed in college and professional life and provide a selective introduction to the increasingly broad range of academic disciplines represented at the University. They serve to emphasize the fundamental means and essential knowledge required for continuing self-education and intellectual growth.

Entering undergraduate students in the College of Fine, Performing and Communication Arts are required to satisfy the University General Education requirements (p. 24).

Department Requirements

Some of the courses listed in the University General Education program are also courses required by for specific majors within this College. With careful course selection, students may satisfy both General Education Requirements and Department Requirements in some majors (and concentrations, where applicable). For more information, please consult an academic advisor in the major Department.

Major Requirements

A major is a program of intensive study in a Department within the College. The specific course requirements for all such majors are listed in this bulletin under each of the Departmental sections. Some degree programs offer students a choice of concentrations within the major. Students who plan to elect a major should consult with a departmental academic advisor prior to initial course registration. Courses in the major (and concentration, as applicable) must be completed with the grade of 'C' (2.0) or higher OR a C- (1.67) or higher depending on the department. In all cases, a student must have achieved a GPA in the major of 'C' (2.0) or higher in order to complete the major. In addition, the student is required to maintain a cumulative g.p.a. of 'C' (2.0) or higher for all University coursework.

Students who have not decided on a particular major area of study may initially select an exploratory option thereby indicating only the intention to take a degree in one of the Departments of the College. These options are Exploratory Communication Arts, Exploratory Fine Arts, Exploratory Music, and Exploratory Performing Arts. In partnership with academic advisors, students are encouraged to choose a specific degree program in one of the Departments within thirty credit hours. The exploratory option is not available for transfer students.

Course requirements vary with each curriculum. Exceptions are permitted to the College rules governing the minimum and maximum credits in the major subject and the maximum credits allowed in restricted courses if provision for such exceptions are stated or implied in the curriculum requirements outlined in this bulletin. Descriptions of courses

and the various curricula may be found in this Bulletin, under each of the Departmental sections of the College of Fine, Performing and Communication Arts.

Capstone Course: All undergraduate students must successfully complete a capstone course within their major. This course will be taken during the senior year (last thirty credits in course work) and provides a systematic focus on and assessment of the knowledge and skills obtained in the major.

Credits: The major must include at least twenty credits in one subject, exclusive of the introductory courses and inclusive of some advanced work. No more than forty-six credits in the major subject (including introductory courses) may be counted toward a degree, except in specific curricula in which additional courses are specified in the curriculum outline.

For majors that require intensive study in a particular subject, more than forty-six credits are allowed.

Within the above limits and the University's Bulletin-in-Effect (p. 24) Graduation Policy (p. 23), each major program has specific requirements, and these requirements may be modified from time to time; therefore, it is the student's responsibility to stay informed of current requirements from the major Department.

The major completed is part of the degree designation on the diploma.

Double Major (one degree, 2 majors, minimum of 120 credit hours)

If a student wishes to declare a double major, the approval of the chairperson or designated representatives of each of the departments of the intended majors must be obtained. In order for a student to graduate with a double major, the major requirements in both majors (and areas of concentration, as applicable) must be fulfilled and at least 120 credit hours must be earned. All courses in the major must meet the minimum grade requirement designated by the department and an overall GPA in the major of C (2.0) or higher. In addition, the student is required to maintain a cumulative g.p.a. of 'C' (2.0) or higher for all University coursework.

PLEASE NOTE:

1. If the majors are in two different colleges, the student must complete the General Education curriculum of the college that has the most comprehensive requirements;
2. only the name of the first of the two majors will appear on the diploma; and
3. the names of both majors will appear on the transcript. Students who wish to pursue dual concentrations within a single department must secure the permission of the chairperson or designated representative of the department. However, only one concentration will appear on the transcript.

Concurrent Degrees (2 degrees)

A student who has completed all the University, School/College, and Department requirements for two different degree programs may apply for both degrees simultaneously. A separate diploma will be issued for each degree and both degrees will be listed on the transcript. Students must inform the academic advisors in each degree program of their intention to pursue concurrent degrees. All courses in the major must meet the minimum grade requirement designated by the department and an overall GPA in the major of 'C' (2.0) or higher. In addition, the student is required to maintain a cumulative g.p.a. of 'C' (2.0) or higher for all University coursework.

Second Degree

A student who has received a Fine, Performing and Communication Arts degree from Wayne State University or any other accredited institution may obtain a second bachelor's degree in another academic area by registering in the College/School sponsoring the degree program. A graduate of Wayne State University who has earned a degree from the College of Fine, Performing and Communication Arts may be ranked as an undergraduate by declaring a new major (in a departmentally approved area of concentration, as applicable) and indicating a desire to earn a second undergraduate degree. Other Wayne State University graduates must transfer to the College of Fine, Performing and Communication Arts. A student from another institution must be admitted to the College by the University Admissions Office. Courses in the major (and concentration, as applicable) must be completed with the grade of 'C' (2.0) or higher OR a C- (1.67) or higher depending on the department. In all cases, a student must have achieved a GPA in the major of 'C' (2.0) or higher in order to complete the major. In addition, the student is required to maintain a cumulative g.p.a. of 'C' (2.0) or higher for all University coursework.

It is assumed that the second degree major will be different than that of the first degree and the student is not earning redundant credit; generally, no second degree will be granted in the academic area in which the first degree was earned. The University also requires that the student complete at least thirty credits in coursework at Wayne State University beyond the first degree, in order to be granted a second bachelor's degree from Wayne State University.

Fine, Performing and Communication Arts: Minor Options

The College of Fine, Performing and Communication Arts offers the option of minor concentrations in various subjects both to students in this college and other schools and colleges of the University. Students are strongly encouraged to consult with departmental academic advisors for course selections. Courses in the minor must be completed with the grade of 'C' (2.0) or higher OR a C- (1.67) or higher depending on the department. In all cases, a student must have achieved a GPA in the minor courses of 'C' (2.0) or higher in order to complete the minor. Minors are optional for College majors and students may choose not to fulfill the typical 18-21 credits of course work that make up a minor.

The notation of the minor will appear on the transcript but not on the diploma. Early declaration of the minor is encouraged so that coursework can be incorporated into the student's ongoing Plan of Work, see above under Academic Procedures (Majors and Minors).

Academic Procedures (Majors and Minors)

For procedures on declaring a major, adding a second major or second degree, or adding a minor, students should consult the sponsoring departmental academic advisor. Students should consult with their academic advisor as soon as possible to establish a comprehensive Plan of Work in order to pursue their academic goals as efficiently and effectively as possible.

Senior Rule

In addition to the University policy, the College requires that all competency requirements must be met before Senior Rule (p. 34) registrations can be considered. No student who has competency requirements to fulfill in the final semester of his or her undergraduate program will be eligible to apply for Senior Rule.

‘AGRADE’ (Accelerated Graduate Enrollment Program)

Accelerated Graduate Enrollment: Some departments of the College permit academically strong majors to apply for admission into the College’s ‘AGRADE’ program. ‘AGRADE’ procedures enable qualified seniors in the College of Fine, Performing and Communication Arts to enroll simultaneously in the undergraduate and graduate programs of the College and apply up to a maximum of sixteen credits towards both a bachelor's and master's degree in the major field. Some programs permit less than the maximum number of credits to be applied so check with the major department.

Qualified students may apply for the AGRADE program no earlier than the semester in which ninety credits are completed. Applicants must have an overall grade point average of 3.5 and not less than a 3.6 grade point average in the major courses already completed.

For more details about the ‘AGRADE’ program, contact the Graduate Director of the major department.

Teacher Preparation & Certification

CFPCA music and dance students interested in teaching may choose to complete coursework and clinical experiences leading to K-12 certification as part of a combined program with the College of Education (COE). Students follow the curriculum for their respective major (B.S. or B.F.A. in dance) or concentration (B. M. in music education).

Typically, CFPCA teacher candidates in music or dance begin their academic studies in the College of Fine, Performing and Communication Arts. During the sophomore year, students consult with their academic advisor in their major Department concerning the Level 2 application to the College of Education. This is a separate application leading to dual enrollment in both the CFPCA and the COE. See Level 2 application details below.

Once approved by the College of Education as a candidate for teacher certification, program requests will be signed by both a College of Fine, Performing and Communication Arts major academic advisor and by the appropriate advisor in the College of Education. Required coursework for the COE including fieldwork is completed during the junior and senior years. Students will not be allowed to register for the professional courses taught through the College of Education until they have been officially admitted to the COE.

Admission to the College of Education

Students submit the Level 2 application when all Level 2 admission requirements have been fulfilled. These requirements vary by program and students are encouraged to meet with a departmental academic advisor to review requirements specific to their program. The admission requirements include but are not limited to the following:

1. Successful completion of the Michigan Basic Skills Requirement: SAT Evidence Based Reading & Writing with a score of 480 and Math with a score of 530, or Michigan Department of Education approved alternative pass measure (see a departmental academic advisor for more information).
2. A Negative TB Test within the past three years.
3. A criminal history background check completed through an approved College of Education vendor. There is a fee paid by the student for the check.

Level 2 applications are processed three times per year and must be submitted by the deadlines listed on the COE admissions website. Click here to view additional information including deadlines, and complete the Level 2 Application: http://coe.wayne.edu/admissions/undergrad-requirements.php.

Note: Near the end of the program and at the time of recommending the teacher candidate to the Michigan Department of Education (MDE), Adult and Child CPR and First Aid Certification is required from an approved MDE provider.

Study Abroad

Various opportunities for study abroad are available through the University. Students should contact their major Department and the Study Abroad Office for further information regarding these programs.

Honors Courses

All departments in the College of Fine, Performing and Communication Arts offer Departmental Honors. Students enrolled in the College of Fine, Performing and Communication Arts who are interested in pursuing University or Departmental Honors curricula should refer to Undergraduate Honors Curricula (p. 33), or contact the departmental honors advisor.

Restrictions on Credit

The College imposes the following restrictions on credit:

Maximum Credits in One Subject: A student may not count as credit toward a degree more than forty-six credits in courses in any one subject except in specific curricula in which additional courses are specified in the curriculum outline.

Over-Age Credits: A student attempting to complete a major after a protracted interruption in education, or on a part-time basis over an extended period of time, may find that some of the early course work is out of date. In such cases, a Department may require refresher work or demonstration of preparation for advanced courses in the Department.

Restrictions on Transfer Credit — *Two-year Schools:* No more than sixty-four semester credits may be transferred from two-year colleges unless the student is following an articulation agreement that allows the transfer of additional two-year college credit.

Life Fitness Activity: No more than eight credits may be earned.

Advanced Courses: At least fifteen credits in courses numbered 3000 or above must be earned.

Repeated Subjects: It is understood that degree credit will not be granted for coursework for which credit has already been granted. Since similar courses may have different names at different times and at different colleges, students are advised to make sure they do not offer repeated coursework as credit toward a degree.

Grade Point Average

All students are required to maintain a cumulative grade point average of 'C' (2.0) for all University coursework. In addition, courses in the major (and concentration, as applicable) must be completed with the grade of 'C' (2.0) or higher OR a C- (1.67) or higher depending on the department. In all cases, a student must have achieved a GPA in the major of ‘C’ (2.0) or higher in order to complete the major.

Residence Requirement

To qualify for a baccalaureate degree in the College of Fine, Performing and Communication Arts a minimum of thirty credits must be earned in the College.

Law Minor

The Law minor requires a minimum of 18 credits. Students take three classes each in Law and in Communication.

Code	Title	Credits
Law School Courses		
LEX 5000	Law in Social Context	3
LEX 5010	Law and Harm	3
LEX 5020	Legal Procedure	3
College of Fine, Performing and Communication Arts Courses		
Select 3 from the following:		9
COM 2110	Argumentation and Debate	
COM 2160	Campaigns and Social Movements	
COM 2170	Persuasive Speaking	
COM 4110	Studies of Legal Argument	
COM 4150	Communication and Conflict	
COM 5710	Media Law and Ethics	
Total Credits		**18**

Art, Art History, and Design

Office: 150 Art Building, 450 Reuther Mall; 313-577-2980
Chairperson: Lauren Kalman
https://art.wayne.edu/

Our Mission

The James Pearson Duffy Department of Art, Art History, and Design is a community of students, staff, and faculty that advances the study and practice of art history, design, and fine art.

Our Vision

We sustain and further these disciplines through rigorous research, creative production, instruction, and community engagement within the context of an urban research university.

To realize this vision the department will:

1. Offer relevant and innovative programs grounded in faculty expertise
2. Support the research and creative activity of students and faculty
3. Develop lectures, workshops, exhibitions, and events that engage diverse audiences
4. Cultivate a supportive and collaborative environment for critical thinking, visual literacy, and creative practice
5. Provide safe and professional facilities for our students, staff, and faculty
6. Promote the importance of an arts education within a university context

The James Pearson Duffy Department of Art, Art History, and Design is dedicated to the understanding, production and presentation of works of art in all media. It seeks to explore and develop visual literacy as well as technical, critical and conceptual skills. The curriculum combines history, theory, practice and technology with interdisciplinary learning that aims to nurture a balance between technical proficiency, experimentation with new ideas and studying the visual arts as a means of understanding the intellectual and cultural history of humanity. By receiving a comprehensive training in the visual arts within the context of a liberal arts education, students are encouraged to master the various avenues of creative investigation and learning within the Department as well as in other departments of the College and the University at large. Each student is thereby able to progress from fundamentals to creative and intellectual maturity and given the tools of professionalization in a variety of different areas while immersed in the rich diversity of cultural and research opportunities offered by the University as a whole.

Academic Work Retention Policy

The Department reserves the right to retain, for its permanent collection, the work submitted by students for credit in any course, and to exhibit or reproduce such work in University publications. Students are encouraged to retain work as they proceed through their program, so as to have at least twenty works for a final portfolio review and demonstration of progress.

Advising

All students in the Department of Art, Art History, and Design are encouraged to meet regularly with their advisors regarding their selected program of study every semester. Students are advised to register as early as allowable to ensure that classes are available to them. Students are encouraged to take courses pertaining to their major as soon as the first semester of study in the Department of Art, Art History, and

Design. They are also encouraged to consult a Department advisor for information regarding the declaration of major.

Transfer Students

Transfer students must complete a minimum of twenty-seven resident credits in art courses for the B.F.A. degree with a studio major; a minimum of twelve resident credits with B.A. degree with a studio major; a minimum of twelve resident credits with an art history major; or a minimum of twelve resident credits for either the B.A. or B.S. degree with a major in design and merchandising. The minimum grade for each course required in the major, which must be taken in the Department of Art, Art History, and Design, must be no less than a C- in order for the course credit to count toward completion of the degree. A minimum of fifty-six credits must be completed for the degree from a Bachelor Degree granting institution.

Articulation Agreements (Transfer of Credit)

Articulation agreements are formal arrangements by which Wayne State University enters into agreement with other institutions for the transfer of college credits in certain designated degree programs. Students who have come to the Department of Art, Art History, and Design to pursue a degree in Art, Design, Art History or Fashion Design and Merchandising under an articulation agreement with another school or college program are required to meet with the Department academic advisor on a regular basis to ensure compliance with the terms of the agreement.

- Animation and Interactivity Minor (p. 195)
- Art (B.A.) (p. 189)
- Art (B.F.A.) (p. 190)
- Art History (B.A.) (p. 192)
- Art History Minor (p. 196)
- Art Minor (p. 196)
- Blacksmithing Minor (p. 196)
- Ceramics Minor (p. 196)
- Design (B.F.A.) (p. 192)
- Design and Merchandising (B.A.) (p. 194)
- Design and Merchandising (B.S.) (p. 195)
- Design Minor (p. 197)
- Digital Art and Photography Minor (p. 197)
- Fashion Design Minor (p. 197)
- Graphic Design Minor (p. 198)
- Illustration Minor (p. 198)
- Industrial Design Minor (p. 198)
- Interior Design Minor (p. 198)
- Jewelry Minor (p. 199)
- Painting and Drawing Minor (p. 199)
- Printmaking Minor (p. 199)
- Sculpture Minor (p. 200)
- Textile Design Minor (p. 200)
- Law Minor (p. 188)

Art (B.A.)

The James Pearson Duffy Department of Art, Art History, and Design is dedicated to the understanding, production and presentation of works of art in all media. It seeks to explore and develop visual literacy as well as technical, critical and conceptual skills. The curriculum combines history, theory, practice and technology with interdisciplinary learning that aims to nurture a balance between technical proficiency, experimentation with new ideas and studying the visual arts as a means of understanding the intellectual and cultural history of humanity.

Admission Requirements

Admission Requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates for the Bachelor of Arts in Art must complete a minimum of 120 credits including satisfaction of the University (p. 24) General Education requirements and a minimum of forty-eight credits in art courses, including the Course Requirements Sections A, B, and C as cited below. No grade lower than a 'C-' in a major course may be applied toward the completion of the degree. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 183) governing undergraduate scholarship and degrees.

Major Requirements

48 credits total – courses in sections A, B, and C

Code	Title	Credits
Section A		
Select three of the following:		9
ACO 1200	Surface Studio	
ACO 1230	Space Studio	
ACO 1270	Time Studio	
ADR 1050	Drawing I	
Section B		
Select two of the following:		6
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Section C		
Select thirty-three credits from the following:		33
Art History Elective, AH 3000-level or above (3 cr.)		
2000-level Art Studio (9-15 cr.)		
3000-level Art Studio (6-12 cr.)		
4000-level or above Art Studio (3 cr.)		
Department Elective: ACO, ACR, ADA, ADN, ADR, AFA, AFI, AGD, AH, AIA, AID, AME, APA, APR, ASL, ACS (3 cr.)		
ACS 3997	Professional Practices in the Visual Arts I (3 cr.)	
Total Credits		**48**

Art Honors Curriculum (B.F.A. and B.A. Programs)

(15 Credits required)

The Department of Art and Art History Honors program offers capable students the opportunity to pursue independent study and to work closely with department full-time faculty members. Completion of the honors major results in an honors degree designation on the diploma.

Departmental Honors Requirements

In order to enter the Departmental Honors program a student must have achieved academic excellence with a college or university with a g.p.a. of 3.3. A student must meet all regular major requirements including the following:

Code	Title	Credits
Honors Option Required Courses		
Two Honors Option studio art courses at the 2000-level or 3000-level (internships cannot satisfy this requirement)		6
One Honors Option course of an advanced art studio elective at 4000-level or above		3
One Honors Seminar (HON 4200 through HON 4280)		3
One Honors Project (ACS 5996 – Honors Project)		3
Total Credits		**15**

The student must maintain a minimum g.p.a. of 3.3 overall and in the major.

Art (B.F.A.)

The James Pearson Duffy Department of Art, Art History, and Design is dedicated to the understanding, production and presentation of works of art in all media. It seeks to explore and develop visual literacy as well as technical, critical and conceptual skills. The curriculum combines history, theory, practice and technology with interdisciplinary learning that aims to nurture a balance between technical proficiency, experimentation with new ideas and studying the visual arts as a means of understanding the intellectual and cultural history of humanity.

Admission Requirements

Admission Requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Degree Requirements

Candidates for the Bachelor of Fine Arts degree must complete a minimum of 120 credits including satisfaction of the University General Education requirements (p. 24). Departmental requirements as cited under the Bachelor of Arts with a Major in Art (p. 189) must be met, as well as the concentration requirements below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 183) governing undergraduate scholarship and degrees.

Major Requirements

Students pursuing a B.F.A. in Art must complete courses listed in sections A, B, and C and all courses listed under a selected concentration. The minimum grade for each course required in the major must be no less than a C- in order for the course credit to count toward completion of the degree.

Code	Title	Credits
Section A		
ACO 1200	Surface Studio	3
ACO 1230	Space Studio	3
ACO 1270	Time Studio	3
ADR 1050	Drawing I	3
Section B		
Select two of the following:		6
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Section C		
Five, 2000-level Fine Arts Electives:		15
Course must be taken from different subject areas in Fine Art including : ACR, ADA, ADR, AFI, AME, APA, APH, APR, ASL		
One, 3000-level Fine Arts Elective:		3
Course may be taken from offerings in: ACR, ADA, ADR, AFI, AME, APA, APH, APR, ASL		
One, 2000-Level or above Fine Art or Design Elective:		3
Course may be taken from offerings in: ACR, ADA, ADR, AFA, AFI, AGD, AIA, AID, AME, APA, APH, APR, ASL		
Two Art History electives (AH 3000 level or above)		6
ACS 5550	Special Topics	3
Select one from the following:		3
ACS 5550	Special Topics	
ACS 5300	Studio Art Internship	
ACS 3997	Professional Practices in the Visual Arts I (Junior Seminar in the Visual Arts)	3
ACS 5997	Professional Practices in the Visual Arts II	3
Total Credits		**57**

Concentration Requirements

Students must complete eighteen credits at the advanced level (from courses numbered 3000 and above) within a selected concentration. The minimum grade for each course required in the concentration, which must be taken in the Department of Art and Art History, must be no less than a C- in order for the course credit to count toward completion of the degree. Curriculum outlines with suggested scheduling patterns for the below concentrations are available from the Department of Art and Art History (http://www.art.wayne.edu/). All work within the following Concentration Requirements (18 credit hours) must be completed in addition to the courses from the Major Requirements (57 credit hours). Required courses in each concentration for the B.F.A. with a major in Art are given below; exceptions may be made only with the consent of advisor.

Ceramics

Code	Title	Credits
ACR 3550	Intermediate Ceramics	3
ACR 4000	Ceramic Multiples I	3
ACR 4550	Advanced Ceramics I	3
ACR 5000	Ceramic Multiples II (must be taken once)	3
ACR 5550	Advanced Ceramics II	3
One of the following courses must be taken once more. Select one:		3
ACR 5000	Ceramic Multiples II	
ACR 5550	Advanced Ceramics II	
Total Credits		**18**

Digital Arts

Code	Title	Credits
ADA 3210	Video Art	3
ADA 3220	Interactive Art	3
ADA 5210	Tech Justice	3
ADA 5250	Advanced Time-Based Media	3
Choose 6 credits from the following courses:		6
ADA 4000 Elective		
ADA 5000 Elective		
Total Credits		**18**

Drawing

Code	Title	Credits
ADR 3070	Intermediate Life Drawing	3
ADR 3000-level or above: Nine credits (topics include: Life Drawing, Alternative Materials and Methods, Landscape, and Anatomy)		9
ADR 5060	Advanced Concepts in Drawing and Painting	3
ADR 5100	Contexts of Studio Practice	3
Total Credits		**18**

Fibers

Code	Title	Credits
AFI 3640	Fibers: Digital Textile Design	3
AFI 3650	Fibers: Weaving	3
AFI 3660	Fibers: Print and Dye	3
AFI 4650	Fibers: Studio I	3
AFI 5650	Fibers: Studio II	3
AFI 5870	Directed Projects: Fibers	3
Total Credits		**18**

Metalsmithing

Code	Title	Credits
AME 3600	Intermediate Jewelry I	3
AME 3601	Intermediate Jewelry II	3
AME 4600	Metalsmithing I	3
AME 4601	Metalsmithing II	3
AME 5600	Advanced Jewelry and Metalsmithing (taken twice)	6
Total Credits		**18**

Painting

Code	Title	Credits
APA 3000-level or above: Twelve credits (topics include: Oil Painting, Watercolor Painting, Alternative Painting Media, Mural Painting, Figure Painting, and Landscape Painting)		12
APA 5060	Advanced Concepts in Drawing and Painting	3
APA 5100	Contexts of Studio Practice	3
Total Credits		**18**

Photography

Code	Title	Credits
APH 3410	Darkroom Photography	3
APH 3420	Digital Photography	3
APH 4410	Advanced Camera	3
APH 4420	Advanced Printing	3
APH 5470	Photography Portfolio and Contemporary Practices	3
APH (5000-level Photography Elective)		3
Total Credits		**18**

Printmaking *(An admissions moratorium is in effect for this concentration.)*

Code	Title	Credits
APR 3480	Intaglio I	3
APR 3490	Lithography I	3
Three credits from the following courses:		3
APR 3470	Photo-Processes for Printmaking I	
APR 3500	Screen Printing I	
APR 3510	Relief and Experimental Printmaking I	
Three credits from the following courses:		3
APR 5470	Photo-Processes for Printmaking II	
APR 5500	Screen Printing II	
APR 5510	Relief and Experimental Printmaking II	
APR 5480	Intaglio II	3
APR 5490	Lithography II	3
Total Credits		**18**

Sculpture

Code	Title	Credits
3-15 credits from the following courses:		
ASL 3150	Intermediate Sculpture	
ASL 3170	Figurative Sculpture I	
ASL 3190	Sculpture Foundry I	
ASL 3200	Wood Shop Practice I	
ASL 3300	Moldmaking I	
3-15 credits from the following courses:		
ASL 5150	Advanced Sculpture	
ASL 5170	Figurative Sculpture II	
ASL 5180	Sculpture: Advanced Technology	
ASL 5190	Sculpture Foundry II	
ASL 5810	Special Topics in Sculpture	
ASL 5200	Wood Shop Practice II	
ASL 5300	Moldmaking II	
Total Credits		**18**

Art Honors Curriculum (B.F.A. and B.A. Programs)

(15 Credits required)

The Department of Art and Art History Honors program offers capable students the opportunity to pursue independent study and to work closely with department full-time faculty members. Completion of the honors major results in an honors degree designation on the diploma.

Departmental Honors Requirements

In order to enter the Departmental Honors program a student must have achieved academic excellence with a college or university with a g.p.a. of 3.3. A student must meet all regular major requirements including the following:

Code	Title	Credits
Honors Option Required Courses		
Two Honors Option studio art courses at the 2000-level or 3000-level (internships cannot satisfy this requirement)		6
One Honors Option course of an advanced art studio elective at 4000-level or above		3
One Honors Seminar (HON 4200 through HON 4280)		3
One Honors Project (ACS 5996 – Honors Project)		3
Total Credits		**15**

The student must maintain a minimum g.p.a. of 3.3 overall and in the major.

Art History (B.A.)

The James Pearson Duffy Department of Art, Art History and Design is dedicated to the understanding, production and presentation of works of art in all media. It seeks to explore and develop visual literacy as well as technical, critical and conceptual skills. The curriculum combines history, theory, practice and technology with interdisciplinary learning that aims to nurture a balance between technical proficiency, experimentation with new ideas and studying the visual arts as a means of understanding the intellectual and cultural history of humanity.

Admissions Requirements

Admission Requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates must complete a minimum of 120 credit hours, including satisfaction of the University General Education Requirements (p. 24) and the major requirements listed below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 183) governing undergraduate scholarship and degrees.

Major Requirements

Students must complete a minimum of thirty-three credit hours in art history and an additional eight credit hours in a language, which includes the courses below:

Code	Title	Credits
Select two of the following:		6
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Language Requirement - two courses in the same language; any language other than English		
Language 1010		4
Language 1020		4
Upper Level Art History Courses		
Select twelve credits at the 3000-level or above		12
Select three credit hours at the 5000-level or above		3
Select one course from EACH of the following groups of upper-level categories:		
Classical		**3**
AH 5210	Hellenistic Art	
AH 5250	Ancient Rome	
AH 5260	Classical Greek Art	
AH 5270	Roman Painting and Sculpture	
AH 5310	The Ancient City of Athens	
Renaissance/Baroque		**3**
AH 5500	Early Renaissance in Italy	
AH 5510	High Renaissance and Mannerism in Italy	
Modern		**3**
AH 5710	Trends in Nineteenth Century Art	
AH 5715	Modernism: Nineteenth and Twentieth Centuries	
AH 5720	Twentieth Century Art	
AH 5780	Topics in Twentieth-Century Art	
African Diaspora		**3**
AH 5560	Special Topics	
Total Credits		**41**

Each course in the major must be completed with a minimum grade of 'C-.' In addition to the credits in art history, students are required to complete three semesters of a single foreign language, with minimum grades of C. Please note that many graduate programs in Art History across the nation require a minimum of 4 semesters of either French or German Language, therefore French or German are the encouraged languages in this field.

Art History Honors Curriculum (B.A. Program)

(15 Credits required)

The Department of Art and Art History Honors program offers capable students the opportunity to pursue independent study and to work closely with full-time department faculty members. Completion of the honors major results in an honors degree designation on the diploma.

Departmental Honors Requirements

In order to enter the Departmental Honors program a student must have achieved academic excellence in a college or university with a g.p.a. of 3.3. A student must meet all regular major requirements including the following:

Code	Title	Credits
Honors Option Required Courses		
Three Honors Option art history courses at the 3000-level to 5000-level		9
One Directed Study course (AH 5990)		3
One Honors Seminar offered (HON 4200 through HON 4280)		3
Total Credits		**15**

The student must maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Design (B.F.A.)

The James Pearson Duffy Department of Art and Art History is dedicated to the understanding, production and presentation of works of art in all media. It seeks to explore and develop visual literacy as well as technical, critical and conceptual skills. The curriculum combines history, theory, practice and technology with interdisciplinary learning that aims to nurture a balance between technical proficiency, experimentation with new ideas and studying the visual arts as a means of understanding the intellectual and cultural history of humanity.

Admission Requirements

Admission Requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Degree Requirements

Candidates for the Bachelor of Fine Arts degree with a major in Design must complete a minimum of 120 credits including satisfaction of the University General Education requirements (p. 24), the Departmental and the Concentration requirements. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 183) governing undergraduate scholarship and degrees.

Major Requirements

24 credits total – courses in sections A, B, and C in addition to the courses in your selected concentration.

Code	Title	Credits
SECTION A		
ADR 1050	Drawing I	3
ACO 1200	Surface Studio	3
ACO 1230	Space Studio	3
ACO 1270	Time Studio	3
SECTION B		
Select two of the following:		6
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
SECTION C		
ADN 3100	Design Process	3
Art or Design History Course 3000-level or above		3
Total Credits		**24**

Concentration Requirements

Students must complete forty-five credit hours in design courses, eighteen of which must be at the advanced level (from courses numbered 3000 and above) within the selected concentration *plus the appropriate senior seminar for the selected concentration.* The minimum grade for each course required in the concentration, which must be taken in the Department of Art and Art History, must be no less than a C- in order for the course credit to count toward completion of the degree. Curriculum outlines with suggested scheduling patterns for the below concentrations are available from the Department of Art and Art History (http://www.art.wayne.edu/). All work within the following Concentration Requirements (45 credit hours) must be completed in addition to the courses from the Major Requirements (24 credit hours). Required courses in each concentration for the B.F.A. with a major in Design are given below; exceptions may be made only with the consent of advisor.

Fashion Design

Code	Title	Credits
ADN 2410	Textiles	3
AFA 2420	Construction Methods I	3
AFA 3420	Construction Methods II	3
AFA 3400	Clothing and Culture	3
AFA 3460	Introduction to Merchandising	3
AFA 4430	Fashion Illustration	3
AFA 5422	Fashion Design: Flat Pattern	3
AFA 5424	Fashion Design: CAD	3
ADN 5430	History of Costume	3
AFA 5442	Fashion Design: Draping	3
AFA 5480	Fashion Design: Exhibition	3
AFA 5997	Seminar	3
One Fashion Design Elective (select one of the following):		3
AFA 4450	Contemporary Fashion Theory	
AFA 5400	Digital Fashion Illustration	
AFA 5472	Special Topics in Fashion	
One Merchandising Elective (select one of the following):		3
AFA 3470	Global Issues in Fashion Merchandising	
AFA 5410	Fashion Entrepreneurship	
AFA 5470	Visual Merchandising: Display	
One Fibers or Textile Design Elective (select one of the following):		3
AFI 3650	Fibers: Weaving	
AFI 3660	Fibers: Print and Dye	
AFI 3640	Fibers: Digital Textile Design	
Total Credits		**45**

Graphic Design

Code	Title	Credits
AGD 2230	Introduction to Typography: Skills and Concepts	3
AGD 2240	Introduction to Graphic Design: Skills and Concepts	3
AGD 2250	Typography	3
AGD 3250	Graphic Design I: Principles and Problem Solving	3
AGD 3260	Introduction to Interactivity in Graphic Design	3
AGD 3700	History of Graphic Design	3
AGD 4250	Graphic Design II: Word, Image, and Visual Organization	3
AGD 5260	Senior Seminar	3
AGD 5997	Senior Studio	3
Two Graphic Design (AGD) electives 5000-level or above		6
Three Art or Design studio electives [1]		9
One Art or Design studio elective, chosen from the following subject areas: AGD, ADA or APR		3
Total Credits		**45**

[1] May be chosen from the following subject areas: ACO, ACR, ACS, ADA, ADN, ADR, AFA, AFI, AGD, AIA, AID, AME, APA, APH, APR or ASL.

Industrial Design

Code	Title	Credits
ADN 5200	Design Research Methods	3
AID 3300	Introduction to Industrial Design	3
AID 3310	Drawing for Designers	3
AID 5300	Advanced Product Design Studio (should be retaken to accrue a minimum of 6 credit hours)	6
AID 5310	Digital Presentation Techniques (should be retaken to accrue a minimum of 6 credit hours)	6
AID 5330	3-D Modeling (should be retaken to accrue a minimum of 6 credit hours)	6
AID 5997	Senior Seminar for Designers	3
AID 6310	Experience Design Studio	3
AID 6300	Advanced Studio: Transportation Design Sketching	3
ADN 6320	History of Modern Design I	3
Two Art or Design studio electives [1]		6
Total Credits		**45**

[1] May be chosen from the following subject areas: ACO, ACR, ACS, ADA, ADN, ADR, AFA, AFI, AGD, AIA, AME, APA, APH, APR or ASL.

Interior Design

Code	Title	Credits
AIA 1610	Visual Communication I	3
AIA 2600	Technical Drawings	3
AIA 2610	Studio I	3
AIA 3610	Studio II	3
AIA 3620	Advanced Visualization	3
AIA 4610	Studio III	3
AIA 5610	Material Practices	3

AIA 5620	Building Construction Systems in Architecture I	3
AIA 5630	Lighting Design	3
AIA 5640	Building Construction Systems in Architecture II	3
AIA 5997	Senior Seminar	3
AIA 6610	Capstone Project	3
ADN 6320	History of Modern Design I	3
Two Art or Design studio electives [1]		6
Total Credits		**45**

[1] May be chosen from the following subject areas: ACO, ACR, ACS, ADA, ADN, ADR, AFA, AFI, AGD, AIA, AID, AME, APA, APH, APR or ASL.

Design Honors Curriculum (B.F.A. Program)

(15 Credits required)

The Department of Art and Art History Honors program offers capable students the opportunity to pursue independent study and to work closely with department full-time faculty members. Completion of the honors major results in an honors degree designation on the diploma.

Department Honors Requirements

In order to enter the Departmental Honors program a student must have achieved academic excellence in a college or university with a g.p.a. of 3.3. A student must meet all regular major requirements including the following:

Code	Title	Credits
Honors Option Required Courses		
Two Honors Option design studio courses at the 2000-level to 4000-level (internships cannot satisfy this requirement)		6
One Honors Option course of an advanced design studio elective at 5000-level or above		3
One Honors Seminar offered (HON 4200 through HON 4280)		3
One Honors Project (ACS 5996 – Honors Project)		3
Total Credits		**15**

The student must maintain a 3.3 g.p.a overall and in the major.

Design and Merchandising (B.A.)

Curricula in this area provide a liberal education as well as the opportunity for a professional concentration in the fields of apparel design and fashion merchandising.

Admission Requirements

Admission Requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Degree Requirements

Candidates must complete a minimum of 120 credits including satisfaction of the University General Education requirements (p. 24) and all departmental and area requirements as indicated below. A minimum grade of C- must be earned in each required course in the major in order for the course credit to count toward completion of the degree. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 183) governing undergraduate scholarship and degrees.

Major Requirements

Code	Title	Credits
Core Requirements		
ADN 2410	Textiles	3
AFA 3400	Clothing and Culture	3
AFA 3460	Introduction to Merchandising	3
ADN 5430	History of Costume	3
AFA 5997	Seminar	3
Language Requirement: two courses of the same language; any language other than English [1]		
Language 1010		4
Language 1020		4
Total Credits		**23**

Fashion Merchandising Concentration

This concentration develops understanding and practical skills related to the planning, buying and selling of fashion merchandise. Students gain insights into the various aspects of the apparel industries including marketing, sales, styling, publicity, advertising, visual presentation, fashion coordination, and merchandising. Possible careers include positions in management, buying, and fashion promotion and sales.

Code	Title	Credits
Fashion Merchandising Option Requirements		
AFA 3470	Global Issues in Fashion Merchandising	3
AFA 5460	Merchandising II	3
AFA 5470	Visual Merchandising: Display	3
AFA 5490	Retail Math	3
AFA 5992	Supervised Field Experience	3
One Fashion Design or Merchandising Elective (select one of the following):		3
AFA 2420	Construction Methods I	
AFA 5410	Fashion Entrepreneurship	
AFA 5472	Special Topics in Fashion	
Cognate Requirements		
AFA 3480	Fashion Marketing Management	3
AFA 4660	Fashion Retail Management	3
9 credit hours of Business electives from the following areas: Accounting (ACC); Business Administration (BA); Finance (FIN); Global Supply Chain (GSC); Marketing (MKT); Management (MGT)		9
Total Credits		**33**

Design and Merchandising Honors Curriculum (B.A. and B.S. Programs)

(15 Credits required)

The Department of Art and Art History Honors program offers capable students the opportunity to pursue independent study and to work closely with department full-time faculty members. Completion of the honors major results in an honors degree designation on the diploma.

Departmental Honors Requirements

In order to enter the Departmental Honors program a student must have achieved academic excellence in a college or university with a g.p.a. of 3.3. A student must meet all regular major requirements including the following:

Code	Title	Credits
Honors Option Required Courses		
Three Honors Option AFA or AFI courses at the 2000-level to 5000-level (internships cannot satisfy this requirement)		9
One Honors Seminar offered (HON 4200 through HON 4280)		3
One Honors Project (ACS 5996 – Honors Project)		3
Total Credits		**15**

The student must maintain a 3.3 g.p.a overall and in the major.

Design and Merchandising (B.S.)

An admissions moratorium is currently in effect for this program.

Curricula in this area provide a liberal education as well as the opportunity for a professional concentration in the fields of apparel design and fashion merchandising.

Admission Requirements

Admission Requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Degree Requirements

Candidates must complete a minimum of 120 credits including satisfaction of the University General Education requirements (p. 24) and all departmental and area requirements as indicated below. A minimum grade of C- must be earned in each required course in the major in order for the course credit to count toward completion of the degree. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 183) governing undergraduate scholarship and degrees.

Students pursuing the *Bachelor of Science Degree* with a Major in Design and Merchandising must complete a minimum of fifteen credits in Natural Science courses. Science courses can be taken in the following subjects areas: Astronomy, Biology, Chemistry, Geology, Nutrition and Food Science, or Psychology. This course selection should be done in consultation with a departmental advisor.

Major Requirements

Code	Title	Credits
Core Requirements		
ADN 2410	Textiles	3
AFA 3400	Clothing and Culture	3
AFA 3460	Introduction to Merchandising	3
ADN 5430	History of Costume	3
AFA 5997	Seminar	3
Science Requirement: 15 credits in Natural Sciences. May be chosen from the following areas: AST, BIO, CHM, ESG, NFS, PH, PHY, or PSY		15
Total Credits		**30**

Fashion Merchandising Concentration

This concentration develops understanding and practical skills related to the planning, buying and selling of fashion merchandise. Students gain insights into the various aspects of the apparel industries including marketing, sales, styling, publicity, advertising, visual presentation, fashion coordination, and merchandising. Possible careers include positions in management, buying, and fashion promotion and sales.

Code	Title	Credits
Core Requirements		
AFA 3470	Global Issues in Fashion Merchandising	3
AFA 5460	Merchandising II	3
AFA 5470	Visual Merchandising: Display	3
AFA 5490	Retail Math	3
AFA 5992	Supervised Field Experience	3
One Fashion Design or Merchandising Elective (select one of the following):		3
AFA 2420	Construction Methods I	
AFA 5410	Fashion Entrepreneurship	
AFA 5472	Special Topics in Fashion	
3 credit hours of Art, Art History, or Design electives		3
Cognate Requirements		
AFA 3480	Fashion Marketing Management	3
AFA 4660	Fashion Retail Management	3
9 credit hours of Business electives from the following areas: Accounting (ACC); Business Administration (BA); Finance (FIN); Global Supply Chain (GSC); Marketing (MKT); Management (MGT)		9
Total Credits		**36**

Design and Merchandising Honors Curriculum (B.A. and B.S. Programs)

(15 Credits required)

The Department of Art and Art History Honors program offers capable students the opportunity to pursue independent study and to work closely with department full-time faculty members. Completion of the honors major results in an honors degree designation on the diploma.

Departmental Honors Requirements

In order to enter the Departmental Honors program a student must have achieved academic excellence in a college or university with a g.p.a. of 3.3. A student must meet all regular major requirements including the following:

Code	Title	Credits
Honors Option Required Courses		
Three Honors Option AFA or AFI courses at the 2000-level to 5000-level (internships cannot satisfy this requirement)		9
One Honors Seminar offered (HON 4200 through HON 4280)		3
One Honors Project (ACS 5996 – Honors Project)		3
Total Credits		**15**

The student must maintain a 3.3 g.p.a overall and in the major.

Animation and Interactivity Minor

This minor provides a thorough focus on the study of Animation and Interactivity through the lens of New Media developments in Contemporary Arts. Explore the topics through a fine arts perspective; research and develop ideas as creative producers; foster innovative and critical thinking within digital media.

Students must complete 21 credits as specified below:

Code	Title	Credits
Select one of the following:		**3**
AH 1000	Introduction to Art	
AH 1110	Survey of Art History: Ancient through Medieval	

AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Required courses:		
ACO 1270	Time Studio	3
ADA 2210	Introduction to Digital Practices	3
ADA 3220	Interactive Art	3
ADA 4220	Experimental 2D Animation	3
ADA 4230	Experimental 3D Animation	3
ADA 5240	Interface	3
Total Credits		**21**

All courses in the minor must be completed with the grade of C- or higher.

Art History Minor

Study art as the human visual and physical record. Investigate the time and circumstances in which works of art were created as a way to understand their cultural meaning and significance.

Students must complete 15 credits in art history courses, including:

Code	Title	Credits
Select one of the following:		3
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Select twelve credits at the 2000 level or above		12
Total Credits		**15**

All courses in the minor must be completed with the grade of C- or higher.

Art Minor

This minor broadens understanding of artistic expression from the past to the present. Learn fundamental concepts and then apply them in a studio setting. Fine Art electives may be taken from any of the nine Fine Art areas: Ceramics, Digital Art, Drawing, Fibers, Metalsmithing, Painting, Photography, Printmaking or Sculpture.

Students must complete 21 credits as specified below:

Code	Title	Credits
ADR 1050	Drawing I	3
ACO 1200	Surface Studio	3
or ACO 1230	Space Studio	
Select one of the following:		3
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Select four studio electives		12
Total Credits		**21**

All courses in the minor must be completed with the grade of C- or higher.

Blacksmithing Minor

The Blacksmithing minor is intended for students who wish to hone their critical thinking and creative problem solving by using a variety of blacksmithing skills including handwork, machining and digital fabrication to refine their ability to produce artwork, commissions and utilitarian tools. With a minor offering such as Blacksmithing, students in art, design, physics, engineering, education and other interested majors will be able to have a “physical” material application to apply to their field and creative/research projects.

Students pursuing a Blacksmithing minor must complete the following courses from the list below totaling 21 credits.

Code	Title	Credits
Select one of the following:		3
ADR 1050	Drawing I	
ACO 1200	Surface Studio	
ACO 1230	Space Studio	
ACO 1270	Time Studio	
Select one of the following:		3
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
ADN 6320	History of Modern Design I	
Art: Metalsmithing (AME) Requirements:		12
AME 2600	Introduction to Jewelry and Metalsmithing	
AME 2650	Blacksmithing I	
AME 3650	Blacksmithing II	
AME 4650	Blacksmithing III	
Elective:		3
Complete a 2000 level Studio Art course from the Fine Art areas: ACR, ADA, AFI, ADR, APA, APR, APH or ASL. (p.)		
Total Credits		**21**

Ceramics Minor

The ceramics minor offers undergraduate students the opportunity to supplement their major field of study with a rigorous investigation of the ceramic material. Lower level coursework provides students with a foundation of art and an introduction to ceramics in effort to prepare them for more advanced courses. Students have the option of taking upper level coursework that explores sculptural and conceptual concerns and/or productions skills and functional ceramics.

Students pursuing the ceramics minor must complete 18 credits as specified below.

Code	Title	Credits
Core		**3**
Select one of the following:		
ACO 1200	Surface Studio	
ACO 1230	Space Studio	
ACO 1270	Time Studio	
ADR 1050	Drawing I	
Art History		**3**
Select one of the following:		
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Ceramics		**12**
ACR 2550	Introduction to Ceramics	
Select three of the following (9 credits):		

ACR 3550	Intermediate Ceramics	
ACR 4000	Ceramic Multiples I	
ACR 4550	Advanced Ceramics I	
ACR 5000	Ceramic Multiples II	
ACR 5550	Advanced Ceramics II	
ACR 5880	Directed Projects in Ceramics	
Total Credits		**18**

Design Minor

This minor offers students the opportunity to learn fundamental visual concepts in design and apply these in a studio setting. The minor also broadens understanding of creative expression from the past to the present.

Students must complete 21 credits as specified below:

Code	Title	Credits
ADR 1050	Drawing I	3
Select one course from the following:		3
ACO 1200	Surface Studio	
ACO 1230	Space Studio	
ACO 1270	Time Studio	
ADN 3100	Design Process	3
Art and Design History - choose one		3
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
ADN 5430	History of Costume	
ADN 6320	History of Modern Design I	
ADN 6330	History of Modern Design II	
Design Studio Electives - select from the following courses: [1]		9
Fashion		
AFA 2410	Textiles	
AFA 2420	Construction Methods I	
AFA 3400	Clothing and Culture	
AFA 3420	Construction Methods II	
AFA 3460	Introduction to Merchandising	
AFA 3470	Global Issues in Fashion Merchandising	
AFA 4430	Fashion Illustration	
Graphic Design		
AGD 2240	Introduction to Graphic Design: Skills and Concepts	
AGD 2250	Typography	
AGD 3250	Graphic Design I: Principles and Problem Solving	
AGD 3260	Introduction to Interactivity in Graphic Design	
AGD 4250	Graphic Design II: Word, Image, and Visual Organization	
Industrial Design		
ADN 5200	Design Research Methods	
AID 3300	Introduction to Industrial Design	
AID 3310	Drawing for Designers	
Interior Design		
AIA 1610	Visual Communication I	
AIA 2600	Technical Drawings	
AIA 2610	Studio I	
AIA 3610	Studio II	
AIA 3620	Advanced Visualization	
AIA 4610	Studio III	
AIA 4620	Visual Communication II	
Total Credits		**21**

[1] Choose design studio electives in discussion with your art advisor.

Digital Art and Photography Minor

This minor offers students the opportunity to supplement their major field of study with a rigorous investigation of digital art and photography. The program will provide a rich academic environment that will foster creativity and spur innovative thinking. The three required courses provide students with a deep understanding of the production of visual language in video, photography, and other time-based methods. From this dynamic foundation, they will choose a line of study to more thoroughly investigate advanced photography techniques, interactive art, or 2D/3D animation in a fine arts context.

Students must complete 18 credits as specified below:

Code	Title	Credits
Required courses		**9**
ACO 1270	Time Studio	
ADA 3210	Video Art	
APH 2400	Introduction to Photography	
Art History - choose one		**3**
AH 1000	Introduction to Art	
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Studio Electives - choose two		**6**
ADA 2210	Introduction to Digital Practices	
ADA 3220	Interactive Art	
ADA 4220	Experimental 2D Animation	
ADA 4230	Experimental 3D Animation	
ADA 5240	Interface	
ADA 5250	Advanced Time-Based Media	
APH 3410	Darkroom Photography	
APH 3420	Digital Photography	
APH 4410	Advanced Camera	
APH 4420	Advanced Printing	
Total Credits		**18**

All courses in the minor must be completed with the grade of C- or higher.

Fashion Design Minor

The Fashion Design Minor offers students the opportunity to gain skills in the techniques and concepts specific to garment construction and the fashion industry. Students will have the opportunity to learn through demonstrations, lectures, and projects in which they apply learned material. The minor broadens understanding of fashion design and its role in the future of dress.

The Fashion Design Minor requires 21 credits as specified below.

Code	Title	Credits
Required Course		
ADN 3100	Design Process	3
Design History		
Select one of the following:		3
ADN 5430	History of Costume	
ADN 6320	History of Modern Design I	
ADN 6330	History of Modern Design II	
ADN 5000	History of Interior Design and Architecture	
AGD 3700	History of Graphic Design	
Fashion Design		
ADN 2410	Textiles	3
AFA 2420	Construction Methods I	3
AFA 3420	Construction Methods II	3
AFA 5422	Fashion Design: Flat Pattern	3
AFA 4430	Fashion Illustration	3
or AFA 5424	Fashion Design: CAD	
or AFA 5442	Fashion Design: Draping	
Total Credits		**21**

Graphic Design Minor

The Graphic Design Minor offers students the opportunity to learn the basics of typography, layout and visual hierarchy. Students will have the opportunity to learn through lectures, demonstrations and hands-on exercises. The minor broadens understanding of graphic design and its role in everyday visual cultures.

The Graphic Design Minor requires 21 credits as specified below.

Code	Title	Credits
Required Course		
ADN 3100	Design Process	3
Design History		
Select one of the following:		3
ADN 5000	History of Interior Design and Architecture	
AGD 3700	History of Graphic Design	
ADN 5430	History of Costume	
ADN 6320	History of Modern Design I	
ADN 6330	History of Modern Design II	
Graphic Design		
AGD 2230	Introduction to Typography: Skills and Concepts	3
AGD 2240	Introduction to Graphic Design: Skills and Concepts	3
AGD 2250	Typography	3
AGD 3250	Graphic Design I: Principles and Problem Solving	3
AGD 3260	Introduction to Interactivity in Graphic Design	3
Total Credits		**21**

Illustration Minor

An admissions moratorium is currently in effect for this program.

The minor in Illustration offers students the opportunity to learn to effectively use both traditional and digital media to create illustrations and hand lettering to communicate messages intended for reproduction. Students will have the opportunity to learn through demonstrations, hands-on exercises and lectures. The minor broadens understanding of illustration and its role in everyday visual culture.

The minor in Illustration requires 21 credits as specified below.

Code	Title	Credits
Core courses		**6**
ADR 1050	Drawing I	
ADR 2070	Introduction to Life Drawing	
Art/Design History (select one of the following)		**3**
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
AGD 4260	Professional Practice	
ADN 6320	History of Modern Design I	
ADN 6330	History of Modern Design II	
Illustration courses		**12**
AGD 2230	Introduction to Typography: Skills and Concepts	
AGD 2240	Introduction to Graphic Design: Skills and Concepts	
AGD 3270	Introduction to Illustration	
AGD 4270	Intermediate Illustration	
Total Credits		**21**

Industrial Design Minor

The Industrial Design Minor offers students the opportunity to learn the basics of spatial composition and designing with the user's experience in mind. Students will have the opportunity to learn through lectures, demonstrations and hands-on exercises. The minor broadens understanding of industrial design and its role in everyday object culture.

The Industrial Design Minor requires 21 credits as specified below.

Code	Title	Credits
Required Course		
ADN 3100	Design Process	3
Design History		
Select one of the following:		3
ADN 5000	History of Interior Design and Architecture	
AGD 3700	History of Graphic Design	
ADN 5430	History of Costume	
ADN 6320	History of Modern Design I	
ADN 6330	History of Modern Design II	
Industrial Design		
ADN 5200	Design Research Methods	3
AID 3300	Introduction to Industrial Design	3
AID 5300	Advanced Product Design Studio	3
AID 5330	3-D Modeling	3
AID 6301	Design for Urban Mobility	3
or AID 6310	Experience Design Studio	
Total Credits		**21**

Interior Design Minor

The minor in Interior Design offers students the opportunity to gain competency in planning, navigating, and experiencing spaces. Students will have the opportunity to learn through skill building exercises, lectures, and real-world projects. The minor broadens

understanding of interior design and its role in providing appropriate solutions to contemporary interior space problems.

The Interior Design Minor requires 21 credits as specified below.

Code	Title	Credits
Required Courses		
ADN 3100	Design Process	3
AIA 1610	Visual Communication I	3
Design History		
Select one of the following:		3
ADN 5000	History of Interior Design and Architecture	
AGD 3700	History of Graphic Design	
ADN 5430	History of Costume	
ADN 6320	History of Modern Design I	
ADN 6330	History of Modern Design II	
Interior Design		
AIA 2600	Technical Drawings	3
AIA 2610	Studio I	3
AIA 5610	Material Practices	3
or AIA 5630	Lighting Design	
AIA 3610	Studio II	3
or AIA 5010	Furniture/Product Workshop	
Total Credits		**21**

Jewelry Minor

The Jewelry minor offers undergraduate students a rich experience of materials, process and interpretation to complement their degree work. The minor is open to both Art and Non-Art majors and is designed to give students a range of experiences including use of hand processes, machines and digital fabrication through the scope of Jewelry. This minor will blend historic and contemporary theory and awareness of practitioners to help students contextualize their work within jewelry making.

Students pursuing a minor in jewelry must complete the following courses from the list below totaling 18 credits.

Code	Title	Credits
Select one of the following courses:		**3**
ADR 1050	Drawing I	
ACO 1230	Space Studio	
Select one of the following courses:		**3**
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
AME Requirements		**12**
AME 2600	Introduction to Jewelry and Metalsmithing	
AME 3600	Intermediate Jewelry I	
AME 3601	Intermediate Jewelry II	
AME 4600	Metalsmithing I	
Total Credits		**18**

Painting and Drawing Minor

This minor provides students the opportunity to supplement their major field of study with an exploration of the media, techniques, and concerns of contemporary painting and drawing. The wide array of courses allows students to follow individualized paths through the curriculum, whether their interests lay in working from live models, in the landscape, with non-objective imagery, or either alternative or traditional media in both painting and drawing. The breadth of the Painting and Drawing program comprises a rich and stimulating environment through which students are invited to express their ideas and stretch their creativity.

The Minor in Painting and Drawing requires 21 credits.

Code	Title	Credits
ACO 1200	Surface Studio	3
ADR 1050	Drawing I	3
AH 1120	Survey of Art History: Renaissance through Modern	3
Select two of the following courses:		6
ADR 2070	Introduction to Life Drawing	
ADR 2130	Introduction to Alternative Drawing Methods and Materials	
APA 2000	Introduction to Oil Painting	
APA 2110	Watercolor Painting I	
APA 2130	Introduction to Alternative Painting Media	
Select two of the following intermediate and advanced courses:		6
ADR 3070	Intermediate Life Drawing	
ADR 5070	Advanced Life Drawing	
ADR 5080	Landscape Drawing	
ADR 5100	Contexts of Studio Practice	
or APA 5100	Contexts of Studio Practice	
ADR 5160	Advanced Alternative Drawing Methods and Materials	
APA 3000	Intermediate Painting and Drawing	
APA 3110	Watercolor Painting II	
APA 4000	Advanced Painting and Drawing I	
APA 5080	Landscape Painting	
APA 5110	Watercolor Painting III	
APA 5160	Advanced Alternative Painting Media	
APA 5200	Advanced Mural Painting	
Total Credits		**21**

Printmaking Minor

This minor offers students the opportunity to supplement their major field of study to focus on printmaking as a means of visual expression. Students pursuing a Minor in Printmaking must complete 18 credits distributed as follows:

Code	Title	Credits
Select one of the following:		3
ACO 1200	Surface Studio	
ADR 1050	Drawing I	
Select one of the following:		3
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
APR 2300	Printmaking	3
Select three of the following:		9
APR 3470	Photo-Processes for Printmaking I	
APR 3480	Intaglio I	

APR 3490	Lithography I	
APR 3500	Screen Printing I	
APR 3510	Relief and Experimental Printmaking I	
APR 5470	Photo-Processes for Printmaking II	
APR 5480	Intaglio II	
APR 5490	Lithography II	
APR 5500	Screen Printing II	
APR 5510	Relief and Experimental Printmaking II	
Total Credits		**18**

All courses in the minor must be completed with the grade of C- or higher.

Sculpture Minor

This minor provides students the opportunity to supplement their major field of study with an exploration of contemporary sculpture through hands on exposure to the variety of sculptural capacities available at Wayne State: foundry work for bronze and aluminum casting, mold-making and casting for contemporary applications, clay modeling from the figure, steel fabrication and welding, and woodworking.

The Minor in Sculpture requires 18 credits.

Code	Title	Credits
Core		
Select one of the following:		3
ADR 1050	Drawing I	
ACO 1200	Surface Studio	
ACO 1230	Space Studio	
ACO 1270	Time Studio	
Art History		
Select one of the following:		3
AH 1110	Survey of Art History: Ancient through Medieval	
AH 1120	Survey of Art History: Renaissance through Modern	
AH 1130	Encounters with the Arts of Global Africa	
Sculpture Courses		
ASL 2150	Beginning Sculpture	3
Select three of the following:		9
ASL 3150	Intermediate Sculpture	
ASL 3170	Figurative Sculpture I	
ASL 3190	Sculpture Foundry I	
ASL 5150	Advanced Sculpture	
ASL 5170	Figurative Sculpture II	
ASL 5180	Sculpture: Advanced Technology	
ASL 5190	Sculpture Foundry II	
ASL 5810	Special Topics in Sculpture	
Any Art Department Studio Course		
Total Credits		**18**

Textile Design Minor

This minor offers students the opportunity to learn textile design skills and apply these in a studio/industry setting. The minor provides course options in both print and woven textile design. The minor combines elements of the fibers and fashion programs.

Students must complete 24 credits as specified below:

Code	Title	Credits
Drawing		**3**
ADR 1050	Drawing I	
Core		**3**
ACO 1200	Surface Studio	
Graphic Design		**3**
AGD 2240	Introduction to Graphic Design: Skills and Concepts	
Textile Design		**6**
AFI 3640	Fibers: Digital Textile Design	
AFI 3660	Fibers: Print and Dye	
Design History (select one of the following):		**3**
ADN 5430	History of Costume	
ADN 6320	History of Modern Design I	
ADN 6330	History of Modern Design II	
Textile Design Studio Electives		**6**
In discussion with your art advisor, select two studio electives from fibers.		
AFI 2650	Fibers: Material Fundamentals	
AFI 3650	Fibers: Weaving	
AFI 4650	Fibers: Studio I	
AFI 5650	Fibers: Studio II	
AFI 5870	Directed Projects: Fibers	
Total Credits		**24**

All courses in the minor must be completed with the grade of C- or higher.

Communication

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Chairperson: Pradeep Sopory
Undergraduate Program Director: Julie Novak
https://comm.wayne.edu/

The Department of Communication advances students' understanding of how communication works in different contexts and develops their capabilities to become effective oral, written, and visual communicators. Our majors receive a comprehensive liberal arts education that cultivates critical thinking abilities alongside practical skills, preparing them for a range of careers in communication, journalism, media, and public relations.

The department offers several co-curricular opportunities, open to all students at Wayne State, that complement its academic programs. Students can join our nationally ranked debate and speech teams or participate in chapters of national student organizations, such as Lambda Pi Eta (the communication honor society), the Society of Professional Journalists, and the Public Relations Student Society of America. The department also awards several scholarships annually to support students with talent, achievement, and financial need.

The department teaches several courses that fulfill Wayne State's General Education requirements. These include COM 1010 (Public Speaking) that satisfies the oral communication competency by enhancing students' confidence in speaking to diverse audiences in various public settings and COM 1700 (Media Literacy) that fulfills the social inquiry competency by enabling students to critically examine how the media affect society in both positive and negative ways.

- Communication and Media Studies (B.A.) (p. 202)
- Film (B.A.) (p. 203)
- Journalism and Media (B.A.) (p. 204)
- Media Arts and Studies (B.A.) (p. 204)
- Public Relations and Strategic Communication (B.A.) (p. 205)

Communication Department Minors and Cognate Study

The following minors are available in the department and should be pursued in consultation with an advisor in each of the specialized areas of concentration. Please note that some minors are not available to students who also major in the department. While a minor designation does not appear on the diploma, it will be noted on the student's transcript.

- Film Minor (p. 206)
- Communication Studies Minor (p. 206)
- Health Communication Minor (p. 207)
- Journalism Minor (p. 207)
- Law Minor (p. 188)
- Media Arts and Studies Minor (p. 207)
- Media Content Creation (p. 208)
- Public Relations Minor (p. 208)

Bachelor of Arts Program Requirements

At the undergraduate level the Department of Communication offers Bachelor of Arts degrees with majors in: Communication Studies (https://bulletins.wayne.edu/undergraduate/college-fine-performing-communication-arts/communication/communication-studies-ba/), Film (p. 203), Journalism (https://bulletins.wayne.edu/undergraduate/college-fine-performing-communication-arts/communication/journalism-ba/), Media Arts and Studies (p. 204), and Public Relations (https://bulletins.wayne.edu/undergraduate/college-fine-performing-communication-arts/communication/public-relations-ba/).

The following requirements apply to all of these degrees; specific requirements are listed within each major program.

Admission Requirements

Admission requirements are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Degree Requirements

Candidates for the Bachelor's degree must complete 120 credits of course work including satisfaction of the University General Education requirements, department degree requirements including completion of a foreign language through the third semester or two semesters of foreign language and one semester of foreign culture, as well as the major requirements of one of the programs. All courses in the major or the minor must be completed with a grade of C or better and be completed in accordance with the regulations of the University (p. 23) and the College (p. 185) governing undergraduate scholarship and degrees.

A major will complete at least thirty but not more than forty-six credits in the Department. Any course work elected over the forty-six credit maximum must have prior approval of both advisor and chairperson if the additional credits are to count toward the degree (120 credits). This required approval includes students who plan to double major in the Department. Double majors are not allowed in some combined concentrations: Public Relations and Communication Studies, or Public Relations and Journalism. At least twelve credits are required in residence within the major. Students should consult their advisor in selecting a proper distribution of courses.

Foreign Language Requirement

Students will be required to complete two semesters of a single foreign language to fulfill the requirements for a bachelor of arts in communication. Two semesters of American Sign Language will count as fulfilling that requirement.

General Education Requirements

University-wide General Education Requirements are designed to enhance students' basic skills and the diversity of their intellectual background. These requirements assure minimal competence in those skills needed to succeed in college and professional life and provide a selective introduction to the increasingly broad range of academic disciplines represented at the University. They serve to emphasize the fundamental means and essential knowledge required for continuing self-education and intellectual growth. The College adheres to specified timelines for completion of General Education requirements (p. 24).

Some of the courses listed in the University General Education program are also courses required in some majors. With careful course selection, students may satisfy both General Education Requirements and Department Requirements in some majors (and concentrations, where applicable). Students should consult the table in the College introductory section in order to take advantage of these occasions of overlapping requirements.

Writing Intensive Requirement

The requirement of a writing intensive course in the major may be fulfilled by taking one of the following:

Code	Title	Credits
COM 2230	Broadcasting (broadcast journalism)	3
COM 3400	Theories of Communication (communication studies)	3
COM 5270	Screenwriting (film)	4
COM 4170	Public Relations Writing (public relations)	3
COM 4100	Feature Writing (journalism)	3
COM 3010	Media Analysis and Criticism (media arts and studies)	3
or COM 4560	Telecommunications Policy: A Political Economy Approach	

The writing intensive course should be taken during the junior year after satisfactory completion of the Intermediate Composition (IC) requirement.

Communication and Media Studies (B.A.)

The Communication and Media Studies major prepares students to think critically and engage creatively in media and communication processes to navigate an increasingly complex world of traditional and digital messaging. Students will examine theories of communication and media influence that span the micro- (e.g., individuals, relationships), macro- (e.g., organizations, communities), and meso- (culture, social structures) levels while developing hands-on skills in presentation, content creation, research, and critical analyses. With expertise in various and diverse communication and media processes, students who complete this major will be equipped with the knowledge, responsibility, and competence to produce, use, and evaluate communication in any profession or domain.

In addition to the course work below, students must complete all of the department's general degree requirements (p. 201).

All Communication and Media Studies majors must complete the following:

Code	Title	Credits
Department Core (9cr)		
COM 1700	Media Literacy	3
COM 2000	Introduction to Communication Practices and Professions	3
COM 2280	Visual Communication & Content Creation	3
Major Requirements (27cr)		
COM 2200	Interpersonal Communication	3
COM 2260	Digital Writing and Research Methods	3
COM 2300	Intercultural Communication	3
COM 3250	Organizational Communication	3
COM 4190	Rhetorical Criticism	3
or COM 3010	Media Analysis and Criticism	
COM 4210	Data Analysis and Research	3
COM 5080	History of Journalism and Mass Media	3
or COM 5010	History of Communication Technologies	
COM 5070	Culture, Communication, and Media	3
COM 5900	Senior Project	3
Major Electives (6cr)		
Select at least six credits from the following:		**6**
COM 2010	Introduction to Film	
COM 2110	Argumentation and Debate	
COM 2160	Campaigns and Social Movements	
COM 3300	Business and Professional Presentations	
COM 4110	Studies of Legal Argument	
COM 4150	Communication and Conflict	
COM 4270	Group Communication	
COM 4500	Leadership Communication	
COM 4680	WAYN Radio and Podcasting	
COM 5190	Special Topics	
	Upon consultation with an Academic Advisor, students may also choose electives from other courses regularly offered in other department majors (If relevant, students must have any prerequisites required for the course.)	
Total Credits		**42**

Departmental Honors Program

The Communication Department Honors program offers capable students the opportunity to pursue independent study and to work closely with department faculty members. Completion of the honors major results in an honors degree designation on the diploma.

In order to enter the departmental honors program students must have achieved academic excellence in previous work, such as a high school g.p.a. of 3.5 or a college or university g.p.a. of 3.3. Students must meet all regular major requirements including the following: three honors-option courses within their major at the 2000 level or above, taught by full-time faculty members (internships cannot satisfy this requirement), at least one HON 42xx-level seminar offered through the Honors College, a senior honors thesis under the direction of a faculty advisor in their major area (COM 4996) and maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Departmental AGRADE Program

The AGRADE program enables highly qualified seniors majoring in Communication Studies or Public Relations to enroll simultaneously in undergraduate and graduate programs and to apply a maximum of 15 credits toward both the undergraduate and graduate degrees. The program encourages such students to continue to graduate school at Wayne State by reducing the time to the master's degree. Only AGRADE-approved courses in which the student has earned a B or higher will transfer to the graduate transcript. Once in the master's program, students may be required to repeat an AGRADE course in which they earn less than a B grade.

Eligibility: AGRADE applicants must have an overall undergraduate GPA of 3.5. Applicants are also expected to have performed at a superior level in their major, as determined by the major department and reflected in a GPA in the major of at least 3.6 at the time of application.

Application: A student seeking AGRADE status should present to the Department of Communication Graduate Committee all of the materials which that department requires for normal admission to the M.A. program with a concentration in Communication Studies. Specific departmental admission requirements can be found in this bulletin or obtained from the Graduate Advisor in the Department of Communication (313-577-2959).

The earliest date by which a student may apply for the AGRADE program is during the semester in which he/she completes 90 credits toward the undergraduate degree.

AGRADE Credits: Students may elect a minimum of three and a maximum of 15 AGRADE credits. These credits will be used to complete the baccalaureate degree as well as to serve as the beginning of graduate study. Upon formal admission to a master's program, AGRADE credits are transferred as if they were graduate credits transferred from a graduate program at another university. The remaining graduate credits required for the master's degree will be earned in the conventional manner following formal admission to the graduate program. Formal admission to the graduate program occurs as AGRADE students complete their baccalaureate degree.

Students admitted into an AGRADE program will develop a Plan of Work for the master's program, specifying the courses that will be taken in the AGRADE status as well as the courses required for the balance of the undergraduate degree. **Note that COM 7000 must be taken in the first semester of AGRADE coursework** . The remaining AGRADE courses must be approved by both the student's undergraduate program advisor and the graduate director of the master's program. In courses permitting both undergraduate and graduate students to enroll, AGRADE students will be held to the graduate standard.

For more details about the AGRADE program, contact the Graduate Advisor in the Department of Communication (313-577-2959)

Film (B.A.)

The major in Film prepares students for careers as film/video makers, professionals and scholars who can create, interpret and critique film as a visual and narrative art form. Students acquire knowledge of film history and film/media theory as they gain training and experience in the art of storytelling through screenwriting, cinematography, sound recording, editing, producing and directing. Students develop skills in the planning, acquisition and management of resources and logistics as they engage in the conceptualization, realization and exhibition of engaging narratives.

Additional work at the graduate level is recommended for some of these careers.

In addition to the course work below, students must complete all of the department's general degree requirements (p. 201).

Major Requirements: The major in Film requires completion of 45-46 credits in coursework as outlined below.

Code	Title	Credits
Required Courses		**33**
COM 1600	Introduction to Audio-Television-Film Production	
COM 1610	Fundamentals of New Media Production	
COM 2010	Introduction to Film	
COM 2020	History of Film	
COM 2210	Media Writing and Storytelling	
COM 3380	Editing and Field Production	
COM 5270	Screenwriting	
COM 5400	Techniques of Film and Video Production	
COM 5410	Producer's Workshop	
COM 5540	Film Criticism and Theory	
Portfolio Requirement (select one)		**3-4**
COM 5420	Director's Workshop	
COM 5440	Film, Cinematography and Lighting	
Electives		
Select nine credits of the following:		9
COM 3010	Media Analysis and Criticism	
COM 3230	The African-American Film Experience	
COM 3240	Queer Film and Media	
COM 4310	Audio Production	
COM 4410	Television Production	
COM 4510	Immersive Media Production	
COM 5020	Studies in Film History	
COM 5060	Documentary and Non-Fiction Film and Television	
COM 5270	Screenwriting (can be twice for an additional 4 credits)	
COM 5440	Film, Cinematography and Lighting (if not taken as portfolio req.)	
COM 5390	Digital Animation	
COM 5420	Director's Workshop	
COM 6190	Internship	
COM 6310	Allesee Lectures in Media (Max. 3)	
COM 6390	Documentary Storytelling I	

COM 6410	Allesee Master Class (Max. 6)	
COM 6680	Directed Projects in Film and Media	
Total Credits		**45-46**

Note: Students interested in Sound Design may fulfill some elective requirements through the Music Technology program in consultation with their advisor.

Film majors are encouraged to take additional film-related courses, offered throughout the university, toward fulfillment of their undergraduate degree requirements. These include, but are not limited to:

Code	Title	Credits
ADA 4220	Experimental 2D Animation	3
AID 3300	Introduction to Industrial Design	3
APH 2400	Introduction to Photography	3
COM 4240	African Americans in Television	4
COM 5610	Advanced TV Production	3
ITA 5150	Italian Cinema	3
SLA 3710	Russian and East European Film	3-4
SLA 3750	Polish and Yugoslavian Cinema	3
THR 4271	Acting for the Camera	3

Departmental Honors Program

The Communication Department Honors program offers capable students the opportunity to pursue independent study and to work closely with department faculty members. Completion of the honors major results in an honors degree designation on the diploma.

In order to enter the departmental honors program students must have achieved academic excellence in previous work, such as a high school g.p.a. of 3.5 or a college or university g.p.a. of 3.3. Students must meet all regular major requirements including the following: three honors-option courses within their major at the 2000 level or above, taught by full-time faculty members (internships cannot satisfy this requirement), at least one HON 42xx-level seminar offered through the Honors College, a senior honors thesis under the direction of a faculty advisor in their major area (COM 4996) and maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Journalism and Media (B.A.)

The Journalism and Media major prepares students to report, produce, and share stories that inform and engage diverse audiences in a rapidly changing media environment. Students learn how to gather and verify information, interview effectively, and craft compelling narratives across digital, broadcast, and print platforms. Coursework emphasizes beat and feature reporting, multimedia storytelling, data and solutions journalism, and ethical communication practices. Students also explore how emerging technologies—such as artificial intelligence, audience analytics, and social media algorithms—are reshaping the creation and consumption of news. Through hands-on projects, newsroom simulations, and internships, they gain the practical experience and critical perspective needed to navigate today's complex information landscape.

In addition to the course work below, students must complete all of the department's general degree requirements (p. 201).

All Journalism and Media majors must complete the following:

Code	Title	Credits
Department Core (9cr)		
COM 1700	Media Literacy	3
COM 2000	Introduction to Communication Practices and Professions	3
COM 2280	Visual Communication & Content Creation	3
Major Requirements (27cr)		
COM 2030	Media Writing Toolkit	3
COM 2100	News Reporting	3
COM 2230	Broadcasting	3
or COM 5500	Journalism and New Media	
COM 3100	Solutions Journalism	3
COM 3210	News Editing	3
COM 4250	Reporting Race, Gender, and Culture	3
COM 5080	History of Journalism and Mass Media	3
COM 5710	Media Law and Ethics	3
or COM 4130	Communication Ethics	
COM 6190	Internship (3 req.)	3
Major Electives (6cr)		
Select six credits of the following:		**6**
COM 2010	Introduction to Film	
COM 2110	Argumentation and Debate	
COM 2160	Campaigns and Social Movements	
COM 3300	Business and Professional Presentations	
COM 4110	Studies of Legal Argument	
COM 4150	Communication and Conflict	
COM 4270	Group Communication	
COM 4500	Leadership Communication	
COM 4680	WAYN Radio and Podcasting	
COM 5190	Special Topics	
	Upon consultation with an Academic Advisor, students may also choose electives from other courses regularly offered in other Department of Communication majors. If relevant, students must have any required prerequisites for the course(s).	
Total Credits		**42**

Departmental Honors Program

The Communication Department Honors program offers capable students the opportunity to pursue independent study and to work closely with department faculty members. Completion of the honors major results in an honors degree designation on the diploma.

In order to enter the departmental honors program students must have achieved academic excellence in previous work, such as a high school g.p.a. of 3.5 or a college or university g.p.a. of 3.3. Students must meet all regular major requirements including the following: three honors-option courses within their major at the 2000 level or above, taught by full-time faculty members (internships cannot satisfy this requirement), at least one HON 42xx-level seminar offered through the Honors College, a senior honors thesis under the direction of a faculty advisor in their major area (COM 4996) and maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Media Arts and Studies (B.A.)

An Admissions moratorium will be in effect for this program beginning in Fall 2027.

The major in Media Arts and Studies prepares students for careers in a wide range of media industries (such as radio, television, film and interactive media), for graduate programs in production and media studies, and to compete in a rapidly changing technological world. By integrating the history, theory and analysis of media culture, practices, and technology with production experience and internship opportunities, the program prepares students to think critically and creatively about media and become skilled communicators who are socially, ethically and aesthetically astute.

In addition to the course work below, students must complete all of the department's general degree requirements (p. 201).

Major Requirements: The major in Media Arts and Studies requires completion of a minimum of forty to forty-two credits in coursework as outlined below.

Code	Title	Credits
Required Courses		
COM 1500	Survey of Mass Communication	3
COM 1600	Introduction to Audio-Television-Film Production	3
COM 1610	Fundamentals of New Media Production	3
COM 2010	Introduction to Film	4
COM 2210	Media Writing and Storytelling	3
History and Analysis Courses		
Select two of the following:		6
COM 3010	Media Analysis and Criticism	
COM 4560	Telecommunications Policy: A Political Economy Approach	
COM 5010	History of Communication Technologies	
Production Courses		
Select two of the following:		6-7
COM 3380	Editing and Field Production	
COM 4310	Audio Production	
COM 4410	Television Production	
COM 4510	Immersive Media Production	
Capstone Course		
COM 5400	Techniques of Film and Video Production	3-4
or COM 5510	Societal Effects of New Technologies	
Electives		
Select nine credits of the following (at least three credits must be at the 5000 or 6000 level):		9
COM 2020	History of Film	
COM 2230	Broadcasting	
COM 2290	Fundamentals of New Media Communication	
COM 3010	Media Analysis and Criticism	
COM 3230	The African-American Film Experience	
COM 3240	Queer Film and Media	
COM 3380	Editing and Field Production	
COM 4240	African Americans in Television	
COM 4310	Audio Production	
COM 4410	Television Production	
COM 4510	Immersive Media Production	
COM 4560	Telecommunications Policy: A Political Economy Approach	
COM 4680	WAYN Radio and Podcasting	
COM 5010	History of Communication Technologies	
COM 5020	Studies in Film History	
COM 5060	Documentary and Non-Fiction Film and Television	
COM 5270	Screenwriting	
COM 5380	Video Field Production and Editing	
COM 5381	TV News Reporting and Digital Editing	
COM 5390	Digital Animation	
COM 5400	Techniques of Film and Video Production	
COM 5410	Producer's Workshop	
COM 5420	Director's Workshop	
COM 5440	Film, Cinematography and Lighting	
COM 5510	Societal Effects of New Technologies	
COM 5540	Film Criticism and Theory	
COM 5610	Advanced TV Production	
COM 6050	New Media Practices	
COM 6190	Internship (Max. 6)	
COM 6270	New Media Theory	
COM 6310	Allesee Lectures in Media	
COM 6410	Allesee Master Class	
COM 6680	Directed Projects in Film and Media	
Total Credits		**40-42**

Departmental Honors Program

The Communication Department Honors program offers capable students the opportunity to pursue independent study and to work closely with department faculty members. Completion of the honors major results in an honors degree designation on the diploma.

In order to enter the departmental honors program students must have achieved academic excellence in previous work, such as a high school g.p.a. of 3.5 or a college or university g.p.a. of 3.3. Students must meet all regular major requirements including the following: three honors-option courses within their major at the 2000 level or above, taught by full-time faculty members (internships cannot satisfy this requirement), at least one HON 42xx-level seminar offered through the Honors College, a senior honors thesis under the direction of a faculty advisor in their major area (COM 4996) and maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Public Relations and Strategic Communication (B.A.)

The Public Relations and Strategic Communication program equips students to be ethical, data-driven professionals who design effective messages, engage diverse stakeholders, and manage effective campaigns serving their organization's strategic goals. Through historical insight in professional best practices, grounding in evidence-based research, and mastery of diverse media platforms and methods, students learn to engage audiences across cultural and organizational contexts in a rapidly evolving communication landscape.

In addition to the course work below, students must complete all of the department's general degree requirements (p. 201).

All Public Relations and Strategic Communication majors must complete the following:

Code	Title	Credits
Department Core (9cr)		
COM 1700	Media Literacy	3
COM 2000	Introduction to Communication Practices and Professions	3
COM 2280	Visual Communication & Content Creation	3

Major Requirements (27cr)		
COM 2030	Media Writing Toolkit	3
COM 2100	News Reporting	3
COM 3170	Fundamentals of Public Relations	3
COM 3250	Organizational Communication	3
COM 4130	Communication Ethics	3
or COM 5710	Media Law and Ethics	
COM 4170	Public Relations Writing	3
COM 4210	Data Analysis and Research	3
COM 5140	Social Media for Strategic Communication	3
COM 5900	Senior Project	3
Major Electives (6cr)		
Select at least six credits from the following:		**6**
COM 2010	Introduction to Film	
COM 2110	Argumentation and Debate	
COM 2160	Campaigns and Social Movements	
COM 3300	Business and Professional Presentations	
COM 4110	Studies of Legal Argument	
COM 4150	Communication and Conflict	
COM 4270	Group Communication	
COM 4500	Leadership Communication	
COM 4680	WAYN Radio and Podcasting	
COM 5190	Special Topics	
Upon consultation with an Academic Advisor, students may also choose electives from other courses regularly offered in other department majors (If relevant, students must have any prerequisites required for the course.)		
Total Credits		**42**

Departmental Honors Program

The Communication Department Honors program offers capable students the opportunity to pursue independent study and to work closely with department faculty members. Completion of the honors major results in an honors degree designation on the diploma.

In order to enter the departmental honors program students must have achieved academic excellence in previous work, such as a high school g.p.a. of 3.5 or a college or university g.p.a. of 3.3. Students must meet all regular major requirements including the following: three honors-option courses within their major at the 2000 level or above, taught by full-time faculty members (internships cannot satisfy this requirement), at least one HON 42xx-level seminar offered through the Honors College, a senior honors thesis under the direction of a faculty advisor in their major area (COM 4996) and maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Departmental AGRADE Program

The AGRADE program enables highly qualified seniors majoring in Communication Studies or Public Relations to enroll simultaneously in undergraduate and graduate programs and to apply a maximum of 15 credits toward both the undergraduate and graduate degrees. The program encourages such students to continue to graduate school at Wayne State by reducing the time to the master's degree. Only AGRADE-approved courses in which the student has earned a B or higher will transfer to the graduate transcript. Once in the master's program, students may be required to repeat an AGRADE course in which they earn less than a B grade.

Eligibility: AGRADE applicants must have an overall undergraduate GPA of 3.5. Applicants are also expected to have performed at a superior level in their major, as determined by the major department and reflected in a GPA in the major of at least 3.6 at the time of application.

Application: A student seeking AGRADE status should present to the Department of Communication Graduate Committee all of the materials which that department requires for normal admission to the M.A. program with a concentration in Communication Studies. Specific departmental admission requirements can be found in this bulletin or obtained from the Graduate Advisor in the Department of Communication (313-577-2959).

The earliest date by which a student may apply for the AGRADE program is during the semester in which he/she completes 90 credits toward the undergraduate degree.

AGRADE Credits: Students may elect a minimum of three and a maximum of 15 AGRADE credits. These credits will be used to complete the baccalaureate degree as well as to serve as the beginning of graduate study. Upon formal admission to a master's program, AGRADE credits are transferred as if they were graduate credits transferred from a graduate program at another university. The remaining graduate credits required for the master's degree will be earned in the conventional manner following formal admission to the graduate program. Formal admission to the graduate program occurs as AGRADE students complete their baccalaureate degree.

Students admitted into an AGRADE program will develop a Plan of Work for the master's program, specifying the courses that will be taken in the AGRADE status as well as the courses required for the balance of the undergraduate degree. **Note that COM 7000 must be taken in the first semester of AGRADE coursework** . The remaining AGRADE courses must be approved by both the student's undergraduate program advisor and the graduate director of the master's program. In courses permitting both undergraduate and graduate students to enroll, AGRADE students will be held to the graduate standard.

For more details about the AGRADE program, contact the Graduate Advisor in the Department of Communication (313-577-2959)

Communication Studies Minor

A minor in this area requires:

Code	Title	Credits
COM 1010	Oral Communication: Basic Speech	3
COM 2000	Introduction to Communication Practices and Professions	3
COM 2110	Argumentation and Debate	3
COM 3400	Theories of Communication	3
Two additional communication studies courses selected in consultation with an advisor		6
Total Credits		**18**

Film Minor

Students pursuing a minor in Film must complete **19 credits** including:

Code	Title	Credits
COM 1600	Introduction to Audio-Television-Film Production	3
COM 2010	Introduction to Film	4
COM 2210	Media Writing and Storytelling	3
Select an additional nine credits of film-related courses in consultation with advisor. See course list below:		**9**
COM 2020	History of Film	

COM 3230	The African-American Film Experience
COM 4310	Audio Production
COM 3380	Editing and Field Production
COM 5020	Studies in Film History
COM 5060	Documentary and Non-Fiction Film and Television
COM 5270	Screenwriting
COM 5390	Digital Animation
COM 5400	Techniques of Film and Video Production
COM 5410	Producer's Workshop
COM 5420	Director's Workshop
COM 5440	Film, Cinematography and Lighting
COM 5540	Film Criticism and Theory
COM 6190	Internship
COM 6310	Allesee Lectures in Media
COM 6390	Documentary Storytelling I
COM 6410	Allesee Master Class
Total Credits	**19**

Health Communication Minor

A minor in this area requires the following:

Code	Title	Credits
COM 2000	Introduction to Communication Practices and Professions	3
COM 3170	Fundamentals of Public Relations	3
COM 3250	Organizational Communication	3
COM 4210	Data Analysis and Research	3
COM 5130	Communication and Social Marketing	3
COM 5320	Health Communication	3
Total Credits		**18**

Journalism Minor

Print and Online Concentration

A minor in this area requires:

Code	Title	Credits
COM 1500	Survey of Mass Communication [1]	3
or COM 1700	Media Literacy	
COM 2030	Media Writing Toolkit	3
COM 2100	News Reporting	3
COM 3210	News Editing	3
COM 4100	Feature Writing	3
COM 5080	History of Journalism and Mass Media [2]	3
or COM 5710	Media Law and Ethics	
One additional skills course with advisor approval:		1-3
COM 2280	Visual Communication & Content Creation	
COM 3100	Solutions Journalism	
COM 5500	Journalism and New Media	
COM 6190	Internship	
Total Credits		**19-21**

[1] Only 3 credits of either COM 1500 or COM 1700.
[2] Only 3 credits of either COM 5080 or COM 5710.

Broadcast News and Digital Concentration

A minor in this area requires:

Code	Title	Credits
COM 1500	Survey of Mass Communication [1]	3
or COM 1700	Media Literacy	
COM 2030	Media Writing Toolkit	3
COM 2100	News Reporting	3
COM 2230	Broadcasting	3
COM 5080	History of Journalism and Mass Media [2]	3
or COM 5710	Media Law and Ethics	
COM 5381	TV News Reporting and Digital Editing	3
One additional skills course with advisor approval:		1-3
COM 2280	Visual Communication & Content Creation	
COM 5500	Journalism and New Media	
COM 5610	Advanced TV Production	
COM 6190	Internship	
Total Credits		**19-21**

[1] Only 3 credits of either COM 1500 or COM 1700.
[2] Only 3 credits of either COM 5080 or COM 5710.

Media Arts and Studies Minor

A minor in Media Arts and Studies requires a total of 18 credits:

Code	Title	Credits
Media Production Core (three credits):		**3**
COM 1600	Introduction to Audio-Television-Film Production	
Media Studies Core (Select three credits from the following):		**3**
COM 1500	Survey of Mass Communication	
COM 1700	Media Literacy	
Media Writing Core (Select three credits from the following):		**3**
COM 2210	Media Writing and Storytelling	
COM 3010	Media Analysis and Criticism	
Electives (Select nine credits from the following, including at least three credits at the 4000 level or above):		**9**
COM 1610	Fundamentals of New Media Production	
COM 2010	Introduction to Film	
COM 2210	Media Writing and Storytelling	
COM 3010	Media Analysis and Criticism	
COM 3380	Editing and Field Production	
COM 4240	African Americans in Television	
COM 4310	Audio Production	
COM 4410	Television Production	
COM 4560	Telecommunications Policy: A Political Economy Approach	
COM 5010	History of Communication Technologies	
COM 5060	Documentary and Non-Fiction Film and Television	
COM 5270	Screenwriting	
COM 5510	Societal Effects of New Technologies	
COM 5520	International Communications	
COM 5610	Advanced TV Production	
Total Credits		**18**

Media Content Creation Minor

Students completing the Media Content Creation minor will learn how messages are constructed, distributed, and received in today's AI-generated and digital media environments—identifying principles and techniques associated with AI while developing skills in storytelling and visual communication across platforms. This minor program helps ready students for creative and strategic roles in media industries, marketing, and digital communication, complementing majors in Communication, English, Business, Journalism, Public Relations, and other disciplines where effective media content creation is essential.

A minor in this area requires:

Code	Title	Credits
COM 1700	Media Literacy	3
COM 2230	Broadcasting	3
COM 2260	Digital Writing and Research Methods	3
COM 2280	Visual Communication & Content Creation	3
COM 4210	Data Analysis and Research	3
One additional elective selected in consultation with a Department of Communication Academic Advisor		3
Total Credits		**18**

Public Relations Minor

A minor in this area requires:

Code	Title	Credits
COM 1500	Survey of Mass Communication	3
COM 2030	Media Writing Toolkit	3
COM 2100	News Reporting	3
COM 3170	Fundamentals of Public Relations	3
COM 4170	Public Relations Writing	3
COM 3210	News Editing	3
COM 3250	Organizational Communication	3
Total Credits		**21**

Music

Office: 1321 Old Main; 313-577-1795;

Chairperson: Jeffrey Sposato
Associate Chairperson: Joshua S. Duchan
Director of Graduate Studies: Karl Braunschweig
Academic Advisor: John Edwartowski
Academic Services Officer: Mickayla Chapman
Facilities Manager: Garrett Gaina
Events Production Manager: Isaac Fink
Supervisor; Personnel and Scheduling: Evelyn Williams

http://www.music.wayne.edu *(*http://www.music.wayne.edu/*)*

Wayne State University's Department of Music serves the city of Detroit by providing undergraduate and graduate education in music performance, education, composition and theory, technology, and business. We are committed to preparing students for a variety of careers, and to providing opportunities to explore music in all of its diverse varieties. Whether potential students have had classical music training, sang in their church choir, made beats with friends, or played in a high-school jazz ensemble, they all belong at Wayne State.

Our department draws on Detroit's rich musical history and its vibrant musical present. Detroit is known for its excellent symphony and opera, Motown musicians and producers, Cass Corridor experimenters, and world-renowned jazz festival. We honor this legacy and build on it by offering students opportunities to learn, grow, and develop their skills in a thriving urban cultural setting. The long historical relationships between Wayne State Music and the city's numerous music institutions allow students to learn from exceptional guest artists and resident faculty who are specialists in all musical styles and media.

Wayne State Music is committed to serving the entire Detroit metropolitan area. We maintain public access to our performances and degree programs, offer unique creative and scholarly opportunities appropriate to a large research university, and cultivate a deep aesthetic understanding of music in our students and the larger urban arts community. We offer state-of-the-art resources, including our new performance space for students and professionals, the Gretchen C. Valade Jazz Center. In all that we do, we strive to be a music department for the City of Detroit and a pillar of the city's arts community.

- Music (B.A.) (p. 211)
- Music (B.Mus.) (p. 211)
- Music Industry and Society (B.A.) (https://bulletins.wayne.edu/undergraduate/college-fine-performing-communication-arts/music/music-industry-and-society-ba/)
- Music Minor (p. 217)
- Music Industry Studies Minor (p. 218)
- Music Technology Minor (p. 218)
- Jazz Studies Minor for Instrumental Music Education Majors (p. 218)
- Law Minor (p. 188)

Bachelor Degree Requirements

Department of Music

Registration: All students must meet with a Department of Music advisor prior to initial course registration and at least once per term for early registration advising. Enrollment in all MUP courses requires departmental permission.

Scholarship: All course credit applicable to the degree programs described in the following pages must be completed in accordance with the academic procedures of the University (p. 40) and the College (p. 183) governing undergraduate scholarship and degrees.

Music majors pursuing undergraduate degrees must earn the grade of C or better in all music courses required in the music curriculum they are pursuing. The grade of C-minus or below is not an acceptable grade for degree credit. If the grade of C-minus or below is received by a music major in any required course in a music curriculum, the student must repeat the course and earn a grade of C or better. Students who fail to achieve a grade of C or better in required music courses following two attempts may not be allowed to continue to register as Music Majors.

DOUBLE MAJORS: Music majors in any concentration may seek a second major outside Music with the approval of the Department of Music and the Department offering the second major. Double concentrations within a single major, however, are not granted by the University.

Ensemble Participation

The Music Department encourages all musically inclined students to join its ensembles. Participation gives music majors and non-majors the opportunity to improve their musical skills and perform in internationally recognized groups. Conductors audition new students during the week before classes begin; the level of skill necessary varies by ensemble, however, most require music literacy. Music majors must elect designated Major Ensembles (MUA 2800, MUA 2810, MUA 2820, MUA 2822, MUA 2840, or MUA 2850) for degree credit.

BANDS: Woodwind, brass and percussion players are welcome to join the Concert Band. Wind Symphony members are chosen through competitive auditions.

CHORUSES: Non-music majors are encouraged to register for Choral Union (the large mixed-voice choir), Men's Chorus or Women's Chorale. Concert Chorale is the Department's most select vocal ensemble, and auditions are especially competitive. Music majors who are required to participate in a choral ensemble must elect Choral Union (MUA 2840) or Concert Chorale (MUA 2850) for degree credit.

JAZZ: Jazz studies and other music majors are given highest priority for jazz big band positions (MUA 2820) and jazz guitar ensembles (MUA 2822). Non-music majors are welcome to audition for all jazz ensembles and combos.

ORCHESTRA: Positions in the Orchestra are assigned through auditions with the conductor of the Orchestra.

General Education Requirements

University-wide General Education Requirements are designed to enhance students' basic skills and the diversity of their intellectual background. These requirements assure minimal competence in those skills needed to succeed in college and professional life and provide a selective introduction to the increasingly broad range of academic disciplines represented at the University. They serve to emphasize the fundamental means and essential knowledge required for continuing self-education and intellectual growth. The College adheres to specified timelines for completion of General Education requirements (p. 24).

Some of the courses listed in the University General Education program are also courses required in some majors. With careful course selection, students may satisfy both General Education Requirements and Department Requirements in some majors (and concentrations, where applicable). Students should consult the department academic advisors in order to take advantage of these occasions of overlapping requirements.

Music: Private Instruction

Private instruction in instruments and voice are required in all B.A. and B.Mus. concentrations. The courses listed in the following table under *Principal and Secondary Private Instruction*, MUP 1xxx and 3xxx, are available for one credit each and are intended for students studying instruments as required in the concentrations:

- B.A. in Music
- Composition
- Instrumental Music Education
- Vocal Music Education
- Music Business
- Music Technology
- Jazz Studies
- secondary instrument study in the Performance concentration

All students must successfully pass a junior-standing jury for permission to continue elections at the 3xxx level.

The courses listed in the following table under *Major Private Instruction*, MUP 2xxx and 4xxx, are available for three credits each and are intended for students studying major instruments as required in all performance concentrations. All students must successfully pass a junior-standing jury for permission to continue elections at the 4xxx level.

Corequisite: Students enrolled in MUP Private Instruction must concurrently register in an appropriate major ensemble selected from the following:

Code	Title	Credits
MUA 2800	University Bands	1
MUA 2810	University Symphony Orchestra	1

MUA 2820	Jazz Big Band	1
MUA 2822	Jazz Guitar Ensemble	1
MUA 2840	Choral Union	1
MUA 2850	Concert Chorale	1

Fees: MUP courses have applied music fees as stated in course list in the bulletin as well as the schedule of classes.

MUP Course Numbers

Instrument	Lessons: Lower Division One Credit	Lessons: Upper Division One Credit	Major Lessons: Lower Division Three Credits	Major Lessons: Upper Division Three Credits	Elective Lessons: Lower Division One Credit	Elective Lessons: Upper Division One Credit
Organ	MUP 1201	MUP 3201	MUP 2201	MUP 4201	MUP 1205	MUP 3205
Piano	MUP 1211	MUP 3211	MUP 2211	MUP 4211	MUP 1215	MUP 3215
Voice	MUP 1221	MUP 3221	MUP 2221	MUP 4221	MUP 1225	MUP 3225
Strings	MUP 1231	MUP 3231	MUP 2231	MUP 4231	MUP 1235	MUP 3235
Woodwinds	MUP 1241	MUP 3241	MUP 2241	MUP 4241	MUP 1245	MUP 3245
Brasswinds	MUP 1251	MUP 3251	MUP 2251	MUP 4251	MUP 1255	MUP 3255
Percussion	MUP 1261	MUP 3261	MUP 2261	MUP 4261	MUP 1265	MUP 3265
Harp	MUP 1271	MUP 3271	MUP 2271	MUP 4271	MUP 1275	MUP 3275
Guitar (Classical)	MUP 1281	MUP 3281	MUP 2281	MUP 4281	MUP 1285	MUP 3285
Jazz Piano	MUP 1311	MUP 3311	MUP 2311	MUP 4311	MUP 1315	MUP 3315
Jazz Voice	MUP 1321	MUP 3321	MUP 2321	MUP 4321	MUP 1325	MUP 3325
Jazz Strings	MUP 1331	MUP 3331	MUP 2331	MUP 4331	MUP 1335	MUP 3335
Jazz Woodwinds	MUP 1341	MUP 3341	MUP 2341	MUP 4341	MUP 1345	MUP 3345
Jazz Brasswinds	MUP 1351	MUP 3351	MUP 2351	MUP 4351	MUP 1355	MUP 3355
Jazz Percussion	MUP 1361	MUP 3361	MUP 2361	MUP 4361	MUP 1365	MUP 3365
Jazz Guitar	MUP 1381	MUP 3381	MUP 2381	MUP 4381	MUP 1385	MUP 3385

Music (B.A.)

The Bachelor of Arts curriculum is designed for students who want to develop their musical knowledge and ability while obtaining a broad liberal arts education. It provides students with the academic and musical prerequisites necessary for continuing graduate study in such fields as music theory, musicology and ethnomusicology.

Admission Requirements for the Bachelor of Arts program are satisfied by

1. general requirements for admission (p. 34) to the University;
2. a successful audition on a principal instrument or voice.

Candidates for this degree must complete a minimum of 120 credits including satisfaction of the University General Education requirements (p. 24), College degree requirements (p. 185), and Bachelor of Arts curriculum requirements listed below.

ONLY SIXTY CREDITS IN MUSIC ARE APPLICABLE TO THIS DEGREE.

General Education Requirements (35 Credits)

Code	Title	Credits
MUH 1345	Music Cultures (to satisfy the Global Learning distribution requirement)	3
Other requirements		32

Music Requirements (47 – 48 Total Credits)

Code	Title	Credits
Piano Competency, Applied Music, and Ensembles		
MUA 1795	Piano Skills I	2
MUA 2795	Piano Skills II	2
Four terms of appropriate MUP. private instruction in principal instrument or voice. See Principal and Secondary Private Instruction Courses for courses.		4
Select four terms of the same ensemble (must be elected concurrently with MUP private instruction) from the following:		4
MUA 2800	University Bands	
MUA 2810	University Symphony Orchestra	
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
General Lectures and Concerts		
MUA 0900	General Lectures and Concerts (four terms)	0
Music History, Theory and Technology		
MUH 3310	Music History Survey I	3
MUH 3320	Music History Survey II	3
MUH 3330	Music History Topics	3
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2140	Theory III	3
MUT 2150	Ear Training III	1
MUT 2160	Theory IV	3
MUT 2170	Ear Training IV	1
MUT 5997	Analytical Techniques	3
MUA 2500	Music Technology	3
Music Elective		
Select one of the following:		2-3
MUA 3670	Conducting Techniques I	
MUH 3360	Jazz History	
MUH 5300	Music Research	
MUT 3020	Counterpoint	
MUT 5085	History of Theory	
MUT 5220	Introduction to Schenkerian Analysis	
MUT 5240	Analysis of Twentieth-Century Music	
MUT 5200	Special Topics in Theory	
B.A. Project		
Select one of the following:		2
MUA 4990	BA Project	
MUH 4990	BA Project	
MUT 4990	BA Project	
Total Credits		**47-48**

Outline of Departmental Honors (12 credits):

-HON 42XX – Junior/Senior level Seminar (3 credits)

-Undergraduate Thesis in conjunction with MUT 5997 – Analytical Techniques (3 credits)

-Six honors credits of MED, MUA, MUH, or MUT courses 3000-level or above (6 credits)

Music (B.Mus.)

The Bachelor of Music degree provides a program for talented students with prior musical experience and skills who seek professional training in music. A wide range of concentrations is available under the program to meet the specialized interests and career plans of serious music students. Depending on the student's qualifications, he or she may choose from seven professional areas of concentration: composition; instrumental music education; vocal music education; music business; music technology; jazz studies; or performance.

Admission Requirements

Admission to this program is contingent upon

1. satisfaction of the general requirements for undergraduate admission (p. 34) to the University;
2. a successful audition on a principal instrument or voice.

Audition dates are scheduled throughout the year and prospective students should contact the Music Office at 313-577-1795 for scheduling information. Entering students must consult a departmental advisor prior to their first registration.

Program Requirements

Candidates for the Bachelor of Music must complete 120 to 127 credits including satisfaction of the University General Education requirements (p. 24), College degree requirements (p. 185), as well as the specific course requirements for each concentration listed below. In addition, all Bachelor of Music students are required to successfully complete a junior-standing performance jury and, depending upon concentration,

other junior-standing assessments during the fourth semester of enrollment.

Concentrations (B.Mus. Program)

Composition (120 Credits)

Code	Title	Credits
Piano Competency, Applied Music, and Ensembles		
MUA 1795	Piano Skills I	2
MUA 2795	Piano Skills II	2
MUP 1211	Piano Lessons - Lower Division (two semesters, one credit per semester)	2
Four semesters of appropriate MUP courses (private instruction in instrument or voice, one credit per term, four total credits; must be taken concurrently with major ensemble). See private lessons courses.		4
Major Ensemble - six semesters of major ensemble from the following:		6
MUA 2800	University Bands	
MUA 2810	University Symphony Orchestra	
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
Secondary Ensemble - one semester of secondary ensemble from the following:		1
MUA 2826	Jazz Combos	
MUA 2880	Chamber Music and Special Ensembles	
MUA 2891	Electronic Music Ensemble	
General Lectures and Concerts		
MUA 0900	General Lectures and Concerts (four semesters)	0
Music History Core		
MUH 1345	Music Cultures (GL)	3
MUH 3310	Music History Survey I	3
MUH 3320	Music History Survey II	3
Advanced History Study - select one of the following:		3
MUH 3330	Music History Topics (CI)	
MUH 3360	Jazz History (DEI)	
MUH 3380	American Music (CI)	
Music Theory Core		
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2030	Keyboard Harmony I	1
MUT 2040	Keyboard Harmony II	1
MUT 2140	Theory III	3
MUT 2150	Ear Training III	1
MUT 2175	Advanced Ear Training	1
MUT 5997	Analytical Techniques	3
Advanced Theory		
MUT 2120	Jazz Theory and Harmony	3
MUT 3000	Orchestration & Arranging	2
MUT 3020	Counterpoint	2
Extended Theory Study - Select one of the following:		3
MUT 5200	Special Topics in Theory	
MUT 5220	Introduction to Schenkerian Analysis	
MUT 5240	Analysis of Twentieth-Century Music	
Music Business, Technology, and Conducting		
MUA 2400	Survey of the Music Business and Labor (SI)	3
MUA 2500	Music Technology	3
MUA 3670	Conducting Techniques I	2
Composition		
MUT 1200	Beginning Composition I	2
MUT 1210	Beginning Composition II	2
MUT 2200	Beginning Composition III	2
MUT 2210	Beginning Composition IV	2
MUT 3200	Intermediate Composition I	2
MUT 3210	Intermediate Composition II	2
MUT 4200	Advanced Composition I	2
MUT 4210	Advanced Composition II	2
MUT 5280	Interactive Electronic Music Composition	3
Senior Project		
Presentation of a program of original compositions approved by the major advisor		0
Music Electives		
Any combination of music courses totaling three credits		3
General Education Requirements		
PHI 3700	Philosophy of Art	3
Other requirements		23
Electives		
Selected in consultation with advisor		7
Total Credits		**120**

Jazz Studies (120 Credits)

Code	Title	Credits
Piano Competency, Applied Music, and Ensembles		
MUA 1795	Piano Skills I	2
MUA 2795	Piano Skills II	2
Eight semesters of appropriate MUP courses (private major lessons, three credits per semester, total twenty-four credits; must be elected concurrently with major or secondary ensemble). See major private lessons courses.		24
Major Ensemble - Four semesters of major ensemble from the following:		4
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
Secondary Ensemble - Four semesters of secondary ensemble from the following:		4
MUA 2824	Jazztet	
MUA 2826	Jazz Combos	
General Lectures and Concerts		
MUA 0900	General Lectures and Concerts (four semesters)	0
Music History Core		
MUH 1345	Music Cultures (GL)	3
MUH 3310	Music History Survey I	3
MUH 3320	Music History Survey II	3
Music Theory Core		
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2140	Theory III	3

MUT 2150	Ear Training III	1
MUT 2175	Advanced Ear Training	1
MUT 5997	Analytical Techniques	3
Music Business & Technology		
MUA 2400	Survey of the Music Business and Labor (SI)	3
MUA 2500	Music Technology	3
MUA 2510	Studio Recording Techniques	2
Jazz Studies Requirements		
MUH 3360	Jazz History (DEI)	3
MUT 2120	Jazz Theory and Harmony	3
MUT 2885	Jazz Improvisation I	1
MUT 2887	Jazz Improvisation II	1
MUT 5110	Jazz Arranging and Composition I	3
MUT 5120	Jazz Arranging and Composition II	3
MUA 5690	Stage Band Direction	1
Recital		
MUP 4480	Senior Recital (must be elected concurrently with MUP 43X4: Major Instruction)	0
Music Electives		**3**
Any combination of music courses totaling three credits		
General Education Requirement		**26**
Other requirements		
Electives		**7**
Selected in consultation with advisor		
Total Credits		**120**

Music Business (120 Credits)

Code	Title	Credits
Piano Competency, Applied Music, and Ensembles		
MUA 1795	Piano Skills I	2
MUA 2795	Piano Skills II	2
Four semesters of appropriate MUP courses (private lessons in instrument or voice, one credit per semester; must be taken concurrently with major ensemble). See private lessons courses.		4
Ensemble - Four semesters of ensemble from the following:		4
MUA 2800	University Bands	
MUA 2810	University Symphony Orchestra	
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
MUA 2860	Opera Workshop	
MUA 2891	Electronic Music Ensemble	
General Lectures and Concerts		
MUA 0900	General Lectures and Concerts (four semesters)	0
Music History Core		
MUH 1345	Music Cultures (GL)	3
MUH 3310	Music History Survey I	3
MUH 3320	Music History Survey II	3
Advanced History Study - Select one of the following:		3
MUH 3330	Music History Topics (CI)	
MUH 3360	Jazz History (DEI)	
MUH 3380	American Music (CI)	
Music Theory Core		
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2140	Theory III	3
MUT 2150	Ear Training III	1
MUT 5997	Analytical Techniques	3
Music & Industry Core		
Popular Music Study - Select one of the following:		3
MUH 1350	History of American Popular Music (DEI)	
MUH 1351	History and Styles of Rock and Roll (DEI)	
MUA 2400	Survey of the Music Business and Labor (SI)	3
MUA 2500	Music Technology	3
MUA 2510	Studio Recording Techniques	2
MUA 3500	Music IP and Stakeholders	3
FIN 1200	Personal Finance Planning (QE)	3
Capstone Courses - Select two of the following:		6
MUA 4000	Marketing and Artist Management in Music	
MUA 4500	Music Entrepreneurship and Leadership	
MUA 5800	Strategy and Organization in Music	
MUA 5950	Special Topics in Music Industry & Technology	
General Business Requirements		
ECO 2010	Principles of Microeconomics (SI)	4
ECO 2020	Principles of Macroeconomics (SI)	4
BLW 2510	Business Law I	3
Accounting - Select one of the following:		2
ACC 3010	Introduction to Financial Accounting TIS 2300 prerequisite	
THR 2651	Introduction to Life Skills for the Creative Entrepreneur	
THR 5640	Introduction to Accounting for Nonprofit Organizations	
Music Business Elective Tracks		**12**
Elective Track - Complete one "track" of electives from the lists below. Courses used to fulfill a requirement above may not also be counted toward an elective track.		
Track A: Music Technology & Music Industry - 12 credits selected from the following:		
MUA 2530	Electronic Music Synthesis	
MUA 3510	Mixing and Mastering	
MUA 3550	Advanced Studio Techniques	
MUA 3990	Directed Study	
MUA 4000	Marketing and Artist Management in Music	
MUA 4020	Theories of Electronic Music	
MUA 4030	Sound Design for Visual Media	
MUA 4040	Electroacoustic Music	
MUA 4500	Music Entrepreneurship and Leadership	
MUA 4620	Music Business Internship (max 2 semesters)	
MUA 5800	Strategy and Organization in Music	
MUA 5900	Music Industry Seminar	
MUA 5950	Special Topics in Music Industry & Technology	
FPC 5660	Creativity	
PHI 3700	Philosophy of Art (SI)	
Track B: Performing Arts Management & Practice - 12 credits selected from the following:		
ELR 4100	Labor Through the Arts	
THR 1010	Introduction to the Theatre (CI)	

THR 2585	Theatre Studio - Theatre Management
THR 3301	Design Skills - Drafting I
THR 3341	Design Skills - Digital I
THR 3585	Advanced Theatre Studio - Theatre Management
THR 3601	Stage Management Studio - Principles
THR 3605	Stage Management Studio - Health and Safety
THR 3651	Principles of Theatre Management
THR 3671	Theatre Management: Marketing and Public Relations
THR 3675	Theatre Management: Marketing Design and Layout
THR 3681	Theatre Management: Patron Services and Development
THR 4331	Entertainment Design - Lighting II
THR 4335	Entertainment Design - Lighting III
THR 4342	Design Skills - Digital II
THR 4371	Entertainment Design - Projection Design
THR 4601	Stage Management Studio: Event Management
THR 4605	Stage Management Studio - Performance Management
THR 5331	Entertainment Design - Lighting I
SEM 5100	Introduction to Sport & Entertainment Management
Track C: New Media and Business Communicaton - 12 credits selected from the following:	
COM 2210	Media Writing and Storytelling
COM 2280	Visual Communication & Content Creation
COM 2290	Fundamentals of New Media Communication
COM 2310	Introduction to Web Design
COM 3250	Organizational Communication
COM 4140	Popular and Celebrity Culture
COM 4500	Leadership Communication
COM 4680	WAYN Radio and Podcasting
ELR 3220	Labor in Media and Popular Culture
Track D: MISB Minor in Business - 18 credits, plus pre-requisites	
Prerequisites in Business - complete the following:	
TIS 1500	Business Tools and Applications TIS 2300 co-requisite
TIS 2300	Quantitative Methods I: Probability and Statistical Inference TIS 1500 co-requisite
Business Foundations - complete the following:	
ACC 3010	Introduction to Financial Accounting TIS 2300 pre-requisite
MGT 2530	Management of Organizational Behavior PSY 1010 or 1020 pre-requisite
MKT 2300	Marketing Management ECO 2010 pre-requisite
Advanced Business Study - select one of the following:	
FIN 3290	Business Finance TIS 2300 pre-requisite
GSC 3600	Operations and Supply Chain Management
TIS 3630	Business Information Systems
Business Electives - any two courses offered by the MISB, totaling six credits	
Track E: MISB Minor in Entrepreneurship & Innovation - 15 credits	
Entrepreneurship & Innovation Core - complete the following:	
EI 5000	Introduction to Entrepreneurship and Innovation
MKT 5610	Marketing New Ventures
EI 6000	Entrepreneurship and Innovation Capstone (must be taken after all other courses in the minor are completed)
Entrepreneurship & Innovation Electives - select two of the following:	
ACC 3010	Introduction to Financial Accounting TIS 2300 pre-requisite
EI 5400	Management and Leadership for Entrepreneurs
EI 5900	Special Topics in Entrepreneurship and Innovation
EI 5950	Directed Study in Entrepreneurship and Innovation
FIN 3290	Business Finance TIS 2300 pre-requisite
FIN 5200	Startup Funding and Profitability
FIN 5280	Entrepreneurs' Ecosystem
IE 4355	Product Engineering
MKT 2300	Marketing Management ECO 2010 pre-requisite
MKT 5410	Marketing Research and Analysis
MKT 5450	Consumer Behavior
MUA 4500	Music Entrepreneurship and Leadership
TIS 3630	Business Information Systems
TIS 5994	Software Tools for Business Applications
Music Electives	**6**
Any combination of music courses totaling six credits	
General Education Requirements	**20**
Other requirements	
Electives	**7**
Selected in consultation with advisor	
Total Credits	**120**

Music Education - Instrumental (127 Credits)

Code	Title	Credits
Piano Competency, Applied Music, and Ensembles		
MUA 1795	Piano Skills I	2
MUA 2795	Piano Skills II	2
Six semesters of appropriate MUP courses (private lessons in instrument or voice, one credit per semester; must be taken concurrently with major or secondary ensemble). See private lessons courses.		6
Major Ensemble - Five semesters of major ensemble from the following:		5
MUA 2800	University Bands (required for winds, brass, or percussion players)	
MUA 2810	University Symphony Orchestra (required for strings players)	
Secondary Ensemble - Select one of the following:		1
MUA 2800	University Bands	
MUA 2804	Warrior Band	
MUA 2810	University Symphony Orchestra	
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
MUA 2860	Opera Workshop	
MUA 2880	Chamber Music and Special Ensembles	
MUA 2891	Electronic Music Ensemble	
Improvisation & Creative Music Making - Select one of the following:		1
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	

MUA 2826	Jazz Combos	
MUA 2891	Electronic Music Ensemble	
MUT 2885	Jazz Improvisation I	
MUP 4470	Junior Recital (must be taken concurrently with sixth semester of private lessons)	0
General Lectures and Concerts		
MUA 0900	General Lectures and Concerts (4 semesters)	0
Music History Core		
MUH 1345	Music Cultures (GL)	3
MUH 3310	Music History Survey I	3
MUH 3320	Music History Survey II	3
Advanced History Study - Select one of the following:		3
MUH 3330	Music History Topics (CI)	
MUH 3360	Jazz History (DEI)	
MUH 3380	American Music (CI)	
Music Theory Core		
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2140	Theory III	3
MUT 2150	Ear Training III	1
MUT 2175	Advanced Ear Training	1
MUT 5997	Analytical Techniques	3
Music Business & Technology		
MUA 2400	Survey of the Music Business and Labor (SI)	3
MUA 2500	Music Technology	3
Techniques		
MUA 1720	Voice Techniques and Pedagogy	2
MUA 1730	String Techniques and Pedagogy	2
MUA 1740	Woodwind Techniques and Pedagogy	2
MUA 1750	Brasswind Techniques and Pedagogy	2
MUA 1760	Percussion Techniques and Pedagogy	2
MUA 3670	Conducting Techniques I	2
MUA 3680	Conducting Techniques II	2
Arranging - Select one of the following:		2
MUT 3000	Orchestration & Arranging	
MUT 5110	Jazz Arranging and Composition I	
Music Education		
MED 3500	Introduction to Music Education	2
MED 3510	Teaching & Learning Music	3
MED 4510	General Music Methods	3
MED 4540	Instrumental Music in the Schools I	3
MED 4550	Instrumental Music in the Schools II	3
MED 4560	Practicum in Music Education	3
MED 4570	Student Teaching and Seminar	12
College of Education Required Courses		
EDP 3310	Educational Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
General Education Requirement		**25**
Other requirements		
Total Credits		**127**

NOTE: Music Education and the College of Education Joint Enrollment: All music education students must apply for admission to the College of Education (COE) at the end of their sophomore year. Students are then jointly enrolled in the College of Fine, Performing and Communication Arts and the College of Education. Students should contact their music education advisor for information on applying to the COE. Students will not be allowed to register for the professional courses taught through the College of Education (EDP 3310and/orRLL 6121) until they have been officially admitted to the COE.

Music Education - Vocal (122 Credits)

Code	Title	Credits
Piano Competency, Applied Music, and Ensembles		
MUA 1795	Piano Skills I	2
MUA 2795	Piano Skills II	2
MUP 1221	Voice Lessons - Lower Division (four semesters, one credit per semester, taken concurrently with an ensemble)	4
MUP 3221	Voice Lessons - Upper Division (two semesters, one credit per semester, taken concurrently with an ensemble)	2
Major Ensemble - Four semesters of major ensemble from the following:		4
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
Secondary Ensemble - Select one of the following:		1
MUA 2800	University Bands	
MUA 2804	Warrior Band	
MUA 2810	University Symphony Orchestra	
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
MUA 2860	Opera Workshop	
MUA 2891	Electronic Music Ensemble	
Improvisation & Creative Music-Making - Select one of the following:		1
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
MUA 2826	Jazz Combos	
MUA 2891	Electronic Music Ensemble	
MUT 2885	Jazz Improvisation I	
MUP 4470	Junior Recital (taken concurrently with sixth semester of private lessons)	0
General Lectures and Concerts		
MUA 0900	General Lectures and Concerts (four semesters)	0
Music History Core		
MUH 1345	Music Cultures (GL)	3
MUH 3310	Music History Survey I	3
MUH 3320	Music History Survey II	3
Advanced History Study - Select one of the following:		3
MUH 3330	Music History Topics (CI)	
MUH 3360	Jazz History (DEI)	
MUH 3380	American Music (CI)	
Music Theory Core		
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2140	Theory III	3
MUT 2150	Ear Training III	1

MUT 2175	Advanced Ear Training	1
MUT 5997	Analytical Techniques	3
Music Business & Technology		
MUA 2400	Survey of the Music Business and Labor (SI)	3
MUA 2500	Music Technology	3
Techniques		
MUA 3670	Conducting Techniques I	2
MED 5550	Choral Conducting and Rehearsal Techniques	3
Techniques & Literature - Select at least two courses, totaling at least four credits, from the following:		4
MUA 1700	Guitar Class	
MUA 1730	String Techniques and Pedagogy	
MUA 1740	Woodwind Techniques and Pedagogy	
MUA 1750	Brasswind Techniques and Pedagogy	
MUA 1760	Percussion Techniques and Pedagogy	
MUH 5370	Diction and Vocal Literature I	
MUH 5380	Diction and Vocal Literature II	
MUP 1211	Piano Lessons - Lower Division (up to four semesters, one credit per semester)	
Additional Instrumental Techniques - Select one of the following (cannot duplicate any courses selected above):		2
MUA 1700	Guitar Class	
MUA 1730	String Techniques and Pedagogy	
MUA 1740	Woodwind Techniques and Pedagogy	
MUA 1750	Brasswind Techniques and Pedagogy	
MUA 1760	Percussion Techniques and Pedagogy	
Music Education		
MUA 1720	Voice Techniques and Pedagogy	2
MED 2500	Piano Skills for the Music Classroom	2
MED 3500	Introduction to Music Education	2
MED 3510	Teaching & Learning Music	3
MED 4510	General Music Methods	3
MED 4530	Choral Methods	3
MED 4560	Practicum in Music Education	3
MED 4570	Student Teaching and Seminar	12
College of Education Required Courses		
EDP 3310	Educational Psychology	3
RLL 6121	Teaching Literacies across the Content Areas	3
General Education Requirement		**25**
Other requirements		
Total Credits		**122**

NOTE: Music Education and the College of Education Joint Enrollment: All music education students must apply for admission to the College of Education (COE) at the end of their sophomore year. Students are then jointly enrolled in the College of Fine, Performing and Communication Arts and the College of Education. Students should contact their music education advisor for information on applying to the COE. Students will not be allowed to register for the professional courses taught through the College of Education (EDP 3310 and/or RLL 6121) until they have been officially admitted to the COE.

Music Technology (120 Credits)

Code	Title	Credits
Piano Competency, Applied Music, and Ensembles		
MUA 1795	Piano Skills I	2
MUA 2795	Piano Skills II	2
Four semesters of appropriate MUP courses (private lessons in instrument or voice, one credit per semester; must be taken concurrently with ensemble). See private lessons courses.		4
MUA 2891	Electronic Music Ensemble (two semesters, one credit per semester)	2
Major Ensemble - Two semesters of major ensemble from the following:		2
MUA 2800	University Bands	
MUA 2810	University Symphony Orchestra	
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
MUA 2891	Electronic Music Ensemble	
General Lectures and Concerts		
MUA 0900	General Lectures and Concerts (four semesters)	0
Music History Core		
MUH 1345	Music Cultures (GL)	3
MUH 3310	Music History Survey I	3
MUH 3320	Music History Survey II	3
Advanced History Study - Select one of the following:		3
MUH 3330	Music History Topics (CI)	
MUH 3360	Jazz History (DEI)	
MUH 3380	American Music (CI)	
Music Theory Core		
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2140	Theory III	3
MUT 2150	Ear Training III	1
MUT 5997	Analytical Techniques	3
Music Technology Requirements		
MUA 2400	Survey of the Music Business and Labor (SI)	3
MUA 2500	Music Technology	3
MUA 2510	Studio Recording Techniques	2
MUA 2530	Electronic Music Synthesis	3
MUA 3500	Music IP and Stakeholders	3
MUA 3510	Mixing and Mastering	2
MUA 3530	Advanced Music Synthesis	3
MUA 3550	Advanced Studio Techniques	2
Advanced Music Technology - Select at least four courses from the following:		12
MUA 4010	Audio Electronics	
MUA 4020	Theories of Electronic Music	
MUA 4030	Sound Design for Visual Media	
MUA 4040	Electroacoustic Music	
MUA 4650	Directed Study: Internships	
MUT 5280	Interactive Electronic Music Composition	
MUA 4950	Music Technology Senior Project	1
Music Electives		**9**
Any combination of music courses totaling nine credits		
MAT 1070	College Algebra (QE)	5
Other requirements		23
General Electives		**10**

Selected in consultation with advisor	
Total Credits	**120**

Performance (120 Credits)

Code	Title	Credits
Applied Music and Ensembles		
Eight semesters of appropriate MUP courses (major lessons on instrument or voice, three credits per semester - total twenty-four credits; must be taken concurrently with major ensemble). See major private lessons courses.		24
Major Ensemble - Eight semesters of major ensemble from the following:		8
MUA 2800	University Bands	
MUA 2810	University Symphony Orchestra	
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
MUP 4470	Junior Recital	0
MUP 4480	Senior Recital	0
General Lectures and Concerts		
MUA 0900	General Lectures and Concerts (4 semesters)	0
Music History Core		
MUH 1345	Music Cultures (GL)	3
MUH 3310	Music History Survey I	3
MUH 3320	Music History Survey II	3
Advanced History Study - Select one of the following:		3
MUH 3330	Music History Topics (CI)	
MUH 3360	Jazz History (DEI)	
MUH 3380	American Music (CI)	
Music Theory Core		
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2140	Theory III	3
MUT 2150	Ear Training III	1
MUT 2175	Advanced Ear Training	1
MUT 5997	Analytical Techniques	3
Music Business & Technology		
MUA 2400	Survey of the Music Business and Labor (SI)	3
MUA 2500	Music Technology	3
Performance Tracks		**21**
Select one of the following tracks:		
Keyboard Performance Track (21 credits)		
MUT 2030	Keyboard Harmony I	
MUT 2040	Keyboard Harmony II	
MUA 2880	Chamber Music and Special Ensembles (four semesters, one credit per semester)	
MUA 3670	Conducting Techniques I	
MUA 3800	Collaborative Piano	
MUH 5358	Piano Pedagogy	
MUT 3000	Orchestration & Arranging	
or MUT 3020	Counterpoint	
Music Electives - Any combination of music courses totaling six credits		
Instrumental Performance Track (21 credits)		
MUA 1795	Piano Skills I	
MUA 2795	Piano Skills II	
MUA 2880	Chamber Music and Special Ensembles (four semesters, one credit per semester)	
MUA 3670	Conducting Techniques I	
MUH 5350	Instrumental Pedagogy	
MUT 3000	Orchestration & Arranging	
Music Electives - Any combination of music courses totaling six credits		
Vocal Performance Track (23 credits)		
MUA 1795	Piano Skills I	
MUA 2795	Piano Skills II	
MUA 2860	Opera Workshop (two semesters, one credit per semester)	
MUH 5355	Vocal Pedagogy & History	
MUH 5370	Diction and Vocal Literature I	
MUH 5380	Diction and Vocal Literature II	
Foreign Language Study - Select two of the following:		
FRE 1010	Beginning French I	
GER 1010	Elementary German I	
ITA 1010	Beginning Italian I	
General Education Requirements		**26**
Other requirements		
General Electives		**7**
Selected in consultation with advisor		
Total Credits		**120**

Outline of Departmental Honors (12 credits):

-HON 42XX – Junior/Senior level Seminar (3 credits)

-Undergraduate Thesis in conjunction with MUT 5997 – Analytical Techniques (3 credits)

-Six honors credits of MED, MUA, MUH, or MUT courses 3000-level or above (6 credits)

Music Minor

The Music Department offers a minor in music for undergraduate students majoring in other disciplines. Requirements for the music minor consist of a minimum of twenty-two credits in the following courses:

Code	Title	Credits
Music Theory and Ear Training		
MUT 1140	Theory I	3
MUT 1150	Ear Training I	1
MUT 1160	Theory II	3
MUT 1170	Ear Training II	1
MUT 2140	Theory III	3
MUT 2150	Ear Training III	1
Music History		
Select two of the following:		6
MUH 1345	Music Cultures	
MUH 3310	Music History Survey I	
MUH 3320	Music History Survey II	
MUH 3330	Music History Topics	
Performance Ensemble		
Select four credits in one ensemble from the following:		4
MUA 2800	University Bands	

MUA 2810	University Symphony Orchestra	
MUA 2820	Jazz Big Band	
MUA 2822	Jazz Guitar Ensemble	
MUA 2840	Choral Union	
MUA 2850	Concert Chorale	
Total Credits		**22**

Jazz Studies Minor for Instrumental Music Education Majors

The minor in jazz studies is designed for instrumental music education majors who wish to gain experience in jazz. Requirements for the jazz studies minor consist of eighteen credits in the following courses:

Code	Title	Credits
Music History and Theory		
MUH 3360	Jazz History	3
MUT 2120	Jazz Theory and Harmony	3
MUT 2885	Jazz Improvisation I	1
MUT 2887	Jazz Improvisation II	1
MUT 5110	Jazz Arranging and Composition I	3
MUT 5120	Jazz Arranging and Composition II	3
Ensemble and Piano Competency		
MUA 2820	Jazz Big Band	1
MUA 2826	Jazz Combos	1
MUA 3795	Advanced Piano Skills	2
Total Credits		**18**

Music Industry Studies Minor

The Music Department offers a minor in Music Industry Studies to undergraduate students majoring in other disciplines. The program is designed for students who wish to engage with and explore the theoretical and practical fundamentals of the music industry.

Students pursuing the minor in Music Industry Studies must complete a minimum of 18-19 credits by taking the classes listed below.

Code	Title	Credits
MUH 1351	History and Styles of Rock and Roll	3
or MUH 1350	History of American Popular Music	
MUA 2400	Survey of the Music Business and Labor	3
MUA 3500	Music IP and Stakeholders	3
ECO 2010	Principles of Microeconomics	4
Select two or more of the following (to reach a minimum of 18 credits):		5-6
MUA 4000	Marketing and Artist Management in Music	
MUA 4500	Music Entrepreneurship and Leadership	
MUA 5800	Strategy and Organization in Music	
MUA 5900	Music Industry Seminar	
FPC 5660	Creativity	
COM 4680	WAYN Radio and Podcasting	
THR 3651	Principles of Theatre Management	
THR 3681	Theatre Management: Patron Services and Development	
Additionally, students may elect any course in MUP, MUA, MUT, or MUH to meet the elective requirements.		
Total Credits		**18-19**

Music Technology Minor

The Music Department offers a minor in music technology for undergraduate students majoring in other disciplines. The program is designed for the students who wish to learn fundamental knowledge in sound engineering and electronic music production.

Students pursuing the minor in Music Technology must complete a minimum of 18 credits by taking the classes listed below.

Code	Title	Credits
MUA 2500	Music Technology	3
MUA 2510	Studio Recording Techniques	2
MUA 2530	Electronic Music Synthesis	3
MUA 3510	Mixing and Mastering	2
MUA 3530	Advanced Music Synthesis	3
Select two of the following:		5-7
MUA 3550	Advanced Studio Techniques	
MUA 4010	Audio Electronics	
MUA 4020	Theories of Electronic Music	
MUA 4030	Sound Design for Visual Media	
MUA 4040	Electroacoustic Music	
MUT 5280	Interactive Electronic Music Composition	
PHY 3100	The Sounds of Music	
Total Credits		**18-20**

Theatre and Dance

Office: 3226 Old Main; 313-577-3508
Chairperson: Michael J. Barnes
http://www.theatreanddance.wayne.edu (http://www.theatreanddance.wayne.edu/)

The Theatre and Dance Programs prepare students for professional careers as performing artists, choreographers, designer/technicians, stage managers, and informed audience members within the urban, metropolitan context of Wayne State University. The Department of Theatre and Dance is committed to providing student the opportunity to develop within their disciplines through an extensive performance program that includes twelve theatrical productions and dance concerts, four community outreach performance companies that target the city schools, a summer children's theatre tour designed to bring affordable quality summer entertainment to the youth of Detroit, the Underground Theatre Company—a student-run summer theatre, and Baira WSU Professional Resident Dance Company.

Theatre and Dance Mission Statement: We engage, educate, and empower diverse/student/artists through the rigorous study, practice, and production of theatre and dance to enrich Detroit and the Global Community.

Dance

The Dance Program prepares students for professional careers as performing artists, choreographers, dance teachers, and informed dance audience members. The dance program offers curricular choices at the undergraduate and post-degree levels, integrating a thorough understanding of applied and theoretical principles of movement with the newest forms and ideas in contemporary dance performance, choreography, and dance education. Undergraduate studies in dance are reflected in the following major and minor designations: Major in Dance leading to the Bachelor of Science degree; Major in Dance leading to the Bachelor of Fine Arts degree.

The Wayne State University Dance Company, Dance Workshop, and To Sangana African Dance Company are performing groups composed of skilled dance students who must qualify for membership through auditions. They present concerts, lecture/demonstrations, and performances on campus and in the community, choreographed by visiting artists, faculty, and talented students. Students must have a minimum 2.5 overall GPA to participate in a performance ensemble. The Dance Program also provides dance instruction for non-majors and develops general appreciation for dance as an art form.

Theatre

The various theatre programs in the Department offer creative opportunities for preprofessional training at every academic level. Undergraduate majors may prepare for careers in teaching, acting, design/technology and related fields. The Department sponsors a large number of production activities and practicum experiences including performances in the Hilberry Gateway theatre complex, Underground Theatre, Freedom Players, Motor City Cabaret, and Summer Children's Theatre. Participation in these activities is available to all University students.

- Dance (B.F.A.) (p. 219)
- Dance (B.S.) (p. 220)
- Theatre (B.F.A.) (p. 222)
- Theatre (B.A.) (p. 225)
- Africana Theatre and Dance Minor (p. 226)
- Dance Minor (p. 226)
- General Theatre Minor (p. 226)
- Musical Theatre Minor (p. 227)
- Studio and Community Dance Minor (p. 227)
- Theatre Design and Technology Minor (p. 227)
- Theatre Management Minor (p. 228)
- Law Minor (p. 188)

Dance (B.F.A.)

The Bachelor of Fine Arts with a major in dance provides a professional degree program for talented students with prior dance experience and skills who seek professional careers as performing artists and choreographers. Dance technique and the history, philosophies, and aesthetics of dance are all central to this program.

Admission Requirements

Admission to this program is contingent upon satisfaction of the general requirements for undergraduate admission (p. 34) to the University and a successful audition conducted by the Department faculty. Audition dates are scheduled throughout the year prior to admission. Prospective students should contact the Theatre and Dance Office for audition schedule information.

All B.F.A. dance majors must be enrolled in appropriate level technique classes each semester and evidence successful progress in their respective degree programs in order to maintain dance major status. Any dance major who does not comply and/or does not register and complete appropriate dance coursework for one semester MUST AUDITION FOR THE DANCE PROGRAM for re-admission. Students out of the dance program for two semesters or more are rarely re-admitted to the program.

Program Requirements

Candidates must complete a minimum of 120 credits in course work, including satisfaction of the University General Education requirements (p. 24), College degree requirements (p. 185) and a minimum of eighty credits in dance courses (specified below). B.F.A students must comply with the following department policies – any student who does not meet these standards will be placed on Departmental probation and may be denied continuation in the program: the credits in specified Dance courses must be completed with grades of C minus or better; dance technique and choreography classes must be completed with a B plus or better; and a 3.0 cumulative g.p.a must be maintained. Students must be current in their plan of work and all Basic Competency courses must be completed prior to enrolling in the Capstone course.

All course work must be completed in accordance with the academic procedures of the University (p. 40) and the College of Fine, Performing and Communication Arts (p. 185) governing undergraduate scholarship and degrees, as well as with the requirements of the Maggie Allesee Department of Theatre and Dance.

General Education Course Progress

Majors must complete the Basic Composition (BC) requirement by the time forty-five credits have been earned, and the Oral Communication (OC) and Intermediate Composition (IC) requirement by the time sixty credits have been earned. Failure to meet these limits on matriculation will result in the student being placed on departmental probation: the student will be ineligible to be cast in or participate as a member of the artistic/production staff of department productions. Transfer students will be reviewed upon entry into the major for compliance with these standards and advised as needed.

B.F.A. Major Requirements

Code	Title	Credits
Required Technique Credits		
Students must complete 32 credits of Technique coursework.		32
DNC 1220	Fundamentals of Classic Ballet II	
DNC 1300	Pilates Conditioning for Performing Artists	
DNC 2010	Contemporary Dance II: Part I	
DNC 2610	African Diasporic Dance Technique I	
DNC 3010	Contemporary Dance III	
DNC 3200	Ballet III	
DNC 3410	African Diasporic Dance Technique II	
DNC 2600	African Dance II	
DNC 3300	Pilates Equipment Lab	
Performance		
Students must complete nine credits of performance coursework.		9
Select from the following:		
DNC 4000	Performance Tour	
DNC 4710	Dance Company	
DNC 4800	Repertory	
Creative Practice		
DNC 2460	Dance Improvisation	2
DNC 2500	Choreography I	2
DNC 3500	Choreography II	2
DNC 5560	Choreography III	2
DNC 5996	Senior Capstone Research (1 Credit in Fall, 2 Credits in Winter)	3
Required Theory Courses		
DNC 1330	Production Practicum	2
DNC 2400	Introduction to African Dance	3
DNC 2000	Introduction to World Dance	3
DNC 2310	History of Dance from 1800 to the Present	3
DNC 2180	Anatomy of Human Movement	3
THR 3341	Design Skills - Digital I	2
DNC 3310	Dance Production	3
DNC 3810	Dance Pedagogy	3
Core Theory Courses		
Select two of the following:		6
DNC 1810	Introduction to Dance Professions	
DNC 2410	Music and Dance Relationships	
DNC 4810	Dance Teaching Methods	
DNC 3180	Dance Science	
DNC 4910	Dance in Community	
Total Credits		**80**

Performance Opportunities

There are three performance ensembles: the W.S.U. Dance Company One, Dance Workshop, and To Sangana African Dance Company composed of skilled dance students who must qualify for membership through auditions. They present concerts, lecture/demonstrations, and performances on campus and in the community, choreographed by visiting artists, faculty, and talented students. Students must have a minimum 2.5 overall g.p.a. to participate in a performance ensemble.

Dance Honors Program (B.S. and B.F.A. degrees)

In order to enter the departmental honors program students must have achieved academic excellence in previous work, such as a high school g.p.a. of 3.5 or a college or university g.p.a. of 3.3. Students must meet all regular major requirements including the following: three honors-option courses within their major taught by full-time faculty members (internships cannot satisfy this requirement), at least one 42XX honors seminar offered through the Honors College, a senior honors thesis under the direction of a faculty advisor in their major area (DNC 5997) and maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Dance Honors Curriculum (15 credits required)

Code	Title	Credits
Select the Honors Option in three of the following:		9-10
DNC 2000	Introduction to World Dance	
DNC 2300	History of Dance to 1800	
DNC 2310	History of Dance from 1800 to the Present	
DNC 3180	Dance Science	
DNC 3310	Dance Production	
DNC 3810	Dance Pedagogy	
DNC 4810	Dance Teaching Methods	
DNC 5810	Teaching Creative Dance for Children	
DNC 5997	Departmental Honors Thesis	3
HON 42xx Honors Seminar		3
Total Credits		**15-16**

Student must maintain an overall 3.3 g.p.a.

For additional information, students should consult the Irvin D. Reid Honors College (http://www.honors.wayne.edu).

Dance Teaching Majors (B.F.A. and B.S. Programs)

Professional Education Sequence: The additional following courses are required for a K-12 teaching major in dance, K-12 certification, and a major in dance, secondary certification for both the B.F.A. and the B.S. degrees:

Code	Title	Credits
DNC 3190	Movement Analysis	3
DNC 3810	Dance Pedagogy	3
DNC 4410	Student Teaching and Seminar I	5
DNC 4420	Student Teaching and Seminar II	5
DNC 4810	Dance Teaching Methods	3
DNC 4820	Assisting in Dance	1
DNC 4910	Dance in Community	3
DNC 5810	Teaching Creative Dance for Children	3
DNC 5830	Field Work in Creative Dance	2-8
EDP 5480	Adolescent Psychology	3
LFA 2330 or HE 3300	First Aid and CPR Health of the School Child	3
RLL 6121	Teaching Literacies across the Content Areas	3
Total Credits		**37-43**

Dance (B.S.)

This degree program is for students with prior dance experience who wish to combine university-level dance studies with targeted

general study in the arts and sciences. The Bachelor of Science in Dance offers an integrative program of dance professions, culture and community providing students multiple opportunities to enhance technical skill, investigate shifting social and global concerns, and cultivate innovative approaches for dance career preparation in diverse contexts and related professions.

Admission Requirements

Admission to this program is contingent upon satisfaction of the general requirements for undergraduate admission (p. 34) to the University and a successful audition conducted by the Department faculty. Audition dates are scheduled each November, December and February in the year prior to admission; prospective students should contact the Theatre and Dance Office (http://theatreanddance.wayne.edu/dance/) for audition schedule information. Entering students are required to consult the Departmental advising staff prior to their first registration for classes.

All B.S. dance majors must be enrolled in required curriculum each semester and evidence successful progress in the B.S. degree program in order to maintain dance major status. Any dance major who does not comply and/or does not register and complete appropriate dance coursework for one semester MUST AUDITION FOR THE DANCE PROGRAM for re-admission.

Program Requirements

Candidates must complete a minimum of 120 credits in course work, including satisfaction of the University General Education requirements (p. 24), College degree requirements (p. 185), minimum fifty-nine credits in dance courses (specified below) and minimum twenty-nine credits in electives. B.S students must comply with the following department policies – any student who does not meet these standards will be placed on Departmental probation and may be denied continuation in the program: the credits in specified Dance courses must be completed with grades of C minus or better and 2.5 cumulative g.p.a must be maintained. Students must be current in their plan of work and all Basic Competency courses must be completed prior to enrolling in the Capstone course.

All course work must be completed in accordance with the academic procedures of the University (p. 40) and the College of Fine, Performing and Communication Arts (p. 185) governing undergraduate scholarship and degrees, as well as with the requirements of the Maggie Allesee Department of Theatre and Dance.

General Education Course Progress

majors must complete the Basic Composition (BC) requirement by the time forty-five credits have been earned, the Oral Communication (OC) and Intermediate Composition (IC) requirement by the time sixty credits have been earned. Failure to meet these limits on matriculation will result in the student being placed on departmental probation: the student will be ineligible to be cast in or participate as a member of the artistic/production staff of department productions. Transfer students will be reviewed upon entry into the major for compliance with these standards and advised as needed.

B.S. Major Requirements

Code	Title	Credits
Required Technique Credits		
DNC 1220	Fundamentals of Classic Ballet II	2
DNC 1300	Pilates Conditioning for Performing Artists	2
DNC 2010	Contemporary Dance II: Part I	2
DNC 2610	African Diasporic Dance Technique I	2
Technique of Choice. Choose from the following courses:		12
DNC 2600	African Dance II	
DNC 2620	Tap Dance	
DNC 3010	Contemporary Dance III	
DNC 3200	Ballet III	
DNC 3410	African Diasporic Dance Technique II	
DNC 4010	Contemporary Dance IV	
DNC 4200	Ballet IV	
Performance		
Complete three credits of Performance coursework. Additional Performance credit can be counted toward General Elective coursework. Select from the following:		3
DNC 4000	Performance Tour	
DNC 4710	Dance Company	
DNC 4800	Repertory	
Creative Practice		
DNC 2460	Dance Improvisation	2
DNC 2500	Choreography I	2
Required Theory Courses		
DNC 1330	Production Practicum	2
DNC 1810	Introduction to Dance Professions	3
DNC 2180	Anatomy of Human Movement	3
DNC 2400	Introduction to African Dance	3
DNC 2000	Introduction to World Dance	3
DNC 2310	History of Dance from 1800 to the Present	3
DNC 3310	Dance Production	3
DNC 3810	Dance Pedagogy	3
DNC 5998	Professions Capstone Research	3
Core Theory Courses		
Select two from the following:		6
DNC 2410	Music and Dance Relationships	
DNC 3180	Dance Science	
DNC 4810	Dance Teaching Methods	
DNC 4910	Dance in Community	
DNC General Electives		
These DNC course are optional and may be taken as General Electives.		
THR 3341	Design Skills - Digital I	
DNC 3300	Pilates Equipment Lab	
DNC 3500	Choreography II	
DNC 5560	Choreography III	
Total Credits		**59**

Pre-Dance/Movement Therapy Concentration (B.S. Program)

Students completing this concentration will gear their capstone internship in dance towards human services or a related mental health discipline. Students who complete this concentration will graduate with a B.S. in Dance and minor in Psychology.

In addition to the regular B.S. requirements, the following courses are required:

Code	Title	Credits
DNC 3180	Dance Science	3
PSY 1010	Introductory Psychology	4
PSY 2020	Research Methods In Psychology	4
PSY 2400	Developmental Psychology	4
PSY 2410	Health Psychology	4

PSY 3310	Introduction to Psychopathology	4
Capstone Internship		3

SOC 2203 Social Psychology is a not required course, but it supports the concentration in Movement Therapy and may support entrance into specific master's programs. DNC 1330 Production Practicum and DNC 3310 Dance Production are not required for the Movement Therapy concentration.

Dance Honors Program (B.S. and B.F.A. degrees)

In order to enter the departmental honors program students must have achieved academic excellence in previous work, such as a high school g.p.a. of 3.5 or a college or university g.p.a. of 3.3. Students must meet all regular major requirements including the following: three honors-option courses within their major taught by full-time faculty members (internships cannot satisfy this requirement), at least one 42XX honors seminar offered through the Honors College, a senior honors thesis under the direction of a faculty advisor in their major area (DNC 5997) and maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Dance Honors Curriculum (15 credits required)

Code	Title	Credits
Select the Honors Option in three of the following:		9-10
DNC 2000	Introduction to World Dance	
DNC 2300	History of Dance to 1800	
DNC 2310	History of Dance from 1800 to the Present	
DNC 3180	Dance Science	
DNC 3310	Dance Production	
DNC 3810	Dance Pedagogy	
DNC 4810	Dance Teaching Methods	
DNC 5810	Teaching Creative Dance for Children	
DNC 5997	Departmental Honors Thesis	3
HON 42xx Honors Seminar		3
Total Credits		**15-16**

Student must maintain an overall 3.3 g.p.a.

For additional information, students should consult the Irvin D. Reid Honors College (http://www.honors.wayne.edu).

Dance Teaching Majors (B.F.A. and B.S. Programs)

Professional Education Sequence: The additional following courses are required for a K-12 teaching major in dance, K-12 certification, and a major in dance, secondary certification for both the B.F.A. and the B.S. degrees:

Code	Title	Credits
DNC 3190	Movement Analysis	3
DNC 3810	Dance Pedagogy	3
DNC 4410	Student Teaching and Seminar I	5
DNC 4420	Student Teaching and Seminar II	5
DNC 4810	Dance Teaching Methods	3
DNC 4820	Assisting in Dance	1
DNC 4910	Dance in Community	3
DNC 5810	Teaching Creative Dance for Children	3
DNC 5830	Field Work in Creative Dance	2-8
EDP 5480	Adolescent Psychology	3
LFA 2330	First Aid and CPR	3
or HE 3300	Health of the School Child	
RLL 6121	Teaching Literacies across the Content Areas	3
Total Credits		**37-43**

Theatre (B.F.A.)

The Bachelor of Fine Arts with a Major in Theatre is an intensive pre-professional curriculum that combines foundational studies, rigorous training and extensive production assignments. The B.F.A. program is divided into two areas: a) performance and b) design and technical theatre including stage management.

Admission Requirements

Students seeking admission to the performance program must: 1) satisfy the general requirements for undergraduate admission (p. 34) to the University; 2) complete a minimum of forty-five credits, including all program-specific prerequisite courses; 3) be selected for the program through an audition process. Admissions to the performance program typically take place at the end of the Fall semester of a student's sophomore year.

Students seeking admission to the design and technical theatre program must satisfy the general requirements for undergraduate admission (p. 34) to the University and be selected for the program through an interview with the faculty.

Program Requirements

Candidates must complete a minimum of 120 credits in course work, including satisfaction of the University General Education requirements (p. 24), College degree requirements (p. 185), and seventy-seven credits in theatre courses including the major requirements listed below. The minimum grade for each course required in the major, which must be taken in the Department of Theatre, must be no less than a C-minus in order for the course credit to count toward completion of the degree. B.F.A students must comply with the following department policies – any student who does not meet these standards will be placed on Departmental probation and may be denied continuation in the program: the seventy-seven credits in specified Theatre courses must be completed with grades of C minus or better and a minimum of 3.0 Theatre major g.p.a must be maintained. Students must be current in their plan of work and all Basic Competency courses must be completed prior to enrolling in the Capstone course. Departmental information published in this Bulletin is intended for use in conjunction with advising, but in all cases, regardless of advice given, students are responsible for meeting and satisfying requirements as set forth in this Bulletin.

All course work must be completed in accordance with the academic procedures of the University (p. 40) and the College of Fine, Performing and Communication Arts (p. 185) governing undergraduate scholarship and degrees, as well as with the requirements of the Maggie Allesee Department of Theatre and Dance.

General Education Course Progress: Majors must complete the Basic Composition (BC) and Quantitative Experience (QE) requirement by the time forty-five credits have been earned, the Oral Communication (OC) and Intermediate Composition (IC) requirement by the time sixty credits have been earned. Failure to meet these limits on matriculation will result in the student being placed on departmental probation: the student will be ineligible to be cast in or participate as a member of the artistic/production staff of department productions. Transfer students will be reviewed upon entry into the major for compliance with these standards and advised as needed.

B.F.A. – Performance

Freshman

Fall Semester		**Credits**
ENG 1020	Introductory College Writing (BC)	3
COM 1010	Oral Communication: Basic Speech (OC)	3
THR 1121 or THR 1211	Play Analysis or Acting I	3
DNC 2460	Dance Improvisation	2
THR 2580	Fundamentals of Production Practice	3
THR 1451	Principles of Makeup (or General Education Course)	1-3
	Credits	**15-17**

Winter Semester		
Social Inquiry (SI)		3
Cultural Inquiry (CI); recommended THR 1041		3
THR 1211 or THR 1121	Acting I or Play Analysis	3
THR 1030	Introduction to Black Theatre and Performance	3
THR 1451	Principles of Makeup (If not taken in the fall; or take General Elective)	1-3
	Credits	**13-15**

Sophomore

Fall Semester		
Intermediate Composition (IC)		3
Natural Science Inquiry w/ Lab (NSI)		4
THR 2220	Fundamentals of Voice and Movement [5]	3
THR 3322 or THR 2611 or THR 3731	Introduction to Costuming or Stage Management or Applied Theatre Studies: Community Possibilities	3
THR 2581 or THR 2582	Theatre Studio - Performance [4] or Intermediate Production Practice	1
THR 2251 Musical Theatre Performance I; Theatre Elective; or General Elective		2-3
	Credits	**16-17**

Winter Semester		
Civic Literacy (CIV)		3
Quantitative Experience (QE); Suggested THR 2651		3
THR 1215	Acting II	3
THR 2221	Stage Movement I	2
THR 2231	Voice Lab I	2
THR 2581	Theatre Studio - Performance [4]	1
Theatre, Dance, Music/Voice or General Elective [7]		1-3
	Credits	**15-17**

Junior

Fall Semester		
Natural Science Inquiry w/o Lab (NSI)		3
THR 3211	Acting III	3
THR 3221	Stage Movement II	2
THR 3231	Voice Lab II	2
THR 3841	History of Theatre and Drama I	3
THR 2581	Theatre Studio - Performance [4]	1
Theatre, Dance, Music/Voice or General Elective [7]		1-3
	Credits	**15-17**

Winter Semester		
Global Learning (GL); Suggested: DNC 2000 or DNC 2400		3
THR 3215	Acting IV	3
THR 3225	Stage Movement III	2
THR 3235	Voice Lab III	2
THR 3842	History of Theatre and Drama II	3
THR 2581	Theatre Studio - Performance [4]	1
	Credits	**14**

Senior

Fall Semester		
Any Missing Gen Eds not fulfilled		3
THR 4211	Acting V	3
THR 4231	Voice Lab IV	2
THR 4271	Acting for the Camera	3
THR 3581	Advanced Theatre Studio - Performance [4]	1
2 Theatre, Dance, Music/Voice or General Elective [7]		3-6
	Credits	**15-18**

Winter Semester		
Any Missing Gen Ed		3
THR 4995	Theatre Capstone: Performance	3
THR 4221	Stage Movement IV	2
THR 3581	Advanced Theatre Studio - Performance [4]	1
2 Theatre, Dance, Music/Voice or General Elective [7]		3-6
	Credits	**12-15**
	Total Credits	**115-130**

1. Placement by test scores. Must take ENG 1010 first if: ACT English < 21, SAT EBRW < 520, or SAT Writing < 480.
2. See the General Education of the Undergraduate Bulletin (p. 25) for other QE options.
3. If THR 2301 isn't offered, THR 2611 or THR 5311 can be substituted in its place.
4. THR 2581 course can be taken a max of 3 times. THR 2582, THR 3582 and THR 3583 courses can be taken as Theatre Electives. Students must complete a minimum of 6 THR 2581, THR 2582, THR 3582, or THR 3583 courses (may vary for transfer students).
   Actors must complete at least 1 non-Performance Theatre Studio.
5. This class is a prerequisite to enter the BFA in Acting concentration.
6. If minoring in Musical Theatre
7. Electives taken in Dance Technique may be repeated. Advancement to the next level is based upon skill level evaluated by the Dance Program Faculty.

Elective Courses

Code	Title	Credits
Theatre Studio		
THR 2580	Fundamentals of Production Practice	3
THR 2581	Theatre Studio - Performance	1
THR 2582	Intermediate Production Practice	3
Dramatic/Literature Electives		
THR 1030	Introduction to Black Theatre and Performance	3
THR 1041	Musical Theatre Appreciation	3
THR 5821	Black Dramatic Literature and Performance	3
Performance Electives		
THR 2251	Musical Theatre Performance: Contemporary	2
THR 2255	Musical Theatre Performance: Golden Age	2
THR 3561	WSU Touring Theatre (By audition. Participation in this course requires the student to take it in both the Fall & Winter semesters.)	1
THR 3601	Stage Management Studio - Principles	2
THR 3603	Stage Management Studio - AEA Contracts	2
THR 3605	Stage Management Studio - Health and Safety	2
THR 3731	Applied Theatre Studies: Community Possibilities	3
THR 3738	Applied Theatre Practicum	1-4
THR 5711	Play Direction	3
THR 5721	Playwriting	3
Design/Tech/Management Electives		
THR 2611	Stage Management	3
THR 3322	Introduction to Costuming	2
THR 3651	Principles of Theatre Management	3
THR 3671	Theatre Management: Marketing and Public Relations	3
THR 3675	Theatre Management: Marketing Design and Layout	3

THR 3681	Theatre Management: Patron Services and Development	3
THR 5311	Stage Design	3
THR 5422	Introduction to Scene Painting	3
THR 5331	Entertainment Design - Lighting I	3

[2] All courses in the department could serve as an elective in consultation with an academic advisor.

B.F.A. – Design and Technical Theatre

Freshman		
Fall Semester		**Credits**
COM 1010	Oral Communication: Basic Speech	3
ENG 1020	Introductory College Writing [1]	3
THR 1121 or THR 1211	Play Analysis or Acting I	3
DNC 2460	Dance Improvisation	2
THR 2580 or DNC 2460	Fundamentals of Production Practice or Dance Improvisation	3
THR 1451	Principles of Makeup (or General Elective)	1-3
	Credits	**15-17**
Winter Semester		
Social Inquiry (SI)		3
Cultural Inquiry (CI)		3
THR 1211 or THR 1121	Acting I or Play Analysis	3
THR 1451 or General Elective		1-3
THR 1030	Introduction to Black Theatre and Performance	3
THR 2651 (QE) or General Elective [2]		3
	Credits	**16-18**
Sophomore		
Fall Semester		
Intermediate Composition (IC)		3
Natural Science Inquiry w/ Lab (NSI)		4
THR 3301	Design Skills - Drafting I	3
THR 3341	Design Skills - Digital I	2
THR 2582 or THR 5331 or THR 2611	Intermediate Production Practice or Entertainment Design - Lighting I or Stage Management	3
	Credits	**15**
Winter Semester		
Civic Literacy (CIV)		3
General Elective		3
THR 3303	Design Skills - Drafting II	3
THR 4342	Design Skills - Digital II	1
THR 5315 or THR 2582	Entertainment Design - Scenery I or Intermediate Production Practice	3
	Credits	**13**
Junior		
Fall Semester		
Natural Science Inquiry w/o Lab (NSI)		3
THR 3841	History of Theatre and Drama I	3
THR 3582 or THR 3583	Advanced Production Practice: Pre-Production or Advanced Production Practice: Production	2
Design & Technology Level 1 or 2 Course: THR 5331, THR 5335, THR 4321, THR 4331		3
1 or 2 Design/Tech Electives		3-6
	Credits	**14-17**
Winter Semester		
Global Learning (GL) Course; Possibilities: DNC 2000 or DNC 2400		3
THR 3842	History of Theatre and Drama II	3
THR 3582 or THR 3583	Advanced Production Practice: Pre-Production or Advanced Production Practice: Production	2
Theatre Elective		3
Design/Tech Electives 3-6		3-6
	Credits	**14-17**
Senior		
Fall Semester		
Design/Technology Levels 2 or 3 Courses		3
Design/Tech Elective		3
Theatre Elective		3
Theatre Elective		3
THR 3583 or THR 3582	Advanced Production Practice: Production or Advanced Production Practice: Pre-Production	2
	Credits	**14**
Winter Semester		
THR 4996	Theatre Capstone: Design and Technology	3
Design/Tech Elective		3
Design/Tech Elective		3
General Elective		3
THR 3583	Advanced Production Practice: Production	2
	Credits	**14**
	Total Credits	**115-125**

[1] Placement by test scores. Must take ENG 1010 first if: ACT English < 21, SAT EBRW < 520, or SAT Writing < 480.

[2] See the General Education of the Undergraduate Bulletin (p. 25) for other QE options.

Elective Courses

Code	Title	Credits
Theatre Studio		
THR 2581	Theatre Studio - Performance	1
Dramatic/Literature Electives		
THR 1030	Introduction to Black Theatre and Performance	3
THR 1041	Musical Theatre Appreciation	3
THR 5821	Black Dramatic Literature and Performance	3
Design Elective		
THR 3601	Stage Management Studio - Principles	2
THR 3603	Stage Management Studio - AEA Contracts	2
THR 3605	Stage Management Studio - Health and Safety	2
THR 4601	Stage Management Studio: Event Management	2
THR 4603	Stage Management Studio - Commerce of Theatre	2
THR 4605	Stage Management Studio - Performance Management	2
Theatre Electives		
THR 3731	Applied Theatre Studies: Community Possibilities	3
THR 3738	Applied Theatre Practicum	1-4
THR 5711	Play Direction	3
THR 5721	Playwriting	3
Design/Tech/Management Electives [2]		
ADR 1050	Drawing I	3
ADR 1060	Drawing II	3
AFA 2410	Textiles	3
COM 1600	Introduction to Audio-Television-Film Production	3
MUT 1100	Introduction to Music Theory	3
MUA 2500	Music Technology	3
THR 3301	Design Skills - Drafting I	3
THR 3303	Design Skills - Drafting II	3
THR 3315	Entertainment Design - Scenery I	2
THR 3325	Entertainment Design - Costume I	2
THR 3331	Entertainment Design - Lighting I	2
THR 3341	Design Skills - Digital I	2

THR 3351	Visual Communication for Theatre and Dance	2
THR 3352	Visual Communication - Costumes	2
THR 3603	Stage Management Studio - AEA Contracts	2
THR 3605	Stage Management Studio - Health and Safety	2
THR 3651	Principles of Theatre Management	3
THR 4315	Entertainment Design - Scenery III	3
THR 4342	Design Skills - Digital II	1
THR 4371	Entertainment Design - Projection Design	2
THR 4601	Stage Management Studio: Event Management	2
THR 4603	Stage Management Studio - Commerce of Theatre	2
THR 4605	Stage Management Studio - Performance Management	2
THR 5315	Entertainment Design - Scenery I	3
THR 5325	Entertainment Design - Costume I	3
THR 5331	Entertainment Design - Lighting I	3
THR 5422	Introduction to Scene Painting	3
THR 5426	Advanced Scene Painting	3

[2] Additional Design/Tech/Management Electives may be taken in consultation with design area mentor.

Theatre Honors Programs (B.F.A degrees)

In order to enter the Departmental honors program students must have achieved academic excellence in previous work, such as a high school g.p.a. of 3.5 or a college or university g.p.a. of 3.3. Students must meet all regular major requirements including: the three of the following honors-option courses within their major taught by full-time faculty members (internships cannot satisfy this requirement), at least one 4000-level seminar offered through the Liberal Arts Honors Program, a senior honors thesis under the direction of a faculty advisor in their major area (THR 4998) and maintain a minimum g.p.a. of 3.3 cumulative and in the major.

Bachelor of Fine Arts (B.F.A.) Departmental Honors in Theatre (fifteen credits)

Code	Title	Credits
Select the Honors Option in three of the following:		9
THR 3841	History of Theatre and Drama I	
THR 3842	History of Theatre and Drama II	
THR 5811	Development of the Drama I: Greek to Eighteenth Century	
THR 5821	Black Dramatic Literature and Performance	
THR 5831	Makers of the Modern Theatre	
THR 5812	Development of the Drama II: Nineteenth Century to Modern	
THR 5721	Playwriting	
Students may select the Honors Option in one of the following B.F.A. courses (three credits) to substitute for a course in the above requirement:		
THR 2301	Introduction to Design for the Theatre	
THR 3215	Acting IV	
or THR 4211	Acting V	
THR 5311	Stage Design	
THR 5325	Entertainment Design - Costume I	
THR 5331	Entertainment Design - Lighting I	
THR 4998	Capstone Honors Thesis	3
Honors Seminars [1]		3
Total Credits		**15**

[1] HON 4200-4280 Honors Seminars (select one)

Student must maintain an overall 3.3 g.p.a.

For additional information, students should consult the Irvin D. Reid Honors College (http://www.honors.wayne.edu/).

Theatre (B.A.)

The Bachelor of Arts with a Major in Theatre is designed to introduce students to the multiple facets of theatre scholarship and theatre practice. It provides a flexible and extensive education in dramatic literature, theatre history, performance practice and theatrical design for students interested in careers in theatre and related entertainment arts, education, communication and television, and other professions.

Admission Requirements

Admission requirements for the program include an audition or interview with the Theatre Faculty and satisfying the general requirements for undergraduate admission (p. 34) to the University.

Matriculation: All students in baccalaureate theatre degree programs begin as B.A. students and subsequently may change to the B.F.A. program depending on interest and ability. Classes for theatre students begin immediately in the freshman year. Students should consult with departmental advisors before beginning the program.

Program Requirements

Candidates must complete a minimum of 120 credits in course work, including satisfaction of the University General Education requirements (p. 24), College degree requirements (p. 185), and specific theatre courses required in the individual degree and/or concentrations. The minimum grade for each course required in the major, which must be taken in the Department of Theatre, must be no less than a C-minus in order for the course credit to count toward completion of the degree. Students must be current in their plan of work and all Basic Competency courses must be completed prior to enrolling in the Capstone course. Departmental information published in this Bulletin is intended for use in conjunction with advising, but in all cases, regardless of advice given, students are responsible for meeting and satisfying requirements as set forth in this Bulletin.

All course work must be completed in accordance with the academic procedures of the University (p. 40) and the College of Fine, Performing and Communication Arts (p. 185) governing undergraduate scholarship and degrees, as well as with the requirements of the Maggie Allesee Department of Theatre and Dance.

General Education Course Progress: Majors must complete the Basic Composition (BC) requirement by the time forty-five credits have been earned, the Oral Communication (OC) and Intermediate Composition (IC) requirement by the time sixty credits have been earned. Failure to meet these limits on matriculation will result in the student being placed on departmental probation: the student will be ineligible to be cast in or participate as a member of the artistic/production staff of department productions. Transfer students will be reviewed upon entry into the major for compliance with these standards and advised as needed.

Major Requirements: All students pursuing a Bachelor of Arts degree in theatre must complete the following courses:

Code	Title	Credits
Core Courses		
THR 1121	Play Analysis	3
THR 1030	Introduction to Black Theatre and Performance	3
THR 1211	Acting I	3
THR 2220	Fundamentals of Voice and Movement	3
DNC 2460	Dance Improvisation	2
THR 1451	Principles of Makeup	1
THR 2580	Fundamentals of Production Practice	3
THR 3841	History of Theatre and Drama I	3
THR 3842	History of Theatre and Drama II	3
THR 4997	Theatre Capstone Experience	3
Select three of the following:		9
THR 5315	Entertainment Design - Scenery I	
THR 5331	Entertainment Design - Lighting I	
THR 2611	Stage Management	
THR 5325	Entertainment Design - Costume I	
Production Practice		
Select 7 credits from the following:		7
THR 2581	Theatre Studio - Performance	
THR 2582	Intermediate Production Practice	
THR 3581	Advanced Theatre Studio - Performance	
THR 3582	Advanced Production Practice: Pre-Production	
THR 3583	Advanced Production Practice: Production	
Departmental Electives		
Select any THR, DNC, or THD courses for a total of 6 credits.		6
Total Credits		**49**

Theatre Honors Programs (B.A. degrees)

In order to enter the Departmental honors program students must have achieved academic excellence in previous work, such as a high school G.P.A. of 3.5 or a college or university G.P.A. of 3.3. Students must meet all regular major requirements including: three of the following honors-option courses within their major taught by full-time faculty members (internships cannot satisfy this requirement), at least one 42XX honors seminar offered through the Honors College, a senior honors thesis under the direction of a faculty advisor in their major area (THR 4998) and maintain a minimum G.P.A. of 3.3 cumulative and in the major.

Bachelor of Arts - Departmental Honors in Theatre Option (fifteen credits)

Code	Title	Credits
Select the Honors Option in three of the following:		9
THR 3841	History of Theatre and Drama I	
THR 3842	History of Theatre and Drama II	
THR 5721	Playwriting	
THR 5811	Development of the Drama I: Greek to Eighteenth Century	
THR 5812	Development of the Drama II: Nineteenth Century to Modern	
THR 5821	Black Dramatic Literature and Performance	
THR 5831	Makers of the Modern Theatre	
THR 4998	Capstone Honors Thesis	3
HON 42XX Honors Seminar		3
Total Credits		**15**

For additional information, students should consult the Irvin D. Reid Honors College (http://www.honors.wayne.edu/).

Africana Theatre and Dance Minor

This minor offers an examination of key concepts in Africana theatre and dance theory and practice through the analysis of performance and popular culture.

A minor in this area requires:

Code	Title	Credits
DNC 2400	Introduction to African Dance	3
DNC 2600	African Dance II	2
THR 1030	Introduction to Black Theatre and Performance	3
THR 3811	Africana Theatre and Dance: Concepts and Practices	3
THR 5821	Black Dramatic Literature and Performance	3
Select four credits of the following:		4
AFS 2010	African American Culture	
AFS 2390	Introduction to African-American Literature: Writing about Texts	
DNC 2000	Introduction to World Dance	
THR 3581	Advanced Theatre Studio - Performance (max. 4 Cr.)	
or DNC 4710	Dance Company	
THR 1010	Introduction to the Theatre	
Total Credits		**18**

Dance Minor

Completion of a minor in dance requires nineteen credits in dance classes including ten credits in technique classes and nine credits in academic dance classes. Students should consult with the Department Academic Advisor for approval of courses satisfying this requirement. The department will accept up to ten transfer credits towards the Dance minor. A minimum of four technique credits and three academic dance credits must be taken at WSU. All courses older than ten years are subject to department review.

General Theatre Minor

The minor is designed to be an overview of the theatre arts for those who wish to enhance their interests in theatre. It offers a variety of studies and practice courses across the discipline of theatre. The variety of offerings provide the opportunity to focus studies in the areas of acting, dramaturgy, or directing, if so desired.

A minor in this area requires:

Code	Title	Credits
THR 1010	Introduction to the Theatre	3
or THR 1111	Fundamentals of Theatre	
THR 1121	Play Analysis	3
Select 12 additional credits of the following:		12
THR 1030	Introduction to Black Theatre and Performance	
THR 1211	Acting I	
THR 1411	Fundamentals of Crafts: Scenery and Costumes	
THR 1461	Fundamentals of Crafts: Lighting and Stage Management	
THR 2211	Acting: Scene Study	
THR 2301	Introduction to Design for the Theatre	

THR 2611	Stage Management	
THR 3841	History of Theatre and Drama I	
THR 3842	History of Theatre and Drama II	
THR 3651	Principles of Theatre Management	
THR 3731	Applied Theatre Studies: Community Possibilities	
THR 5711	Play Direction	
THR 5721	Playwriting	
THR 5811	Development of the Drama I: Greek to Eighteenth Century	
THR 5812	Development of the Drama II: Nineteenth Century to Modern	
THR 5821	Black Dramatic Literature and Performance	
THR 5831	Makers of the Modern Theatre	
Total Credits		**18**

Musical Theatre Minor

This minor offers an opportunity for students to further develop their performance skills in musical theatre through course work and practical application. Please note: Students majoring in Theatre, Dance or Music who are electing to declare the Minor in Musical Theatre may NOT count classes or credits required in their major toward the minor. Specifically:

- Theatre students may not apply to the minor credits earned in: Acting 1 and Acting II or Acting: Scene Study;
- Music students may not apply to the minor credits earned in: Private Voice, Elementary Music Theory, Ear Training 1, or Ear Training 2;
- Dance majors may not apply to the minor credits earned in: Modern Dance 1, Ballet 1, Tap Dance, Jazz Dance 1 or Jazz Dance II.

To receive the minor in Musical Theatre students must complete:

Code	Title	Credits
THR 1041	Musical Theatre Appreciation	3
THR 2251	Musical Theatre Performance: Contemporary	2
Select two credits of the following:		2
THR 3581	Advanced Theatre Studio - Performance	
THR 2251	Musical Theatre Performance: Contemporary	
Select 10 or 11 credits of the following:		10-11
DNC 1010	Introduction to Contemporary Dance	
DNC 1210	Fundamentals of Classic Ballet I	
DNC 2610	African Diasporic Dance Technique I	
DNC 2620	Tap Dance	
DNC 3410	African Diasporic Dance Technique II	
MUP 1225	Voice Elective Lessons - Lower Division (max. 3 Cr.)	
MUT 1100	Introduction to Music Theory	
MUT 1150	Ear Training I	
THR 1211	Acting I	
THR 2211	Acting: Scene Study	
Non-dance majors must select four to six credits of DNC courses		4-6
Total Credits		**21-24**

Studio and Community Dance Minor

The Studio and Community Dance Minor provides students the opportunity to supplement their major field program with the rigorous study of private sector dance in studios and community settings. The program offers an artistic and academic environment that will enrich methods and skills in dance teaching and pedagogy, dance kinesiology, outreach, and community engagement, while stimulating students' creativity and innovation.

In order for any minor in the Department of Theatre & Dance to be fulfilled, it must include at least nine credits that have not been used to fulfill requirements for any other major or minor.

A maximum of nine credits in a Theatre or Dance major may share with any other major or minor.

The Studio and Community Dance Minor requires the completion of 20 credits.

Code	Title	Credits
Core Courses		**15**
DNC 3180	Dance Science	
DNC 3810	Dance Pedagogy	
DNC 4810	Dance Teaching Methods	
DNC 4910	Dance in Community	
THR 3671	Theatre Management: Marketing and Public Relations	
Elective Courses		
Select 3 credits from the following courses:		3
DNC 1330	Production Practicum	
DNC 2500	Choreography I	
ACC 3010	Introduction to Financial Accounting	
Select 2 credits of dance technique and movement:		2
Modern Dance		
DNC 1010	Introduction to Contemporary Dance	
DNC 1020	Contemporary Dance I	
DNC 2010	Contemporary Dance II: Part I	
DNC 2020	Contemporary Dance II: Part II	
DNC 3010	Contemporary Dance III	
DNC 4010	Contemporary Dance IV	
Ballet		
DNC 1210	Fundamentals of Classic Ballet I	
DNC 1220	Fundamentals of Classic Ballet II	
DNC 3200	Ballet III	
DNC 4200	Ballet IV	
Jazz Dance		
DNC 2610	African Diasporic Dance Technique I	
DNC 3410	African Diasporic Dance Technique II	
African Dance		
DNC 2600	African Dance II	
Pilates Mat for Performing Artists		
DNC 1300	Pilates Conditioning for Performing Artists	

Theatre Design and Technology Minor

The design and technology minor provides students in related areas of study with the opportunity to enhance and apply their design and/or technical and craft skills in a theatrical context.

In order for any minor in the Department of Theatre & Dance to be fulfilled, it must include at least nine credits that have not been used to fulfill requirements for any other major or minor.

A maximum of nine credits in a Theatre or Dance major may share with any other major or minor.

A minor in this area requires:

Code	Title	Credits
THR 1010	Introduction to the Theatre	3
or THR 1111	Fundamentals of Theatre	
THR 1121	Play Analysis	3
Select twelve elective credits of the following in consultation with a departmental advisor:		12
THR 1411	Fundamentals of Crafts: Scenery and Costumes	
THR 3301	Design Skills - Drafting I	
THR 3303	Design Skills - Drafting II	
THR 1461	Fundamentals of Crafts: Lighting and Stage Management	
THR 3315	Entertainment Design - Scenery I	
THR 3325	Entertainment Design - Costume I	
THR 3331	Entertainment Design - Lighting I	
THR 3341	Design Skills - Digital I	
THR 3351	Visual Communication for Theatre and Dance	
THR 3352	Visual Communication - Costumes	
THR 4311	Entertainment Design - Scenery II	
THR 4321	Entertainment Design - Costume II	
THR 4331	Entertainment Design - Lighting II	
THR 4342	Design Skills - Digital II	
THR 4371	Entertainment Design - Projection Design	
THR 3582	Advanced Production Practice: Pre-Production [1]	
THR 3601	Stage Management Studio - Principles	
THR 3603	Stage Management Studio - AEA Contracts	
THR 3605	Stage Management Studio - Health and Safety	
THR 4601	Stage Management Studio: Event Management	
THR 4603	Stage Management Studio - Commerce of Theatre	
THR 4605	Stage Management Studio - Performance Management	
THR 3583	Advanced Production Practice: Production [1]	
THR 5311	Stage Design	
THR 5315	Entertainment Design - Scenery I	
THR 5322	Introduction to Costuming	
THR 5325	Entertainment Design - Costume I	
THR 5331	Entertainment Design - Lighting I	
THR 5335	Advanced Stage Lighting Design	
THR 5422	Introduction to Scene Painting	
Total Credits		**18**

[1] Max 3 cr. from THR 3582 and/or THR 3583.

Theatre Management Minor

This minor provides students in related areas of study with the opportunity to expand management, marketing, and public relations skills with direct application and practice in theatre management.

A minor in this area requires:

Code	Title	Credits
THR 1010	Introduction to the Theatre	3
or THR 1111	Fundamentals of Theatre	
THR 3585	Advanced Theatre Studio - Theatre Management	1
THR 3651	Principles of Theatre Management	3
THR 3671	Theatre Management: Marketing and Public Relations	3
THR 3675	Theatre Management: Marketing Design and Layout	3
THR 3681	Theatre Management: Patron Services and Development	3
Total Credits		**16**

Irvin D. Reid Honors College

Interim Dean: Elena Past

The Irvin D. Reid Honors College provides Wayne State's highest-achieving undergraduates with a program that is both academically rigorous and culturally engaged. Founded in 2008, it is home to roughly 2000 students, comprising both University Honors and Departmental Honors tracks.

The University Honors track is an interdisciplinary and multidisciplinary program that includes a distinctive first-year sequence, field learning experiences, and Honors courses across the curriculum. The Departmental Honors track is a discipline-specific program that varies by major; students apply after taking at least a semester of courses at Wayne State. Honors students may pursue either or both tracks.

The College offers many benefits, including:

- a small community of high-achieving students
- pre-priority class registration
- dedicated Honors academic advisors
- close mentoring by full-time faculty
- unique opportunities for undergraduate research
- field-learning experiences in the city of Detroit
- available private scholarships
- Honors floors in residence halls, for first-year and upper-class students who live on campus
- special recognition at graduation, with Honors designation on degree and transcript

Note that all Honors College students pursue a traditional major in conjunction with their Honors experience, with access to the full range of faculty, courses, and programs at Wayne State. The college thus combines the opportunities of a premier urban research university with the personal attention typical of a small liberal arts college--all in the heart of the City of Detroit.

Academic Regulations

For complete information regarding academic rules and regulations of the university, students should consult the general information (p. 40) section of this bulletin. The following additions and amendments apply to the Irvin D. Reid Honors College.

Academic Advising

Advising for Honors requirements is available on a walk-in basis on select days and via e-mail. All students are encouraged to consult their undergraduate advisor in their prospective major department. See the Honors College Advising webpage (https://honors.wayne.edu/students/advising) for walk-in hours and other helpful information.

Accelerated Graduate Enrollment Program ('AGRADE')

Accelerated Graduate Enrollment: Some departments of the university permit academically superior majors to petition for admission into the college's 'AGRADE' program. 'AGRADE' procedures enable qualified seniors to enroll simultaneously in the undergraduate and graduate programs and apply a maximum of fifteen credits towards both a bachelor's and master's degree in the major field. Students electing 'AGRADE' programs may expect to complete the bachelor's and master's degrees in five years of full-time study.

An 'AGRADE' applicant may petition the Graduate Committee of the major department for acceptance into the program no earlier than the semester in which ninety credits are completed. Applicants must have an overall grade point average at the *cum laude* level and not less than a 3.6 grade point average in the major courses already completed. If the student's petition is accepted, the student's faculty advisor shall develop a graduate Plan of Work, specifying the 'AGRADE' courses to be included in subsequent semesters.

Credits earned through 'AGRADE' are considered Honors credits towards graduation with University and/or Departmental Honors. Students are asked to submit a copy of the approved 'AGRADE' plan of work to the Honors Advisor. Each 'AGRADE' class will be processed as an Honors Option and the notation added to the student's transcript.

Courses completed as part of an approved AGRADE plan of work may be applied as Honors credits towards Departmental and/or University Honors. To receive Honors credit via Honors Option, students must submit a copy of the approved plan of work with the Honors academic advisor.

For more details about the 'AGRADE' program, contact the chairperson of the major department.

Attendance

Regularity in attendance and performance is necessary for success in college work. Attendance requirements will be announced by instructors at the beginning of each course.

Cheating and Plagiarism

The principle of honesty is recognized as fundamental to a scholarly community. Students are expected to honor this principle and instructors are expected to take appropriate action when instances of academic dishonesty are discovered. An instructor, on discovering such an instance, may give a failing grade on the assignment or for the course. The instructor has the responsibility of notifying the student of the alleged violation and the action being taken. Both the student and the instructor are entitled to academic due process in all such cases. Acts of dishonesty may lead to suspension or exclusion. Information on procedures is available in the Office of the Dean.

Extra Credits

Extra credits are credits taken in excess of the normal program load of eighteen credits. Students with 3.0 (or above) grade point averages may take more than eighteen credits when their proposed programs carry the approval of the Honors advisor.

Graduation with Academic Distinction

Graduation with distinction (*Summa Cum Laude, Magna Cum Laude*, and *Cum Laude*) is determined by the college granting the student's degree.

Normal Program Load

The requirements for graduation are based upon an average program of fifteen credits per semester for eight semesters. A normal program load should not exceed eighteen credits.

Because two hours of outside preparation are normally expected for each class hour, a fifteen credit program calls for approximately forty-five hours of class attendance and study per week. Students who undertake such a program should expect to give it their full time and energy. A few hours of employment a week may be safely added by capable students.

Probation

Low Grade Point Average: Honors students need a cumulative 3.30 or higher grade point average to maintain good standing in the Honors College. Honors academic status is assessed prior to fall pre-priority registration. A student may reapply to the Honors College once his/her cumulative grade point average is at 3.30 or above.

Grade Appeals Policy and Procedure

This policy applies to courses offered directly by the Honors College (e.g. HON 1000, HON 2000, HON 42XX-level seminars, etc.). Grade appeals for Honors sections of other courses should be resolved through the home department where those courses are offered. If in doubt, students should consult the Honors Advisor when initiating an appeal. Please consult the Honors Grade Appeal Policy and Procedure (https://honors.wayne.edu/pdf/grade_appeals_policy_and_procedure_070119.pdf).

It is the instructor's prerogative to evaluate student work and assign grades in accordance with his or her academic and professional judgment.

Grounds for appeals are:

1. the application of non-academic criteria in the grading process, as listed in the university's non-discrimination/affirmative action statute: race, color, sex (including gender identity), national origin, religion, age, sexual orientation, familial status, marital status, height, weight, disability, or veteran status;
2. sexual harassment or discrimination; or
3. evaluation of student work by criteria not directly reflective of performance relative to course requirements.

Coursework Grades

Disputes over coursework grades should be addressed informally between the student and the course instructor. If the student and instructor cannot reach a mutually agreeable resolution, the matter should be referred to the Dean of the College, who will initiate appropriate procedures for resolution.

Final Grades

In those instances where a student disputes the final grade assigned, the following steps should be taken to appeal the grade in question.

Informal Review

The student should discuss the disputed grade with the instructor of the course. If the dispute is not resolved informally, the student may initiate a formal appeal.

Formal Appeal Procedure

Within 30 calendar days following official notification of final grades for the term in which the disputed grade was awarded, and when the informal review fails to resolve the dispute, the student shall submit a written appeal detailing his/her objection, along with supporting documentation in writing, to the instructor. The instructor should respond in writing within 10 work days.

Matters not resolved at the instructor level may be appealed to the Dean's Office. A written appeal should be filed by the student within 10 work days following receipt of the instructor's written response. A file folder containing the course syllabus from the semester in which the student took the course, plus the student's letter, the instructor's letter, and the student's written rationale explaining why the Dean's Office should reconsider this appeal, should be sent to the Dean's Office. The student should forward to the instructor of the course a copy of the written appeal. Where appropriate, the Dean's Office may consult with a Grade Appeals Committee for advice in grade disputes. Students shall be notified in writing of the Dean's Office decision within 30 work days of receiving the request. The Dean's Office decision shall be the final decision at the college level.

University Level Academic Appeals Procedure

Following the Dean's final response, a student may request a formal review by the Provost.

Such requests are subject to the University Academic Appeal Procedure (p. 44) and must be submitted in writing, with a copy sent to the Dean of the College, within thirty (30) calendar days of the postmark on the Dean's final determination.

Irvin D. Reid Honors College Grade Appeal Procedure, revised March 31, 2015

Special Programs

President's Scholars

The President's Scholarship was established to attract National Merit Scholarship Finalists to Wayne State University. These highly talented students join the Honors College as President's Scholars and take part in the President's Scholars Seminar. The President's Scholars receive our most prestigious merit scholarship at WSU; they also receive funding to study abroad at some point during their undergraduate studies. Our goal is for this group of students to establish a community on campus that excels academically, socially and civically. In order to be invited to join the President's Scholars, students must first become National Merit Scholarship Finalists and accept their invitation to join the Irvin D. Reid Honors College. More information about the President's Award is available here (https://wayne.edu/scholarships/president/).

Wayne Med Direct

Wayne Med Direct is a program within the Irvin D. Reid Honors College that is a unique B.S./B.A. to M.D. program that admits 10 students each year to Wayne State University's College of Liberal Arts and Sciences and creates a pipeline for admission to Wayne State's School of Medicine. It emphasizes mentoring and training to help scholars become leaders in the medical community, determined to reduce urban health disparities in their communities. During undergraduate studies, Wayne Med-Direct scholars have the opportunity to engage in patient care and research. They learn about health disparities by becoming a part of the School of Medicine community, leading to Wayne State's M.D. program. More information about Wayne Med Direct is available here (https://provost.wayne.edu/wayne-med-direct).

Other Curricular Opportunities

Detroit Fellows Tutoring Project

Detroit Fellows earn two to four Honors credits while teaching reading skills to Detroit Public School students in kindergarten through fourth grade. This is a special opportunity for Honors College students and is open to all majors. On an hours-per-week basis Detroit Fellows work three hours (earning two credits), five hours (earning three credits) or seven hours (earning four credits) at a designated school. Tutors work during regularly scheduled school hours: 7:30 a.m. to 3:30 p.m.

Detroit Fellows receive training and participate in a weekly seminar to discuss various tutoring techniques. Writing assignments reflective of this experience and an end-of-semester evaluation are also required.

Emerging Scholars Program (ESP)

Wayne State University's Emerging Scholars Program (http://www.clas.wayne.edu/ceem/emerging-scholars) is a special Honors-level calculus and pre-calculus program designed to support students who want and/or need to excel in mathematics and who are willing to do the work required for such success. It is available to students in MAT 1800 (pre-calculus), MAT 2010 and MAT 2020. Honors credits are awarded for MAT 2010 and/or MAT 2020.

Any student who hopes to pursue a degree in science, engineering, medicine, mathematics or math education is strongly urged to take his or her math courses within ESP. Students enroll in designated sections of MAT 1800, MAT 2010 and MAT 2020, taught by specially trained faculty members. They also attend a two-hour workshop, twice a week, where they work together in groups on challenging problems, gaining a deeper understanding of the mathematics involved.

Honors Student Association (HSA)

The Honors Student Association (HSA) provides networking experiences for students from various academic disciplines throughout WSU. The organization also serves to provide Honors students with the opportunity to become involved in diverse social, academic, and service activities. The Honors Student Association has eight executive board members; the positions include: president, vice president, secretary, treasurer, two public relations officers, and two webmasters. Elections for executive board positions are held annually at the end of winter semester.

The faculty advisor for HSA is Dr. Beth Fowler, Senior Lecturer for the Honors College.

Study Abroad

The Honors College, in partnership with the Office for Study Abroad (p. 67), provides a number of opportunities for study and travel. The college encourages these learning experiences as ways for students to acquire broader perspectives and more deeply felt education than is often possible in the classroom. Study/travel options may be linked to the Junior/Senior seminar (HON 4260) and may meet the Global Learning (GL) University requirement. Some programs include service assignments and fulfill the Honors College field learning (HON 3000) requirement. Past study trip destinations have included Belize, France, South Africa, Ghana and China.

Honors College Programs

University-wide Honors Curricula

Honors curricula are designed to meet the needs of highly motivated students who want to be challenged to reach their full potential. Honors courses are of four kinds: regular courses with Honors designated sections; Honors courses offered under various departmental subject areas (for a list of these see below); Honors College courses offered under the HON subject area code; and, regular courses taken as Honors-level course work by individual students (see below under Honors-Option Course Work).

Many Honors courses fulfill University General Education requirements (p. 24). There are no maximum credit restrictions on the number of Honors credits applicable towards graduation. Completion of any Honors course leads to Honors-designated transcript notation for the course.

Students whose cumulative grade point average (g.p.a.) is at least 3.3, but who are not formally admitted to the Honors College, are eligible to elect Honors courses to enrich their educational experiences. Such requests should be directed via e-mail to honors@wayne.edu.

Students who are invited into the Honors College as incoming first-year students are expected to pursue University Honors, with the option of Departmental Honors in their major as well. Students who are accepted to the Honors College as current Wayne State University students or as transfer students are invited to pursue Departmental Honors and/or University Honors.

Admission

There are three pathways into the Honors College:

- Incoming first-year students are considered for the Honors College during the regular Wayne State admission process based on 1. a combination of their high school GPA and SAT/ACT score or 2. only their high school GPA, if they are a test optional applicant; there is no separate application. The selected students are invited to pursue University Honors; they may also later pursue Departmental Honors.
- Transfer students are invited to join Honors based on cumulative GPA and transferable credits from their previous institution. The selected students may pursue Departmental and/or University Honors.
- Current Wayne State students with a 3.3 GPA and at least 12 Wayne State credits may apply to the Honors College by filling out the Honors College application online. Applications are processed after Feb. 15, June 15 and Oct. 15. The selected students may pursue Departmental and/or University Honors.

College Requirements

To remain in the Honors College, a student normally will be expected to:

1. pursue University and/or Departmental Honors;
2. maintain a cumulative g.p.a. of 3.3 or higher; however, colleges/departments may establish a higher g.p.a. for retention in a college/department program; and
3. satisfy the University General Education requirements (p. 24).

A student whose cumulative g.p.a. falls below 3.3 and is, for that reason, dropped from the Honors College, may reapply when his/her cumulative g.p.a. is 3.3 or higher.

For first-year Honors students, HON 1000 and the Honors Foundational Seminar are required to be taken in Fall and Winter semesters, respectively.

Departmental Honors Requirements

Students seeking a degree with Departmental Honors must contact their major department or the Honors College for specific requirements (see the appropriate departmental section of this bulletin). However, all Departmental Honors programs require at least twelve credits in Honors-designated coursework, including:

1. a senior essay or thesis or project done in the student's major department, and
2. at least one 42xx-level seminar offered through the Honors College (HON 4200-4280), and
3. a minimum cumulative g.p.a. of 3.3 (higher in some departments) is required for graduation

Honors Degrees

Most departments offer Departmental Honors. Please visit the Honors website (https://honors.wayne.edu/academics/honors-requirements/department) or the Honors college for a current list of available programs. Graduation with University Honors is reserved for students who complete twenty-eight Honors credits as outlined under University Honors Requirements.

A student who satisfactorily completes a Departmental Honors curriculum or a University Honors curriculum will receive the appropriate Honors designation on both the diploma and the academic transcript. Approval of the Honors College is necessary for graduation with University Honors. Students who complete the requirements of both the university-wide Honors College and a college/department/school Honors Program shall have both designations on the transcript and the diploma. Only a single senior essay, thesis, or project shall be required unless a student is pursuing Departmental Honors in multiple majors.

University Honors Requirements

Students who have been invited to the Honors College as freshmen are expected to complete:

1. at least twenty-eight credits in Honors-designated course work, including HON 1000, and the Honors Foundational Seminar;
2. a field learning through HON 3000
3. a 42XX-level seminar offered by the Honors College (HON 4200-HON 4280);
4. a minimum three-credit Honors Thesis or creative project (HON 4998 or Departmental Honors thesis).

Honors-Option Course Work

The Honors Option allows a student in any course which is 2000 level or above and taught by a full-time faculty member or part-time faculty member (with approval by department chair) to elect Honors caliber coursework, provided the instructor agrees to furnish commensurate extra instruction. If a grade of 'B' (3.00) or above is earned in the course and in the additional work, the student will receive Honors credit for the course on his/her transcript. Application forms for the Honors Option are available in the Honors College office and online (http://www.honors.wayne.edu). The application form must be signed by the instructor and should be returned to the Honors College Office by the assigned due date on the form. At the end of the semester the instructor will be asked to submit a final grade for the Honors Option project and the final grade for the class via e-mail to honors@wayne.edu. The number of Honors credits assigned shall be equivalent to the number of credits allotted to the general section.

Field Learning Requirement (HON 3000)

Effective Fall 2019, field learning is required for graduation with University Honors. The purpose of the requirement is to better prepare students for productive lives in a diverse urban and global setting through community-based education and civic engagement. A student will pair HON 3000 (0 credits) with a field learning experience approved by the Honors College (https://honors.wayne.edu/students/universityhonorsrequirements/hon3000). Students can opt to complete HON 3000 via service-learning, undergraduate research, study abroad, or an internship/co-op/practicum.

Objectives of the Honors Field Learning Requirement are: to enhance academic learning opportunities by integrating theory with service to the community; to learn how to work effectively with diverse populations; to develop communication, negotiation, and problem solving abilities; and, to increase research skills.

Examples of field learning opportunities include the Detroit Fellows Tutoring Project (https://honors.wayne.edu/academics/detroit-fellows), specially-designated sections of General Education and department courses, and some study abroad experiences.

Honors Thesis

To graduate with University and/or Departmental Honors, students must complete an Honors thesis or creative project during junior/ senior year. The thesis or project must be supervised by a full-time member of a department and the paper must be a minimum of twenty pages in length. University Honors students should plan to take at least two semesters to complete the HON 4998 course. Departmental Honors students who complete a thesis course specific to their major department must follow departmental guidelines. Students pursuing both Department and University Honors may use the department thesis to fulfill the University Honors thesis requirement.

School of Information Sciences

Dean: Paul Bracke

The Information Profession

The School of Information Sciences (SIS) prepares information professionals to assume leadership roles in libraries and information organizations. By emphasizing the practical application of knowledge and skills, students are trained in the core principles of information management - information access, organization, services, and management - as well as emerging competencies such as digitization, competitive intelligence, information architecture, and website development. SIS faculty research issues that improve library and information services as an essential component to cultural enrichment, knowledge dissemination, economic development, and the overall quality of life.

Qualified information professionals work in varied settings all over the globe. SIS graduates work in libraries as well as diverse information careers in the public, private, and nonprofit sectors. As organizations continue to view their information as a critical resource and place greater importance on its cultivation, SIS graduates can be found enjoying engaging and exciting careers throughout business, law, health sciences, publishing, government, archives and museums, communications and media, engineering, academia, pre-K-12 education, information organizations and industries.

Graduate Degrees

The School of Information Sciences offers two master's level degree options. The Master of Library and Information Science (MLIS) degree is recognized by the American Library Association (ALA) as the first professional degree in this field and serves as the credential for entry-level professional employment. The Master of Science in Information Science (MSIS) expands the school's current Graduate Certificate in Information Management (GCIM) into a degree that complements the school's Master of Library and Information Science (MLIS) degree. The MSIS appeals to prospective graduate students with an interest in working as information professionals in organizations and industries outside the typical venues for MLIS degree holders (e.g., libraries, archives, or school media centers) where a foundational core of library science coursework is not required.

Accreditation

The School of Information Sciences' MLIS degree has been accredited continuously by the American Library Association since 1967. The School's most recent continuing accreditation was granted by the ALA Committee on Accreditation in 2017. The School's next comprehensive accreditation review occurs in the Fall of 2024.

Mission and Goals of the School

Mission Statement

We create and advance knowledge through our research and teaching in library and information science and cultivate a diverse and professionally equipped student body to positively affect our communities, including the disciplines and professions we represent.

Goals and Objectives

TEACHING EXCELLENCE: SIS will encourage and teach professional approaches and a service philosophy.

- SIS will educate students in the history, philosophies, theories, principles, policies, and ethics of library and information science.
- SIS will expose students to the historical, social, cultural, educational, political, and economic dimensions of information and information agencies.
- SIS will provide the skills and dispositions for excellence in information service delivery.
- SIS will continuously evaluate and apply evolving technologies to its teaching, learning, research, and service programs.

STUDENT SUCCESS: SIS will cultivate a culture of student success.

- SIS will incorporate career enhancement skills development into all courses.
- SIS will promote relationships between students and other members of the campus community who support student learning and success.
- SIS will deliver a "Distinctively Wayne State" experience that leverages our Detroit location, diversity, and academic and research excellence to better prepare students for success.
- SIS will stress the importance of lifelong learning and will promote opportunities to sustain professional growth and achievement, including career mentoring.

RESEARCH: SIS will foster, facilitate, and support research by faculty and students.

- SIS will support faculty research and scholarly communication.
- SIS will cultivate faculty engagement with student research experiences and skill development.
- SIS will encourage and support students in presenting their research in courses, at conferences, and through publication.

DIVERSITY AND INCLUSION: SIS will be engaged within the diverse communities and world of which we are a part.

- SIS will seek diversity among the faculty.
- SIS will seek diversity and facilitate inclusion among the student body.
- SIS will address the roles of library and information services in a diverse global society, paying particular attention to the underserved.
- SIS will facilitate student experience in multicultural and multiethnic information environments.

COMMUNITY ENGAGEMENT: SIS will practice and foster engagement in traditional as well as interdisciplinary research, scholarship, and practices that address important societal as well as information and library issues.

- SIS will engage the library community, alumni, and employers.
- SIS will promote commitment and involvement in professional associations and organizations.
- SIS will encourage involvement in the community and community organizations.
- SIS will support service activities and participation in leadership roles at the School, University, local, state, national, and international levels.

Technology Support

The School of Information Sciences provides SIS students, faculty, and staff with a variety of computing resources that support the School's on-campus and online programs. The School offers students a variety of software products at no cost, including major productivity suites, powerful database software, diagramming tools, and current operating systems. The School provides free technical support to all of its students through several mediums, including email and over the phone. The School maintains a web server for student use, as well as provides access to synchronous online meeting tools for classes and student groups. SIS students have full access to the resources provided by University Computing and the University Library System, including public access computing labs, email and calendaring services, learning management systems, library databases, and full-text e-journals and other resources.

School of Information Sciences Undergraduate Program

Undergraduates interested in enrolling in information sciences courses should contact the School of Information Sciences regarding admission requirements, sequence of courses, the curriculum, career planning, professional development, job opportunities, and Senior Rule requirements. View the Graduate Bulletin (https://bulletins.wayne.edu/graduate/school-information-sciences/) for more information about degree and certificates options offered by the School of Information Sciences.

Law School

Acting Dean: Lance Gable

Wayne State University Law School, founded in 1927, is located in the heart of Detroit's historic cultural center, offering a unique urban experience. Detroit's vibrant legal market - including government offices, state and federal courts, multinational corporations, unions and major law firms - provides students with a wide range of opportunities for employment and externships. Our students are bright, mature, conscientious and altruistic. They come from unique backgrounds and professions, some having previously served as doctors, musicians, actors, engineers and law enforcement officers before pursuing the law. Wayne Law also offers a network of more than 11,000 living alumni, including established leaders of the legal community, practicing throughout the nation and in more than a dozen foreign countries. Our expert faculty's nationally and internationally recognized scholarship adds depth to our students' understanding of legal theory, doctrine and practice. Wayne Law students, faculty and alumni are deeply engaged in the community and profession.

Accreditation

Wayne State University Law School is accredited by the American Bar Association and is a member of the Association of American Law Schools. The Law School has a chapter of the Order of the Coif, the national honorary society dedicated to the highest standards of legal scholarship.

Setting & Facilities

The Law School is a flagship unit of Wayne State University, a major metropolitan research university located in the heart of Midtown, about four miles from downtown Detroit. Within blocks of the Law School are the Detroit Public Library, Detroit Institute of Arts, Charles H. Wright Museum of African American History, Detroit Science Center and other cultural attractions. The city of Detroit shares an international border with Canada and offers access to Michigan's largest concentration of law firms and state and federal courts.

The Law School complex includes four buildings - Classroom Building, Damon J. Keith Center for Civil Rights, Law Building and Arthur Neef Law Library - with lounges, gathering areas and meeting rooms. The three-floor Arthur Neef Law Library offers print and digital resources, a computer lab, 14 study rooms and wireless access. Special collections cover antitrust law, international law, Jewish law and Michigan law.

Degrees

The Law School offers academic programs leading to the degrees of Juris Doctor (J.D.) (https://bulletins.wayne.edu/graduate/law-school/law-jd/) and Master of Laws (LL.M.) (https://bulletins.wayne.edu/graduate/law-school/law-llm/). The J.D. is a graduate degree requiring a baccalaureate degree as a prerequisite. The LL.M. is a graduate degree offered by the Law School in the fields of and corporate and finance law, labor and employment law, and taxation which requires the J.D. or its equivalent as a prerequisite. The Law School also participates in joint degree programs with other Schools and Colleges within the University.

Damon J. Keith Center for Civil Rights

The Damon J. Keith Center for Civil Rights at Wayne Law is a regional hub for civil rights teaching, research and advocacy, training and inspiring the next generation of civil rights leaders in honor of the legacy of Judge Damon J. Keith. At the center, stakeholders gather to analyze policy, law students teach a civil rights curriculum to high school students and leaders dive into the issues of the day, such as tax foreclosures, water shutoffs and police-community relations. The center welcomes the public for lectures by civil rights icons, supports community-based organizations and publishes scholarship about how the law and social justice impact one another. The center offers the nation's first and only repository dedicated to African-American legal history, along with a traveling exhibit about the 14th Amendment's guarantee of equal protection under the law.

In summer 2014, WSU was awarded a three-year, $1.3 million grant from the W.K. Kellogg Foundation to launch the Detroit Equity Action Lab at the Keith Center. Through this initiative, 60 leaders working in the many dimensions of racial equity, including arts and media, community development, education, environment, food security, health care and housing, will address issues of structural racism in Detroit.

Arthur Neef Law Library

The Arthur Neef Law Library provides a major legal research center for Wayne Law students and faculty. Its special collections include the Alwyn V. Freeman International Law Collection, Driker Antitrust Law Collection, Jewish Law Collection and a comprehensive collection of current and historical Michigan law materials that include the Michigan Supreme Court Records and Briefs, Michigan probate court opinions and Michigan Superfund site documents. The law library is a selective depository for U.S. government publications.

Databases and other e-resources are easily discoverable and remotely accessible.

The law library building was designed to make optimal use of natural light in reading and study areas. Tables, carrels and soft-seating areas are available throughout the law library and offer wired and wireless access to networked resources. Our students may reserve any of the 14 study rooms through an online reservation system. A computer lab featuring desktop computers, printers and scanners is reserved for the exclusive use of Wayne Law students.

Law (B.A.)

The Bachelor of Arts (B.A.) in Law degree provides a distinctive, interdisciplinary program for those with an interest in law. Students will emerge with a strong foundation in law, critical thinking and writing, ethics, political and legal theory, and legal and justice systems that will make them competitive for innovative and emerging employment opportunities in a variety of fields and industries or for pursuing graduate studies, potentially including law school. Moreover, this program will build on the distinctive training associated with law school combined with the expertise of Wayne State's liberal arts programs to promote informed, well-rounded, and civic-minded undergraduates who will be well-prepared to be the leaders of the future.

Admissions Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below.

All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. A maximum of three courses for the major may be at the 1000-level.

Code	Title	Credits
Required LEX Courses		
Students must have junior status to enroll in LEX courses.		
LEX 5000	Law in Social Context	3
LEX 5010	Law and Harm	3
LEX 5020	Legal Procedure	3
LEX 5030	Law and Transactions	3
Core Skills: Writing, Critical Thinking, and Ethical Reasoning		
Select two of the following courses:		6-8
CRJ 3710	Legal Writing for Criminal Justice	
ENG 3050	Technical Communication I: Reports	
ENG 3085	Introduction to Rhetorical Theory	
PHI 1050	Critical Thinking	
PHI 1070	Games, Risk, and Logic	
PHI 1090	Critical Thinking: AI & Information Literacy	
PHI 1100	Contemporary Moral Issues	
PHI 1110	Ethical Issues in Health Care	
PHI 1120	Professional Ethics	
PHI 1130	Environmental Ethics	
PHI 1150	AI and Data Ethics	
PHI 1500	Race, Sex, and Religion	
PHI 2320	Introduction to Ethics	
PHI 5330	Ethics, Law, and Health	
PS 2420	Ethics and Politics of Public Policy	
PS 2460	Policy and Rationality: Dilemmas of Choice	
Political and Legal Theory		
Select two of the following courses:		6-8
CRJ/PS 3120	Politics of the Criminal Justice Process	
PHI 2330	Introduction to Social and Political Philosophy	
PHI 2390	Philosophy of Human Rights	
PHI 3270	Foundations of Law	
PHI 5240	Social and Political Philosophy	
PHI 5250	Justice and Rights in Health Care	
PHI 5270	Philosophy of Law	
PHI 5310	Law, Justice, and Intersectionality	
PHI 5340	Special Topics in Philosophy of Law	
PS 3520	Theories of Justice	
PS 3530	Classical Political Philosophy: What is Justice?	
PS 4510	Classical Political Philosophy: What is War?	
PS 5850	Human Rights	
Legal and Justice System		
Select one of the following courses:		3-4
CRJ 3700	The Judicial Process	
CRJ 4740	Constitutional Criminal Procedure	
PS 3040	The Legislative Process	
PS 3100	American Legal Systems and Processes	
PS 4710	Democracy	
PS 5110	Constitutional Law	
PS 5120	Constitutional Rights and Liberties	
PS 5820	International Law	
Electives		
Select three elective courses from the list in the section below, at least one must be an LEX course.		9-11
Total Credits		**36-43**

Elective Courses

NOTE: Students must complete any prerequisites listed for a course (please reference this bulletin). Many of these electives are included in the current curriculum for the Minor in Law. This list of electives also includes courses listed under the Political and Legal Theory and Legal and Justice System sections of the major requirements.

Code	Title	Credits
Law School		
LEX 5100	Law and Regulation	3
LEX 5110	Access to Justice	3
The Law School may approve additional elective LEX courses to be added from time to time to this list through its normal course approval processes.		
College of Liberal Arts and Sciences		
AFS 2210	Black Social and Political Thought	4
AFS/SOC 5580	Law and the African American Experience	4
CRJ 1010	Introduction to Criminal Justice	3
CRJ 2550	Race, Crime and Justice	3
CRJ 2650	Gender and Crime	3
CRJ 2750	Diversity Issues in Criminal Justice	3
CRJ 3050	Mental Health and Crime	3
CRJ/PS 3120	Politics of the Criminal Justice Process	3
CRJ 3400	Juvenile Delinquency and Justice	3
CRJ 3700	The Judicial Process	3
CRJ 3710	Legal Writing for Criminal Justice	3
CRJ 4705	Wrongful Conviction and Justice System Error	3
CRJ 4740	Constitutional Criminal Procedure	3
CRJ 5995	Special Topics in Criminal Justice (Must be approved by program director.)	3
ECO 5250	Economic Analysis of Law	4
ENG 3050	Technical Communication I: Reports	3

ENG 3085	Introduction to Rhetorical Theory	3
ESG 5700	Environmental Law and Policy	3
PH 3800	Law and Public Health	3
PHI 1050	Critical Thinking	3
PHI 1070	Games, Risk, and Logic	3
PHI 1090	Critical Thinking: AI & Information Literacy	3
PHI 1100	Contemporary Moral Issues	3
PHI 1110	Ethical Issues in Health Care	3
PHI 1120	Professional Ethics	3
PHI 1130	Environmental Ethics	3
PHI 1150	AI and Data Ethics	3
PHI 1500	Race, Sex, and Religion	3
PHI 2320	Introduction to Ethics	3
PHI 2330	Introduction to Social and Political Philosophy	3
PHI 2390	Philosophy of Human Rights	3
PHI 3270	Foundations of Law	3
PHI 5240	Social and Political Philosophy	4
PHI 5250	Justice and Rights in Health Care	4
PHI 5270	Philosophy of Law	4
PHI 5310	Law, Justice, and Intersectionality	4
PHI 5330	Ethics, Law, and Health	4
PHI 5340	Special Topics in Philosophy of Law	3-4
PS 1010	American Government	4
PS 2410	Introduction to Public Policy	4
PS 2420	Ethics and Politics of Public Policy	4
PS 2460	Policy and Rationality: Dilemmas of Choice	4
PS 2510	Introduction to Political Philosophy: What is Politics?	4
PS 2710	Introduction to Comparative Politics	4
PS 3030	Political Interest Groups	4
PS 3040	The Legislative Process	4
PS 3050	Politics of the American Presidency	4
PS 3060	State Government and Politics	4
PS 3070	Michigan Politics	4
PS 3080	Gender and Politics	4
PS 3100	American Legal Systems and Processes	4
PS 3520	Theories of Justice	4
PS 3530	Classical Political Philosophy: What is Justice?	4
PS 3550	American Political Philosophy: What is Freedom?	4
PS 4510	Classical Political Philosophy: What is War?	4
PS 4710	Democracy	4
PS 5110	Constitutional Law	4
PS 5120	Constitutional Rights and Liberties	4
PS 5820	International Law	4
PS 5850	Human Rights	4
PS 5999	Special Topics in Political Science (Must be approved by program director.)	1-4
PS 6870	United States Foreign Relations Law	4
College of Fine, Performing and Communication Arts		
COM 4110	Studies of Legal Argument	3
COM 4150	Communication and Conflict	3
COM 5710	Media Law and Ethics	3
Mike Ilitch School of Business		
ACC 5170	Introduction to Taxation: Individuals	3
ACC 5270	Introduction to Taxation: Business Entities	3
BLW 2510	Business Law I	3
BLW 5190	Business Law II	3
MGT 5700	Human Resource Management	3
MGT 5740	Employee Relations	3
TIS 4575	IT Security	3
James and Patricia Anderson College of Engineering		
BME 5310	Device and Drug Approval and the FDA	3
CE 5830	Business of Engineering	3
CMT 3030	Construction Safety Management	3
CMT 3040	Building Codes	3
CMT 5080	Construction Management Law	3
CSC 5270	Computer Systems Security	3
CSC 5272	Principles of Cyber Security	3
CSC 5290	Cyber Security Practice	3
School of Social Work		
Social Work elective courses are limited to BSW students only.		
SW 4710	Social Welfare in the United States: Current Programs	3
SW 5720	Social Services for Older Adults	3
SW 5755	Introduction to Child Welfare	3
SW 6100	Child Welfare and Social Systems: Context for Case Management Practice	3
SW 6500	Social Work and the Law	2
SW 6535	Youth, Delinquency, and Juvenile Justice	3
SW 6585	Introduction to International Social Work	3

Law Minor

A minor in law is available through the Mike Ilitch School of Business, the Eugene Applebaum College of Pharmacy and Health Sciences, the College of Fine, Performing and Communication Arts, the College of Liberal Arts and Sciences, and the School of Social Work. The minor in law offers students the opportunity to study law as undergraduates. The minor gives special attention to developing skills in logical and critical thinking. The minors provide training and knowledge relevant for law-related fields, as well as a valuable credential for those seeking to enter those fields. The minor requires three core law classes taught by full-time Law School faculty. Additional requirements for the minor can be found in the school/college sections of the bulletin:

- Law Minor (Business) (p. 86)
- Law Minor (Pharmacy and Health Sciences) (https://bulletins.wayne.edu/undergraduate/college-pharmacy-health-sciences/applied-health-sciences/law-applied-health-sciences-minor/)
- Law Minor (Fine, Performing and Communication Arts) (p. 188)
- Law Minor (Liberal Arts and Sciences) (p. 323)
- Law Minor (Social Work) (p. 394)

LawStart Program

Director: Eun-Jung Kim,
https://clas.wayne.edu/lawstart

Housed within the College of Liberal Arts and Sciences, the Wayne State University LawStart Program helps highly-qualified undergraduates to complete their General Education, College, and Major requirements within approximately three years, or 90-100 undergraduate credits. Students will then apply to enter Wayne State Law School for their fourth year of undergraduate education. Credits earned during the first year of law school will double-count to fulfill students' remaining undergraduate elective credit requirements. Students in the LawStart Program who are admitted to Wayne Law will receive the Bachelor's degree upon successful completion of all first-year law courses, normally at the end of the fourth year. They will receive the JD degree upon completion of all Law School coursework and other requirements, normally at the end of the sixth full-time year.

Students are eligible to apply to LawStart if they have completed between 24 and 64 credit hours, with a minimum of 24 credits hours being completed at Wayne State University. To qualify for admission to the LawStart program, students must be majoring in a subject in the College of Liberal Arts and Sciences, and must have a cumulative GPA requirement of 3.5 or better in college-level coursework. LawStart application materials also include a personal statement about future career goals, a resume, a graded writing sample from a college-level course, and 2-4 letters of recommendation. A LawStart selection committee may also require an interview for those students who make it to the final selection round.

Students will be accepted to the LawStart Program each fall semester, and application deadlines are in early Fall.

Once accepted into the LawStart program, students must:

- Maintain satisfactory progress toward completing their undergraduate coursework in three years, or by the time they reach 90-100 undergraduate credits.
- Maintain a cumulative GPA of at least 3.5 on a 4.0 scale. If students do not make satisfactory progress for two consecutive semesters, they may be removed from the LawStart program.
- Meet with a member of the Wayne Law admissions staff in November of the third year of undergraduate study, to receive information about the law school application process.
- Take the LSAT no later than midway through their third year of undergraduate study and apply for Wayne State Law School admission by no later than April 1st of the same year.
- Meet with the LawStart advisor at least once a semester, to ensure satisfactory progress toward LawStart program requirements.
- Meet with a departmental advisor at least once a semester, to ensure satisfactory progress toward completing their required undergraduate coursework.
- Participate in LawStart enrichment activities to ensure their preparedness for law school.

Any student failing to meet these program requirements may be removed from the LawStart program at the discretion of the LawStart selection committee. Any student removed or who withdraws from the program will need to complete their final year of undergraduate studies and any remaining requirements in order to attain the bachelor's degree.

In order to earn a bachelor's degree, LawStart students must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements. Acceptance to the LawStart program does not commit students to completing the JD degree. If a student is admitted to and enrolls in Wayne State Law School, he or she will receive a JD degree after completing all JD degree requirements equivalent to three years of full-time law school.

College of Liberal Arts and Sciences

Dean: Stephanie Hartwell

The College of Liberal Arts and Sciences is home to more than forty undergraduate degree programs in a wide variety of disciplines, from the humanities and social sciences to the physical and life sciences. We serve a diverse student population with a wide range of programs and courses. Our dedicated advisors provide individual advising to all our major students, and we strive to provide student engagement and undergraduate research opportunities for all students in the College.

Our bachelor degree programs provide a balance of broad studies and specialization, taking advantage of both the intellectual breadth of the College and the availability of course offerings taught by scholars and researchers who are leaders in their fields. All programs emphasize communication, both written and spoken, and the use of precise and thoughtful language. Students are stimulated to think and read critically and to become familiar with the tools of research so that learning may be a lifelong process. Intellectual growth is encouraged by developing in students the necessary independence, resourcefulness and judgment in early studies so that advanced courses may be selected with confidence.

Most fields of study in the College offer students both theoretical and practical training. Our programs are designed such that a solid knowledge of underlying principles is strengthened by practical training and experience.

The College of Liberal Arts and Sciences also serves students whose academic interests extend over several Departments. Such students have the opportunity to declare minors, pursue a co-major or take elective courses in a wide variety of fields. In addition, interdisciplinary programs such as Environmental Science, Linguistics, Global Studies, and Gender, Sexuality and Women's Studies offer varied individualized curricula.

The undergraduate programs of the College of Liberal Arts and Sciences are strengthened by graduate programs that lead to the master's and doctoral degrees in various disciplines. Professors in the College teach both graduates and undergraduates; research projects may involve both graduates and undergraduates; some specialized classes are available to both graduate students and those undergraduates enrolled in the upper division. This opportunity for association with graduate students and research personnel enriches the experience of many undergraduate students.

In the College of Liberal Arts and Sciences, students are provided with the skills, knowledge, and understanding on which to build professional and personal development in today's rapidly changing world.

Academic Regulations: Liberal Arts and Sciences

For complete information regarding academic rules and regulations of the University, students should consult the Academic Regulations (p. 40) section of this bulletin. The following additions and amendments apply to the College of Liberal Arts and Sciences.

Attendance

Regularity in attendance and performance is necessary for success in college work. Attendance requirements will be announced by instructors at the beginning of each course.

Normal Program Load

To graduate in four years, students should take at least fifteen credits per semester for eight consecutive semesters. A normal load should not exceed eighteen credits.

Because at least two hours of outside preparation are normally expected for each class hour, a fifteen credit program calls for approximately forty-five hours of class attendance and study per week. Students who undertake such a program should expect to give it their full time and energy.

Extra Credits

Extra credits are credits taken in excess of the normal maximum load of eighteen credits. Students with 3.0 (or above) grade point averages may take more than eighteen credits with approval of the advisor.

'AGRADE' (Accelerated Graduate Enrollment Program)

Some departments of the College permit academically superior majors to apply for admission into the College's 'AGRADE' program. 'AGRADE' procedures enable qualified seniors in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College and apply a maximum of sixteen credits towards both a bachelor's and master's degree in the major field.

Qualified students may apply for the AGRADE program no earlier than the semester in which ninety credits are completed. Applicants must meet overall and major minimum grade point average requirements, which vary dependent on program; see specific programs for details.

For more details about the 'AGRADE' program, contact the Graduate Director of the major department or the Graduate Office of the College of Liberal Arts and Sciences (313-577-2516).

Graduation with Academic Distinction

Candidates eligible for the bachelor's degree may receive a special citation on their diplomas under the following circumstances: The designations of 'Summa Cum Laude,' 'Magna Cum Laude,' and 'Cum Laude' will be conferred upon graduating students whose cumulative grade point averages at Wayne State University fall within approximately the upper five percent, the next five percent, and the next ten percent of the senior class, respectively. The grade points used to identify the lower limits for each designation will be based upon the grade points attained by seniors at these percentile levels during the preceding academic year. Only students who have earned 56 or more credits at Wayne State University are eligible to graduate with one of the above distinction citations.

Dean's List

The Dean's List of academically superior students is compiled each fall and winter term based on the following criteria: A 3.6 grade point average for students registered for twelve credits or more and a 4.0 grade point average for students registered for between six and eleven credits.

Academic Probation

If a student's cumulative grade point average falls below 2.0, the student will be placed on academic probation. A probation hold will need to be released each term before he or she registers. To obtain this release, the student must see his or her academic advisor.

A student will be off of academic probation at the end of any term in which she or he achieves a cumulative G.P.A. of 2.0 or better.

Exclusion

Students on academic probation will be given two subsequent terms to enroll while on probationary status. At the conclusion of the third consecutive term below 2.0, a student will be excluded from the University. An excluded student may not apply for reinstatement for one calendar year.

The decision to reinstate will be made by the College Probation Committee and based upon evidence presented by the student that circumstances have changed during the year away and that the probability of success has increased. Students seeking reinstatement should consult: http://www.clas.wayne.edu/reinstatement

Cheating and Plagiarism

The principle of honesty is recognized as fundamental to a scholarly community. Students are expected to honor this principle and instructors are expected to take appropriate action when instances of academic dishonesty are discovered. An instructor, on discovering such an instance, may give a failing grade on the assignment or for the course. The instructor has the responsibility of notifying the student of the alleged violation and the action being taken. Both the student and the instructor are entitled to academic due process in all such cases. Acts of dishonesty may lead to suspension or exclusion.

Academic Advising

Academic advisors are available in all departments. Students who have chosen a major should meet with their departmental advisor. Students should confer with advisors on all questions concerning degree requirements, academic regulations, course elections, and programs of study. It is of primary importance that students talk with an advisor when they are having difficulties in their academic work.

Bachelor's Degree Requirements: Liberal Arts and Sciences

College Requirements

All undergraduate students must satisfy University General Education Requirements (p. 24), their specific major requirements, and the College of Liberal Arts and Sciences Group Requirements, which consist of a minor plus a two-course sequence in a single foreign language.

Minor Requirement

Students must complete a university-approved minor, which may be taken in the College of Liberal Arts and Sciences or any other WSU school or college. The minor requirement is waived for students who complete a second major, a double major, a concurrent degree, a dual degree, or a second degree. Students earning a co-major in Peace and Conflict Studies or Latino/a and Latin American Studies, or who are completing an undergraduate certificate, will be considered to have completed the minor requirement. The University Honors co-major does not fulfill the college requirement for a minor.

Students must complete all courses in their minors with a minimum overall average of 2.0. In order for a minor, second major or degree, or certificate program to fulfill the College of Liberal Arts and Sciences minor requirement, it must include at least three courses that have not been used to fulfill requirements for any other major or minor.

Foreign Language Requirement

All students in the College of Liberal Arts and Sciences must successfully demonstrate language proficiency equivalent to the two-course sequence in a single foreign language. Proficiency is demonstrated by completing courses numbered 1010 and 1020 in one of the following subject area codes: ARB, ARM, CHI, FRE, GER, GKA, GKM, HEB, ITA, JPN, LAT, POL, RUS, SPA, SWA, and UKR. Those continuing the study of a foreign language begun in high school or at another college will be placed at the appropriate level in the sequence as determined by means of qualifying examinations or interviews administered by the Department of Classical and Modern Languages, Literatures, and Cultures. The College Foreign Language Group Requirement will be considered satisfied by those students whose test scores place them beyond the second-course level. Two semesters of American Sign Language will count as fulfilling the foreign language requirement.

Bilingual Students: Students who were born in and completed their secondary education in a country whose language is not English may demonstrate proficiency by means of qualifying examinations or interviews administered by the Department of Classical and Modern Languages, Literatures, and Cultures. However, no credit (through course work or by examination) will be granted to such students for 1000-level courses in that language.

Major Requirements

Specific course requirements for majors are listed in this bulletin under each of the Departments or areas of the College. Students must complete all courses in their majors with a minimum overall average of 2.0. Students must declare a major by thirty credits of study, regardless if these credits are completed at Wayne State University or transferred from another institution. Students can easily declare or change their major online through Academica.

Double Major

For students to graduate with double majors, the major requirements in both areas of concentration must be fulfilled. Both majors are designated on the diploma.

Students wishing to double major in a CLAS degree program and that of another school or college must satisfy the College of Liberal Arts and Sciences Group Requirements.

Co-Majors

The following subjects may be taken in conjunction with another major leading to a Bachelor's Degree: Latino/a and Latin American Studies and Peace and Conflict Studies

Combined Degrees

A Combined Degree (B.A. or B.S.) is granted by the College of Liberal Arts and Sciences in cooperation with approved schools of Dentistry, Medicine, and Law, which do not require a bachelor's degree for admission. Candidates for Combined Degrees must complete ninety credits in the College of Liberal Arts and Sciences, all University requirements, all College requirements, make reasonable progress (as determined by the major Department) toward completing a major, and complete satisfactorily the first year's work in an approved professional school. Courses taken in the first year of professional school may be applied toward the required fifteen credits in advanced courses. Students who fail to pass any course ordinarily required during the first year of professional work forfeit the right to a Combined Degree. Such cases may be reopened only after the student completes the second year of professional work.

Concurrent/Dual Degrees

Students who have satisfied all requirements for two different bachelor degree programs leading to degrees may apply for both degrees simultaneously. Students should contact an academic advisor for more information.

Second Degrees

Students who have received a degree from Wayne State University or any other accredited institution may obtain a second bachelor's degree in another academic area. In order to be granted second degrees, students must complete a minimum of thirty credits beyond the first degree in the College and satisfy all University and major requirements as well as the college requirement for a two-semester sequence in a foreign language.

Exploratory and Pre-Professional Curricula

Students are encouraged to consult an academic advisor before choosing any curriculum.

Exploratory Curricula for Undecided Students

First-time students who are unsure of their major may enroll in a thirty-credit exploratory curriculum. There are four exploratory curricula: humanities, social sciences, life sciences and physical sciences/mathematics. These curricula are designed to give students the opportunity to take some common required courses that will help them graduate within four years once they choose their major.

Admission to pre-professional curricula implies only that students have selected professional goals. It does not necessarily mean that students will be accepted by the corresponding professional school or college.

A pre-professional curriculum is not a major. Students are encouraged to declare a major together with pursuing a pre-professional curriculum. Some professional programs require a bachelor's degree. Even if a bachelor's degree is not required, admission to a professional program is often very competitive, and pursuing a major provides students with an alternative career path.

Advising for pre-health programs, including pre-medicine and pre-dental, pre-law and pre-social work is available through the University Advising Center. The pre-professional curricula in the college are:

- Pre-Dentistry
- Pre-Law
- Pre-Medical Laboratory Science
- Pre-Medicine and Pre-Osteopathic Medicine
- Pre-Mortuary Science
- Pre-Nursing
- Pre-Occupational Therapy
- Pre-Pharmacy
- Pre-Physical Therapy
- Pre-Physician Assistant Studies
- Pre-Radiation Therapy Technology
- Pre-Social Work

Computer Science (B.A.)

An admissions moratorium is in effect for this program. Interested students should contact an undergraduate advisor in the Department of Computer Science.

The Bachelor of Arts curriculum is designed to provide a strong academic foundation in both the principles and methodologies of computer systems, software development, and programming that are necessary to solve real-world problems. Students planning to earn a graduate degree in computer science are strongly advised to seek the Bachelor of Science degree in computer science (p. 158) offered by the James and Patricia Anderson College of Engineering.

Academic Regulations

Academic Probation: A student is considered to be on academic probation whenever his or her cumulative grade point average, or his or her grade point average in the computer science program, falls below 2.0. A student may also be placed on probation whenever his or her academic performance is deemed unsatisfactory. If, at the end of the first semester on probation, the student's cumulative grade point average has not increased to at least 2.0, he or she will be excluded from the Department of Computer Science. If the student's cumulative g.p.a. reaches at least 2.0 by the end of the first semester after being placed on probation, he or she will be returned to regular status. Following exclusion from the Department of Computer Science, the privilege of registering in the Department will be withheld for at least one calendar year.

Exclusion: A student who has been refused the privilege of registering in the Department may request a reconsideration of his or her status by the Academic Standards Committee (ASC) after the one-year exclusionary period. He or she should not make the request, however, unless evidence can be provided of changes in academic preparation or circumstances that will substantially increase the likelihood of academic success. A formal written request for reconsideration must be presented to the Associate Dean for Academic Affairs. Students who plan to petition for readmission are encouraged to request a meeting with the ASC as early as possible during the exclusion period to discuss what changes may provide an opportunity for readmission. In no case is readmission to the Department of Computer Science guaranteed.

Repeated Courses and Substandard Grades: Students will be allowed up to a maximum of five repeated courses, one repeated course for a substandard grade. If a student must repeat a subsequent course in order to complete their degree, he or she will be excluded from the Department of Computer Science (i.e., students must complete a course within three attempts). Prerequisite math and science courses that do not satisfy degree requirements, but are required if students did not place into MAT 2010, are also counted toward exclusion from the Department. A substandard grade is defined as a grade lower than the minimum requirement.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Course Requirements

(Please note that the core courses include mandatory instructional labs. These laboratories must be taken concurrently with their corequisite lecture.)

Code	Title	Credits
MAT 2010	Calculus I	4
STA 2210	Probability and Statistics	4
or BE 2100	Basic Engineering III: Probability and Statistics in Engineering	
CSC 1100	Problem Solving and Programming	4
CSC 1500	Fundamental Structures in Computer Science	4
CSC 2110	Computer Science I	4
CSC 2200	Computer Science II	4
CSC 3010	Ethics in Computer Science	3
CSC 3100	Computer Architecture and Organization	4
CSC 4110	Software Engineering	4
CSC 4420	Computer Operating Systems	4
CSC 4996	Senior Capstone Project	4
Four additional Computer Science courses of at least three credits each, numbered 3000 or above [1]		12

[1] Excluding CSC 3010, CSC 4990 and CSC 4995.

A minimum of twenty-six credits in computer science must be earned at Wayne State University.

A minimum grade of C is required for the following respectively:

Code	Title	Credits
CSC 1100	Problem Solving and Programming	4
CSC 1500	Fundamental Structures in Computer Science	4
CSC 2110	Computer Science I	4
CSC 2200	Computer Science II	4

A minimum grade of C- is required for all other CSC and MAT courses.

Students declaring their major should consult an advisor for a written assessment of current requirements.

General Studies (B.G.S.)

The Bachelor of General Studies (B.G.S.) degree is a graduation pathway without a traditional academic major in the College of Liberal Arts and Sciences (CLAS). The General Studies program seeks to accommodate students whose academic careers spanned many years, even decades, and who may have begun their academic careers in colleges, departments, and degree programs that no longer exist. In such cases, General Studies enables the university to support and honor the work that students have done in the past, and may do upon their return, without certifying expertise in a specific field that may well have undergone considerable change since a student first started. Students cannot elect to join this program. Students must follow a secondary admissions process to be accepted to this program, and should contact their CLAS advisor (https://clas.wayne.edu/students/advising) for more information about how to apply. Students without a current CLAS advisor should contact the University Advising Center to speak to an advisor.

All General Studies admissions decisions are made by an admissions committee made up of advisors, faculty, and administrative staff in the College of Liberal Arts and Sciences. Before applying to join the General Studies program, students must meet these minimum admissions requirements:

- The student holds senior-level standing at Wayne State
- The student faces a temporal problem (i.e., student stepped away from school; length of time away is at least 5 years)
- The student is in good academic standing, with a cumulative GPA of 2.0 or higher
- The students has completed the vast majority of university general education requirements (if enrolled after 1985)
- The student has completed the vast majority of CLAS (college level) requirements
- The student must have completed at least 15 credits applicable to a CLAS-based or discontinued major
- The student has completed at least three college-level semesters and a minimum of 30 credits at Wayne State
- The student has completed at least 15 credits of intermediate level (3000- or above) coursework at Wayne State
- The student has advisor support for their application to the General Studies program

Preference will be given to students who: (1) have a total number of earned credits that is at or near 120 semester credits (or, at or near 180 quarter system credits, if returning from before Fall 1980); (2) have non-academic factors that prevent completion of their current degree path (e.g., work, age, deployment, residential location, etc.); and (3) have no other feasible pathway to graduation. Students with majors from other colleges and schools at Wayne State University will be considered on a case by case basis.

Application materials include an application form completed by the student's advisor, and a personal statement from the student indicating how they meet the above minimum criteria for admission.

Application deadlines for the General Studies Program

- Fall term: August 1
- Winter term: November 1
- Spring/Summer term: April 1

Inquiries can be addressed to the CLAS General Studies program at clasgs@wayne.edu.

Professional Biomedical Sciences (B.S.)

The BS in Professional Biomedical Sciences is an undergraduate degree completion path for students who made initial progress in an undergraduate degree program but transitioned to a professional medical sciences program prior to completion of their undergraduate degree. This degree is only open to students previously enrolled as undergraduate students in a CLAS major at WSU who meet the established eligibility requirements. Eligible students will be able to earn a bachelor's degree after transferring credits from approximately a year of successfully completed professional school credits without having to return to an undergraduate program.

- A student must have completed a minimum of 90 credits towards an UG program prior to entry into a professional program.
  - Completion of university general education requirements and the CLAS language requirement within those 90 credits.
  - Options to meet the CLAS minor requirements would be possible with the student's original intended major or a biology minor as most professional programs require a concentration of BIO courses prior to entry.
- A student must complete a minimum of three college-level semesters at Wayne State.
- A student must have completed a minimum of 30 credits in residence at WSU prior to entry into a professional program.
- A student must complete a minimum of 12 credits at the 3000 level or higher.
- A student must have made reasonable progress toward completion of a declared WSU major. Examples of reasonable progress include documented interaction with department major academic advisors and/or successful completion of required coursework toward the major.
- A student's cumulative and major GPA must be at a minimum of 2.0 at the time of departure from WSU.
- A student will have successfully completed a minimum of the first year (more if additional credits to reach 120 are needed) of a professional medical-based program offered by a U.S. accredited institution.

Digital Humanities Minor

The Digital Humanities minor is open to any student interested in the intersection of digital technology and humanities/social science

research. The minor requires a minimum of fifteen credits, distributed as follows:

Code	Title	Credits
Required Course		**3**
ENG/HIS 2435	Introduction to Digital Humanities	
Skills Courses (select two of the following)		**6**
TIS 5570	Introduction to Business Analytics	
TIS 5705	Inbound Information Technology	
TIS 5670	Special Topics in Information Systems	
TIS 5994	Software Tools for Business Applications	
MKT 5800	Digital Marketing and Analytics	
CSC 1050	Introduction to C and Unix	
CSC 1100	Problem Solving and Programming	
CSC 2000	Introduction to C++ Programming Language	
CSC 3020	Java Programming	
ADA 2210	Introduction to Digital Practices	
ADA 3220	Interactive Art	
ADA 5240	Interface	
AGD 2230	Introduction to Typography: Skills and Concepts	
AGD 2240	Introduction to Graphic Design: Skills and Concepts	
AGD 3260	Introduction to Interactivity in Graphic Design	
COM 1610	Fundamentals of New Media Production	
COM 2260	Digital Writing and Research Methods	
COM 2290	Fundamentals of New Media Communication	
COM 2310	Introduction to Web Design	
COM 5390	Digital Animation	
GPH 3600	Introduction to Geographic Information Systems	
GPH 4600	Advanced Geographic Information Systems	
Elective courses (select two of the following)		**6**
ANT 5565	Urban Archaeology	
COM 5010	History of Communication Technologies	
COM 5500	Journalism and New Media	
COM 6050	New Media Practices	
COM 6270	New Media Theory	
ENG 2430	Digital Literacies: Writing about Texts	
ENG 5690	Topics in Book History	
HIS 3995	Special Topics in History *	
Total Credits		**15**

* Should be chosen in consultation with an advisor.

Jewish Studies Minor

Office: 3094 Faculty/Administration Building; 313-577-2525
Coordinator: Howard Lupovitch
https://clas.wayne.edu/jewishstudies

The Jewish Studies minor engages students who are interested in learning about the history, culture, and languages of Jewish communities. In a variety of courses in history, literature, philosophy, political science, and the Hebrew language, students learn how Jewish thought has influenced the modern world and how it has been influenced in turn by the societies and cultures in which Jews have lived over the past four thousand years.

To earn a minor in Jewish Studies, a student must take a minimum of nineteen credits, including:

Code	Title	Credits
HEB 1010	Elementary Hebrew I	4
HIS 3010	Jewish History from the Bible to Present	3
Select a minimum of twelve credits of the following:		12
ENG 5080	Topics in Global and Transnational Studies	
ENG 5490	Topics in American Literature	
GER 5390	Holocaust Studies	
HIS 3995	Special Topics in History (chosen in consultation with an advisor)	
NE 2010	The Bible and Ancient Mythology	
NE 2060	Trends and Themes in Films of the Middle East	
NE 2700	Topics in Middle Eastern Studies	
NE 3225	Modern Israeli Culture: A Pluralistic Perspective	
PHI 2400	Introduction to the Philosophy of Religion	
PS 3835	Middle East Conflict	
PS 5999	Special Topics in Political Science	
Study Abroad Option		
ED 5998	Field Studies	
Total Credits		**19**

African American Studies

Office: 11th Floor, 5057 Woodward, Rm. 11002.2; 313-577-2321
Interim Chairperson: Lisa Doris Alexander
https://clas.wayne.edu/afamstudies

African American Studies is the systematic study of the historical, cultural, intellectual and social development of people of African descent, the societies of which they are a part, and their contribution to world civilization. Its principal geographic domains are the United States, the Caribbean, Latin America, the African continent, and increasingly Western Europe where large Africana communities reside. The field features a diversity of intellectual approaches and practical interests. Based on an interdisciplinary framework, it draws upon the humanities, and the social and behavioral sciences.

The major in African American Studies prepares students for a wide range of professional and career opportunities. Majors can continue to graduate (including doctoral level) studies in the humanities, social and behavioral sciences, or pursue professional programs in law, medicine, business, and journalism. Graduates who enter the job market are prepared for careers in human services and public health, education, public relations, community development, urban planning; and more generally for jobs in the public sector, in central cities and urban institutions, or jobs that involve cultural or intergroup relations as well as international affairs. In the context of metropolitan Detroit, African American Studies graduates will be better prepared to deal with the complexity and diversity of the city's political and demographic realities as they assume important roles of leadership.

- African American Studies (B.A.) (p. 246)
- African American Studies Minor (p. 247)

African American Studies (B.A.)

The major in African American Studies prepares students for a wide range of professional and career opportunities. Majors can continue to graduate (including doctoral level) studies in the humanities, social and behavioral sciences, or pursue professional programs in law, medicine, business, and journalism. Graduates who enter the job market are prepared for careers in human services and public health, education, public relations, community development, urban planning; and more generally for jobs in the public sector, in central cities and urban institutions, or jobs that involve cultural or intergroup relations as well as international affairs. In the context of metropolitan Detroit, African American Studies graduates will be better prepared to deal with the complexity and diversity of the city's political and demographic realities as they assume important roles of leadership.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students must also have and maintain an overall GPA of 2.0 as well as a GPA of 2.0 in the African American Studies major for graduation.

Students with an interest in African American studies and majoring in anthropology, English, history, sociology, urban studies, and political science are encouraged to consider a second major in African American studies. Many African American Studies courses are cross listed, and African American Studies majors may receive credit for courses taken for another major.

Majors must complete at least thirty-six credits (approx. 9-12 courses) in a prescribed course of study, including:

Code	Title	Credits
AFS 3420/ PS 3820	Pan Africanism and the Diaspora	4
AFS 2210	Black Social and Political Thought	4
AFS 3180	Black Social Movements	4
AFS 3200	The African-American Film Experience	4
AFS 5110	Black Women in America (Writing Intensive Requirement)	3
Select two of the following:		6-8
AFS 2010	African American Culture	
AFS 2250	AfroLatino/a History and Culture	
AFS 2390	Introduction to African-American Literature: Writing about Texts	
AFS 2600	Race and Racism in America	
AFS 3160	Black Urban History	
AFS 3360	Black Workers in American History	
AFS 3610	Africa: Politics, Culture and Society	
AFS 4240	African Americans in Television	
Select one of the following:		3-4
AFS 5310	Special Topics in African American Studies	
AFS/SOC 5580	Law and the African American Experience	
AFS/PSY 5700	The Psychology of African Americans	
AFS electives		4-8

Internships

Internships are available in which students gain experience through placements in settings similar to those in which they will later be seeking professional roles. These include: community service agencies, community-based self-development organizations, public and private institutions, Black alternative organizations and other appropriate settings. Some students may also do a practicum directly with the Department of African American Studies, assisting in research, community relations, and in the organization, coordination and conduct of community extension and education service programs. The objective of this mode of study is to offer students the opportunity to synthesize diverse ideas, theories and methodologies with important and practical real world imperatives. Interested students should contact the department's undergraduate advisor,

Summer Study Abroad

This travel program periodically visits Africa and/or Brazil. Through an integrated field/classroom/seminar experience, students are challenged to grow intellectually, as well as to increase their self-awareness and sensitivity to other cultures. For more information, consult the department advisor.

African American Studies Honors (B.A. Program)

The honors curriculum is designed to challenge highly motivated students to achieve excellence in the field of African American Studies. Students are encouraged to develop active interests in probing the

outstanding research and scholarship related to the global Black experience.

1. Maintain a 3.3 GPA overall and a 3.5 GPA within the AFS major.
2. Complete a minimum of 12-15 credits, including the following:
   a. AFS 5991 or AFS 6990: (3-8 cr.): A senior thesis under the direction of a full-time faculty member in their major area.
   b. HON 42xx (https://bulletins.wayne.edu/undergraduate/honors-college/courses/): Complete one 42xx level Honors seminar offered through the Honors Program. The Honors seminars are interdisciplinary courses that focus on a special topic for the term.
   c. Accumulate at least six credits in honors-designated course work, not including thesis and the HON seminar. These honors credits can be obtained from any department, including AFS.

African American Studies Minor

Students majoring in other fields can minor in African American studies. The minor consists of six AFS courses which must include:

Code	Title	Credits
AFS 3420	Pan Africanism and the Diaspora	4
Select two or more of the following:		6-8
AFS 2010	African American Culture	
AFS 2210	Black Social and Political Thought	
AFS 2600	Race and Racism in America	
AFS 3250	Politics and Culture in the Caribbean	

Students wishing to minor in African American Studies are encouraged to visit the departmental office for information and counseling. A minor may be declared when filing for graduation.

Anthropology

Office: 3054 Faculty Administration Building; 313-577-2935
Chairperson: Krysta Ryzewski
Academic Advisor IV: Stacie Moser
Undergraduate Director: Jonathan Stillo
https://clas.wayne.edu/anthropology

Anthropology is the study of humanity, past and present, around the world and here in Detroit. It seeks to understand what all humans have in common, as well as our biological and cultural diversity. Anthropologists study people by living and talking with them, by interpreting myths and rituals, and by analyzing human remains and artifacts recovered from archaeological sites and crime or mass disaster scenes.

Undergraduate training in anthropology is designed to accommodate a wide range of student interests:

1. those desiring scientific knowledge of the social and cultural determinants of behavior;
2. those preparing to enter law, medicine, public health, social work, information sciences, or public administration;
3. those preparing for employment in historical or natural science museums;
4. those preparing to serve the business and/or industrial community as specialists in cross-cultural analysis or management consulting;
5. those seeking to enter the field of cultural resource management;
6. those expecting to work with the general public and, therefore, requiring a broad grasp of the nature of society, group behavior and social change;
7. those looking forward to teaching anthropology or another of the social or behavioral sciences;
8. those preparing for a career in another country, in international studies, or in foreign affairs;
9. those planning to pursue careers in law enforcement, police science, or criminal justice; and
10. those who desire to pursue graduate studies in anthropology.

- Anthropology (B.A.) (p. 247)
- Anthropology Minor (p. 248)
- Archaeology Minor (p. 248)
- Forensics and Investigation Minor (p. 249)
- Global Health and Social Medicine Minor (p. 249)

Anthropology (B.A.)

Anthropology is a comparative social science that seeks to understand human behavior within the context of different cultural systems, past and present. Anthropology also seeks to understand human biological evolution and adaptation and their interaction with social and cultural behavior. Anthropology brings a cross-cultural knowledge base and unique methodological and conceptual tools to bear on understanding the transformations, problems and interconnections of contemporary societies. The discipline is organized according to the sub-fields of cultural, biological, linguistic anthropology, and archaeology. The department also has an emphasis on applied anthropology. Wayne State's department offers a Bachelor of Arts in anthropology, dual major options, and three minors in Anthropology, Archaeology, Global Health and Social Medicine. The following admission and degree requirements apply.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Students majoring in anthropology are required to elect a minimum of thirty-four credits in anthropology, including:

Code	Title	Credits
ANT 1100	Introduction to Anthropology	3
ANT 2110	Introduction to Biological Anthropology	3
ANT 3020	Introduction to Archaeology	3
ANT 3030	History of Anthropology	3
ANT 3310	Language and Culture	3
ANT 3333	Introduction to Sociocultural Anthropology	3
ANT 5210	Anthropological Methods	4
ANT 5996	Capstone Seminar in Anthropology	3
Anthropology electives		9
Total Credits		**34**

A minimum of fifteen credits must be taken in residence. The capstone course (ANT 5996) must be taken in residence. All ANT core courses must be completed with a grade of C or better. All ANT elective courses must be completed with a grade of C- or better.

Combined Degree

Students pursuing a degree at an approved school of dentistry, medicine, or law may obtain a combined degree with anthropology in accordance with the requirements set forth by the College of Liberal Arts and Sciences (p. 242).

Anthropology Honors (B.A. Program)

This program is open to students pursuing a bachelor's degree with a major in anthropology who maintain an overall cumulative grade point average of at least 3.3 and a similar g.p.a. in anthropology courses. Honors majors must demonstrate the ability to do original work by writing an honors thesis during their senior year. The anthropology honors program leads to a degree designation 'with Honors in Anthropology'. Students in the Honors Program must satisfy the following requirements:

1. All requirements for a major in anthropology;
2. Overall g.p.a. of 3.3 or above;
3. Anthropology g.p.a. of 3.3 or above;
4. A minimum of three thesis credits in anthropology (ANT 4999);
5. An approved honors thesis;
6. One 42XX honors seminar (HON 4200-HON 4280) offered by the Honors College.
7. A total of twelve honors-designated credits including an approved Honors Thesis ANT 4999, the 42XX Honors Program seminar, and two three-credit ANT courses with an honors designation. Honors courses offered by other departments may be considered as a substitute in consultation with the Academic Advisor.

AGRADE Program (Accelerated Graduate Enrollment)

This program enables qualified seniors in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College. Students may apply for the AGRADE Program during the term in which they will complete ninety credits; to qualify, students must have cumulative GPA of 3.3 or higher. For more details about the AGRADE Program, contact the Academic Advisor in the Anthropology Department.

Anthropology Minor

The election of a minor in anthropology is appropriate for students in a variety of disciplines who wish to add a comparative, cross-cultural, or bio-cultural perspective on the study of human beings to their area of specialization. The minor requires a minimum of eighteen credits in anthropology courses including:

Code	Title	Credits
ANT 1100	Introduction to Anthropology	3
Select two of the following:		6
ANT 2110	Introduction to Biological Anthropology	
ANT 3100	World Cultures	
ANT 3020	Introduction to Archaeology	
ANT 3310	Language and Culture	
Select three anthropology elective courses with one course at the 5000-level		9
Total Credits		**18**

In order for students to gain maximum benefit from their minor in conjunction with their major, it is strongly recommended that they consult with an advisor in the department before electing courses. A list of elective anthropology courses recommended for combination with a variety of majors is available from the Department.

Archaeology Minor

Archaeology is the study of past human cultures through material remains; it is one of the sub-fields of the discipline of Anthropology. The minor in archaeology will introduce particular skill sets, concepts, and competencies to students who wish to apply them to their expertise in other disciplines. The minor requires a minimum of 18 credits.

Requirements

Code	Title	Credits
ANT 1100	Introduction to Anthropology	3
ANT 3020	Introduction to Archaeology	3
Select four elective courses from the following, one ANT course must be at the 5000-level:		12-13
ANT 2200	Lost Cities and Ancient Civilizations	
ANT 2500	Archaeology of the Great Lakes	
ANT 3220	The Inca and their Ancestors	
ANT 3530	Native Americans	
ANT 5270	Concepts and Techniques in Archaeology	
ANT 5280	Field Work in Archaeology of the Americas	
ANT 5500	Historical Archaeology	
ANT 5510	Pre-Columbian and Mesoamerican Civilization	
ANT 5565	Urban Archaeology	
ANT 5600	Museum Studies	

One of the following specialty classes may be applied to the 4-course elective requirement:		
BIO 2870	Anatomy and Physiology	
BIO 3500	Ecology and the Environment	
BIO 3800	Botany	
CHM 1100	General Chemistry I	
CHM 1240	Organic Chemistry I	
ESG 3400	Principles of Sedimentology and Stratigraphy	
ESG 3650	Field Geology	
ESG 4200	Geomorphology	
ESG 5210	Environmental and Applied Geophysics	
GKM 3590	Byzantine Civilization	
GPH 3600	Introduction to Geographic Information Systems	
HIS 3650	History of Detroit	
HIS 3995	Special Topics in History	
PHY 2170	University Physics I for Scientists and Engineers	
Total Credits		**18**

Forensics and Investigation Minor

The Forensics and Investigation minor is 21-22 credits of coursework, of which a maximum of 6 credits can be transferred from other institutions for the CRJ courses only.

Code	Title	Credits
Required Courses		
CRJ 1010	Introduction to Criminal Justice	3
CRJ 3260	Investigation	3
CRJ 4220	Criminalistics	3
CRJ 3270	Public Safety: sUAS (Drone) Technology Programs	3
ANT/CRJ 2130	Introduction to Forensic Anthropology and Human Rights	3
Select two of the following:		
CSC 5272	Principles of Cyber Security	3
CSC 5372	Digital Forensics	3
GPH 3600	Introduction to Geographic Information Systems	4

Global Health and Social Medicine Minor

The Global Health and Social Medicine minor will explore the relationship between human rights and health. The minor pays special attention to the factors contributing to health inequities locally and globally. The skills and training that students will receive in the Global Health and Social Medicine minor are transferable to careers in a variety of health-related fields including medicine, nursing, public health, and social work. The minor requires the completion of 18 credits: two required courses and four electives.

Code	Title	Credits
ANT 1100	Introduction to Anthropology	3
ANT/GLS/PH 3410	Global Health	3
Select four of the following:		12
ANT 3400	Introduction to Medical Anthropology	
ANT/GLS 3700	Globalization: Theories, Practices, Implications	
ANT 5400	Anthropology of Health and Illness	
ANT 5410	Anthropology of Age	
ANT 5700	Applied Anthropology	
ECO 5550	Economics of Health Care	
HIS 3585	Science, Technology, and Society	
PH 2500	Race and Ethnic Disparities in Public Health	
PH 2550	MENA Public Health	
PH 3300	Epidemiology	
PH 3100	Social and Behavioral Aspects of Public Health	
PH 4600	Special Topics in Health Disparities	
PHI 1110	Ethical Issues in Health Care	
PSY 2410	Health Psychology	
PSY 3380	Human Sexuality	
SOC 4204	Seminar in Aging and the Life Course	
SOC 2210	Sociology of Health and Medicine	
Total Credits		**18**

Biological Sciences

Office: 1360 Biological Sciences; 313-577-2873; Fax: 313-577-6981
Chairperson: Markus Friedrich
Associate Chairperson: Haidong Gu
Academic Staff and Academic Advisors: Nora Alhussainy, Antoinette Cunningham, Krystyn Purvis, Rebecca Russell, Madelyn Tucker
https://clas.wayne.edu/biology

- Bioinformatics and Data Analysis (Undergraduate Certificate) (p. 250)
- Biological Sciences (B.A.) (p. 251)
- Biological Sciences (B.S.) (p. 252)
- Biological Sciences Minor (p. 254)

Departmental Academic Policies

Student's Responsibility

It is each student's responsibility to learn the major requirements, policies, and procedures governing the program they are following and to act accordingly. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students should consult a Biological Sciences Department Advisor regularly in order to verify that their Biology requirements are being met in a timely fashion. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Declaration of Major

Students should declare their major after
completing BIO 1500 and BIO 1510 with a 'C-minus' or better. Major requirements are established by the declaration of major date. Students who do not formally declare their major are susceptible to program changes made by the Department. Recent program changes may not be reflected in the University Bulletin if they are established after the printing of the Bulletin.

Prerequisites/Corequisites

Students are required to follow all prerequisites and corequisites listed for each Biology course. Please refer to the Biological Sciences Department Advisor and the Class Schedule for accurate listings of prerequisite requirements.

Grade Requirements

All students are required to complete BIO courses with a 'C-minus' or better to satisfy the prerequisite requirements. Students with grades below a 'C-minus' in prerequisite coursework are required to retake the course before proceeding to the subsequent courses in the program.

Residency Requirement

Students must complete a minimum of twenty-one credits *in residence* in biological sciences (BIO). Of the twenty-one in residence credits, fifteen of those credits must be at the 3000 level or higher.

Combined Degree with Dentistry and Medicine

Students who were majoring in biological sciences and are candidates for a combined degree must have made reasonable progress towards the requirements listed for biological sciences majors. A minimum of twenty-five credits in residence are required in biological sciences (BIO). See also the College of Liberal Arts and Sciences policy on combined degrees.

Over-Age Credits

A student attempting to complete a biological sciences major after a prolonged interruption of his/her education may find that some of the previous course work in biological sciences is out of date. In such cases, the record will be reviewed and the Department may require the student to fulfill biological sciences course requirements existing at the time of his/her return.

Transfer

Transfer Students should consult with a Departmental undergraduate advisor during the semester prior to their transfer (after a transfer evaluation has been completed by the Transfer Credit Office).

Determination of course equivalency will be made by the Departmental undergraduate advisor in conjunction with the Transfer Credit Evaluation Unit in the Office of Undergraduate Admissions. The Department reserves the right for the final determination of course equivalency.

Advanced Placement

Advanced Placement in Biological Sciences may be obtained by earning the following scores in the AP Qualifying Examination:

Score of 5: Credit is awarded
for BIO 1500 and BIO 1501 and BIO 1510 (seven credits). Students are eligible to enroll in subsequent courses providing the prerequisites for them have been met. Students will need to complete BIO 1511.

Score of 3 or 4: Credit is awarded for BIO 1510 (three credits). Students with a score of 3 or 4 are eligible to register in BIO 1500 and BIO 1501. Students will also need to complete BIO 1511.

AGRADE (Accelerated Graduate Enrollment)

Accelerated Graduate Enrollment: The 'AGRADE' Program is designed for outstanding seniors who wish to complete bachelor's and master's degrees. For further details and eligibility requirements regarding the 'AGRADE' Program and Biological Sciences, contact the Department Advising Office, 1360 Biological Sciences Building.

Bioinformatics and Data Analysis (Undergraduate Certificate)

This certificate program utilizes existing course structure in Biological Sciences and Mathematics to provide the basic computational skills and biological framework for students to pursue careers in the broad area of Bioinformatics and Data Analysis. Students who receive this certificate will have completed a strong undergraduate program in statistics, statistical programing, cell biology and genetics, and will have hands-on experience in analyzing large biological data sets. Graduates will be well placed to compete for employment in entry level positions in the growing field of computer-based data analysis, including careers in personalized medicine, pharmaceuticals, medical diagnostics, and environmental impact and restoration, to name a few.

The Bioinformatics Certificate will be a joint effort of the Department of Mathematics and the Department of Biological Sciences. It is primarily designed to utilize the academic backgrounds of students from the two disciplines or parallel disciplines such as Neuroscience, and to fill in what would be the complementary missing background. We have identified courses that together would give students the exposure and competency to be awarded a Certificate in Bioinformatics. These are as follows:

MAT 2020 Calculus II (4 s.h.)

STA 2210 Probability and Statistics (4 s.h.)

MAT 2250 Elementary Linear Algebra (3 s.h.)

STA 5030 Statistical Computing and Data Analysis (3 s.h.) or BIO 5040 Biometry (4 s.h.)

BIO 2600 Introduction to Cell Biology (4 s.h.) or BIO 2550 Fundamentals of Cell Biology for Neuroscience (4 s.h.)

BIO 3070 Genetics 4 (s.h.)

BIO 5150 Genomics (3 s.h.) or BIO 5280 Bioinformatics (3 s.h.)

The two tables below show the course track for either majors in Biological Science (1) or Statistics (2). The listing includes 25-26 credits of course work encompassing prerequisite courses taken as part of the major (11-12 credits) as well as the **14 credits of courses unique** to the certificate program. Importantly, BIO 5150, BIO 5280 and BIO 5040 as well as STA 5030 include significant hands-on experience with large sets of biological data, and a student takes two of these as capstones for this Certificate in BioInformatics and Data Analysis.

1. Course list for Biological Sciences major: Top 3 are part of the major while bottom 4 are specific to the Certificate.

Code	Title	Credits
BIO 2600	Introduction to Cell Biology (OR BIO 2550)	4
BIO 3070	Genetics	4
STA 2210	Probability and Statistics	4
BIO 5040	Biometry (OR STA 5030 (3 hrs))	4
BIO 5150	Genomics (OR BIO 5280)	3
MAT 2020	Calculus II	4
MAT 2250	Elementary Linear Algebra	3

2. Course list for Statistics major: Top 3 are part of the major while bottom 4 are specific to the Certificate.

Code	Title	Credits
MAT 2020	Calculus II	4
MAT 2150	Differential Equations and Matrix Algebra	4
STA 2210	Probability and Statistics	4
BIO 2600	Introduction to Cell Biology (OR BIO 2550))	4
BIO 3070	Genetics	4
STA 5030	Statistical Computing and Data Analysis	3
BIO 5150	Genomics (OR BIO 5280)	3

Biological Sciences (B.A.)

The Bachelor of Arts degree is for students who desire a broad liberal arts education with specialization in biology. It is not recommended for students anticipating admission into graduate science programs or medical school. Students contemplating a major program in biological sciences should consult with a departmental undergraduate advisor no later than the beginning of the sophomore year.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students must receive a grade of C-minus or better in all biology courses. A grade point average of 2.0 (C) in both biology and general required courses is required for graduation.

Major Requirements

A minimum of 40 credits of BIO starting at BIO 1500 are required of the major as defined below. Courses through the 6000 level may be elected providing the proper prerequisites have been successfully completed.

Code	Title	Credits
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2600	Introduction to Cell Biology	4
BIO 2700	Evolution: Basic Concepts and Applications	3
BIO 3070	Genetics [2]	4-5
Students must complete additional coursework in BIO courses to reach 40 credits in BIO. Electives in BIO must be at the 3000 level or above. One course must include an upper level lab. One course must include Scientific Communication. Undergraduate research may be applied up to a max of 6 credits including the research seminar, UG research credits and honors thesis. [1]		
Courses that include upper level labs. BIO 3070 (satisfies the lab requirement only when elected for 5 credits), BIO 3250 & BIO 3251, BIO 3800, BIO 4120, BIO 4130, BIO 4350, BIO 4630, BIO 5040, BIO 5100, BIO 5440, BIO 5610.		
Courses that include Scientific Communication. BIO 4110, BIO 4120, BIO 4130, BIO 4370, BIO 5001, BIO 5150, BIO 5240, BIO 5280, BIO 5610/BIO 5620.		

[1] Courses required to complete major requirements listed above cannot also be used as BIO elective credit.

[2] If elected for honors credit, BIO 3070 is 5 credits and includes a lab.

Cognate Requirements

Code	Title	Credits
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240	Organic Chemistry I	4
MAT 1800	Elementary Functions [1]	4
STA 1020 or STA 2210	Elementary Statistics Probability and Statistics	3

[1] Students must start in the appropriate math course based upon placement exam or valid SAT/ACT scores. Students may attempt to place into a higher MAT course by taking the Placement Examination of the Department of Mathematics upon entry into the university.

Biological Sciences Honors (B.A. and B.S. Programs)

The Department participates in the honors program and works with individual students to develop a curriculum that satisfies honors degree requirements. Students interested in an honors degree should contact the departmental honors advisor.

Program Requirements: To achieve honors designation with the Bachelor of Arts or Bachelor of Science in Biological Sciences, students are

required to complete all University and major requirements (see above) including fourteen honors credits in Biology and an honors seminar (HON 4200-HON 4280).

The fourteen credits in Biological Sciences are comprised of:

Code	Title	Credits
8 credits of BIO courses with honors [1]		**8**
BIO 1500	Basic Life Diversity	
BIO 1510	Basic Life Mechanisms	
BIO 2600	Introduction to Cell Biology	
BIO 3070	Genetics	
BIO 3100	Cellular Biochemistry	
BIO 3200	Human Physiology	
BIO 3500	Ecology and the Environment	
BIO 6890	Introduction to Research Practice - Honors	1
BIO 6893	Honors Undergraduate Research in Biological Sciences (Student needs 3 credits of honors research (BIO 6891, 6892, 6893, 6894). Credits can be spread across multiple terms but must total a minimum of 3 cr. Honors UG research.)	3
BIO 6999	Honors Undergraduate Research Thesis	2
Total Credits		**14**

Code	Title	Credits
Honors Seminar		**3**
HON 4200	Seminar in Philosophy and Letters	
HON 4230	Seminar in Physical Science	
HON 4250	Seminar: Global Perspectives on Historical Studies	
HON 4260	Seminar in Foreign Culture	
HON 4280	General Honors Seminar	
Total Credits		**3**

To be awarded a BIO honors degree, students must accumulate seventeen honors credits as defined above. Students must also maintain a cumulative g.p.a. of at least a 3.3. Students completing department honors must also maintain a 3.3 g.p.a in BIO coursework.

[1] BIO courses without an honors section may be used if the professor is willing to do an honors option. Paperwork to do an honors option on a course is available from the Honors College.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Biological Sciences Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Biological Sciences (B.S.)

The Bachelor of Science degree is for those students who wish to follow a career in the sciences and/or those planning to enter post-graduate professional schools. Students contemplating a major program in biological sciences should consult with a Departmental undergraduate advisor no later than the beginning of the sophomore year.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students must receive a grade of C-minus or better in all biology courses. A grade point average of 2.0 (C) in both biology and general required courses is required for graduation.

Major Requirements

A minimum of 40 credits of BIO starting at BIO 1500 are required of the major as defined below. Courses through the 6000 level may be elected providing the proper prerequisites have been successfully completed.

Code	Title	Credits
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2600	Introduction to Cell Biology	4
BIO 2700	Evolution: Basic Concepts and Applications	3
BIO 3070	Genetics [2]	4-5
Students must complete additional coursework in BIO courses to reach 40 credits in BIO. Electives in BIO must be at the 3000 level or above. One course must include an upper level lab. One course must include Scientific Communication. Undergraduate research may be applied up to a max of 6 credits including the research seminar, UG research credits and honors thesis. [1]		
Courses that include upper level labs. BIO 3070 (satisfies the lab requirement only when elected for 5 credits), BIO 3250 & BIO 3251, BIO 3800, BIO 4120, BIO 4130, BIO 4350, BIO 4630, BIO 5040, BIO 5100, BIO 5440, BIO 5610.		
Courses that include Scientific Communication. BIO 4110, BIO 4120, BIO 4130, BIO 4370, BIO 5001, BIO 5150, BIO 5240, BIO 5280, BIO 5610/BIO 5620.		

[1] Courses required to complete major requirements listed above cannot also be used as BIO elective credit.

[2] If elected for honors credit, BIO 3070 is 5 credits and includes a lab.

Cognate Requirements

Code	Title	Credits
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240	Organic Chemistry I	4
CHM 2220	Organic Chemistry II	4
Select one of the following sequences:		10
Option 1		

PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	
Option 2		
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory	
MAT 2010	Calculus I [1]	4
MAT 2020	Calculus II	4
or STA 2210	Probability and Statistics	

[1] Students must start in the appropriate math course based upon placement exam or valid SAT/ACT scores. Students may attempt to place into a higher MAT course by taking the Placement Examination of the Department of Mathematics upon entry into the university.

Biological Sciences Honors (B.A. and B.S. Programs)

The Department participates in the honors program and works with individual students to develop a curriculum that satisfies honors degree requirements. Students interested in an honors degree should contact the departmental honors advisor.

Program Requirements: To achieve honors designation with the Bachelor of Arts or Bachelor of Science in Biological Sciences, students are required to complete all University and major requirements (see above) including fourteen honors credits in Biology and an honors seminar (HON 4200-HON 4280).

The fourteen credits in Biological Sciences are comprised of:

Code	Title	Credits
8 credits of BIO courses with honors [1]		**8**
BIO 1500	Basic Life Diversity	
BIO 1510	Basic Life Mechanisms	
BIO 2600	Introduction to Cell Biology	
BIO 3070	Genetics	
BIO 3100	Cellular Biochemistry	
BIO 3200	Human Physiology	
BIO 3500	Ecology and the Environment	
BIO 6890	Introduction to Research Practice - Honors	1
BIO 6893	Honors Undergraduate Research in Biological Sciences (Student needs 3 credits of honors research (BIO 6891, 6892, 6893, 6894). Credits can be spread across multiple terms but must total a minimum of 3 cr. Honors UG research.)	3
BIO 6999	Honors Undergraduate Research Thesis	2
Total Credits		**14**

Code	Title	Credits
Honors Seminar		**3**
HON 4200	Seminar in Philosophy and Letters	
HON 4230	Seminar in Physical Science	
HON 4250	Seminar: Global Perspectives on Historical Studies	
HON 4260	Seminar in Foreign Culture	
HON 4280	General Honors Seminar	
Total Credits		**3**

To be awarded a BIO honors degree, students must accumulate seventeen honors credits as defined above. Students must also maintain a cumulative g.p.a. of at least a 3.3. Students completing department honors must also maintain a 3.3 g.p.a in BIO coursework.

[1] BIO courses without an honors section may be used if the professor is willing to do an honors option. Paperwork to do an honors option on a course is available from the Honors College.

'AGRADE' Program (Accelerated Graduate Enrollment)

Maximum AGRADE credits

The Department of Biological Sciences offers the M.A. degree under the Plan C option requiring 32 credits of coursework. In the AGRADE pathway program, a maximum of 16 credits in approved graduate courses can be applied towards both the B.S. degree requirements and the M.A. degree requirements with the following further regulations.

Student eligibility

AGRADE applicants must have an overall grade point average of 3.3 or higher. Students can apply for AGRADE status in the semester they will reach 90 credits towards an undergraduate degree, ideally during the junior year. AGRADE status gives the applicant permission to take graduate level courses while still an undergraduate and have them count towards their B.S. degree. Only graduate courses taken after being granted AGRADE status can be transferred to the M.A. degree program. We encourage early discussions with an undergraduate student advisor during the sophomore year to identify undergraduate electives that are required prerequisites for upper level AGRADE eligible courses, while also ensuring that all requirements for the B.S. degree are completed.

Application procedures

Schedule appointment with the AGRADE pathway designated undergraduate advisor of the department to generate a preliminary Plan of Work for review by the departmental Graduate Officer. The departmental Graduate Officer will review the Plan of Work proposal and make an AGRADE admission decision, notifying the applicant and the CLAS graduate office. The CLAS Graduate office will notify the Records Office of the student's admission into the AGRADE program.

Advising

Upon admission, the Graduate Officer of the Department of Biological Sciences will be assigned as the M.A. student Advisor. Alternatively, any graduate faculty member of the department may serve this role per request of the Graduate Officer or the student.

M. A. Program Plan of Work

Upon admission to the AGRADE pathway program, students will finalize their Plan of Work for the M.A. program, specifying the courses that will be taken in the AGRADE status as well as the courses required for the balance of the M.A. degree. The AGRADE courses must be approved by both the Undergraduate and Graduate Officers of the Department of Biological Sciences. Of note:

- In courses permitting both undergraduate and graduate students to enroll, AGRADE students will be graded based on the graduate level grading scales and requirements.

- AGRADE students accepted to the MA program need to complete a minimum of 16 credits from BIO courses

Approval of regular graduate admission status

Students must also apply separately for admission to the M.A. program after admission to the AGRADE pathway program. They typically do so in their senior year when they are taking courses under the AGRADE status. All admission application materials required by the department for regular M.A. program admission must be available at this time. This application will be reviewed for formal admission into the department's graduate program. To qualify, students must have maintained a GPA average of 3.5 or higher in the courses taken after AGRADE admission. In the term of regular graduate admission, all AGRADE courses that were completed with a grade of B or higher will be assigned to the student's graduate record.

Transfer of courses

Only AGRADE-approved courses in which the student has earned a B or higher will transfer to the graduate transcript. Once in the M.A. program, students may be required to repeat an AGRADE course in which they earned a grade lower than B.

Administration

The Graduate Officer of the Department of Biological Sciences will have administrative responsibility for the AGRADE pathway program.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Biological Sciences Minor

Completion of the minor in biological sciences requires twenty-one credits of BIO coursework as indicated below. At least 12 credits in BIO must be completed in residence at WSU.

Code	Title	Credits
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2600	Introduction to Cell Biology	4
Additional three (3) BIO course electives 3000 level or higher (9 credits minimum) must be lecture based		9
Total Credits		**21**

Chemistry

Office: 169 Chemistry Building; 313-577-7784
Chairperson: Matthew J. Allen
Associate Chairperson: Jeremy Kodanko
Academic Services Officers: Erin Bachert, Jackie Kennedy, Melissa Rochon
https://clas.wayne.edu/chemistry

The courses offered by this Department are designed to serve the needs of three distinct groups of students:

1. those majoring in chemistry with the intention of entering the chemical profession,
2. those majoring in chemistry with the intention of entering other professional fields, and
3. those majoring in other subjects who desire to elect chemistry courses as part of their programs. Students intending to major in chemistry should refer to the program tabs for more information.

Students with no prior experience in chemistry may elect CHM 1000 (for non-science majors); CHM 1020 (for non-science majors and certain preprofessional students); CHM 1060 (for non-science majors and certain preprofessional students); or CHM 1040, which is intended for students who need higher-level chemistry work but who fail to qualify for CHM 1100 or CHM 1125 or whose math/science skills are weak.

Students who have had a year or more of high school chemistry or the equivalent may register for CHM 1100 or CHM 1125 (for science and preprofessional majors) provided that they meet the other eligibility requirements outlined below. Election of CHM 1000, CHM 1020, CHM 1100, or CHM 1125, or will satisfy the University General Education Requirement for a physical science.

Terminal Chemistry Courses

CHM 1000 is a terminal survey course designed primarily to acquaint non-science students with the principles of chemistry in a format requiring minimal mathematical skills. When elected for four credits, this course includes a laboratory which satisfies the University General Education Requirement for a laboratory course.

CHM 1020 and CHM 1030 represent a terminal sequence designed to introduce the basic principles of chemistry and survey the various fields of chemistry for non-science majors and certain pre-professional students such as pre-nursing, occupational health, engineering technicians and others.

CHM 1060 is a single terminal course designed to introduce the basic principles of chemistry and survey the various fields of chemistry for non-science majors and certain pre-professional students such as pre-nursing, occupational health and others.

Foundational Chemistry

CHM 1040 is designed as the beginning chemistry course for science majors, pre-professional students, and other students who have had little prior experience in chemistry and/or mathematics. CHM 1100 (or CHM 1125) and CHM 1130 are complementary and corequisite courses which should be taken during the same term. is a classroom-focused course. is a laboratory-focused course. This also describes the succeeding corequisite sets CHM 1140/CHM 1150, CHM 1240/CHM 1250, and CHM 2220/CHM 2230.

General Chemistry

CHM 1100/CHM 1130 are designed as the beginning courses for science majors and preprofessional students who have a good background in high school chemistry. (CHM 1125/CHM 1130 is the sequence for

students in the James and Patricia College of Engineering.) Eligibility for CHM 1100/CHM 1130 must be established by passing a placement examination, covering basic high school material, which is administered by Testing, Evaluation, and Student Life Research, 698 Student Center Building. The qualifying examination is administered several times prior to and during registration.

The sequence of CHM 1100/CHM 1130 and CHM 1140/CHM 1150 are prerequisite to all higher numbered courses in chemistry.

Advanced Placement Credit

Advanced placement college credit in chemistry shall be awarded for scores earned in the chemistry placement examination as follows:

Score of 4 or 5: Credit awarded for CHM 1100/CHM 1130 and CHM 1140 (eight credits); student is eligible to enroll in CHM 1240/CHM 1250.

Score of 3: Credit awarded for CHM 1100/CHM 1130 (five credits); student is eligible to enroll in CHM 1140/CHM 1150.

- Biochemistry and Chemical Biology (B.S.) (p. 255)
- Biochemistry and Chemical Biology Minor (p. 260)
- Cannabis Chemistry (Undergraduate Certificate) (p. 261)
- Chemistry (B.A.) (p. 256)
- Chemistry (B.S.) (p. 257)
- Chemistry Minor (p. 260)

Biochemistry and Chemical Biology (B.S.)

This degree offers students the opportunity to develop in-depth knowledge in five areas of biological chemistry (bioorganic, bioinorganic, bioanalytical, biophysical, and health sciences). The program teaches key chemical concepts and develops student ability to apply them to a wide variety of biological problems. The program serves to develop and train graduates who will be well prepared to enter graduate or professional schools as well as careers in the chemical, pharmaceutical, biomedical, agricultural and bioinformatic industries.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students planning to major in biochemistry and chemical biology should consult with an advisor in the Chemistry Department not later than the beginning of their sophomore year.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Those who wish to follow the curriculum in the College for the B.S. with a major in Biochemistry and Chemical Biology degree must complete the following courses:

Code	Title	Credits
CHM 1100	General Chemistry I	4
CHM 1130	General Chemistry I Laboratory	1
CHM 1140	General Chemistry II	4
CHM 1150	General Chemistry II Laboratory	1
CHM 1240	Organic Chemistry I	4
CHM 1250	Organic Chemistry I Laboratory	1
CHM 2220	Organic Chemistry II	4
CHM 2230	Organic Chemistry II Laboratory	1
CHM 3000	Metals in Biology	3
CHM 3120	Analytical Chemistry	3
CHM 3130	Analytical Chemistry Laboratory	1
CHM 5400	Biological Physical Chemistry	3
CHM 6610	Biological Chemistry Laboratory	3
CHM 6620	Metabolism: Pathways and Regulation	3
CHM 6635	Tools of Molecular Biology	3
CHM 6640	Molecular Biology	3
CHM 5999	Research in Chemistry [1]	2-4
or CHM 5998	Honors Thesis Research in Chemistry	
or CHM 5900	Biomedical Research as Discovery	
Select three advanced electives from the following:		8-10
CHM 5020	Intermediate Inorganic Chemistry II	
CHM 5160	Instrumental Analytical Chemistry	
CHM 5510	Chemical Synthesis Laboratory	
CHM 5570	Instrumental Analytical Chemistry Laboratory	
CHM 6070	Advanced Bioinorganic Chemistry	
CHM 6160	Separation Science	
CHM 6170	Advances in Bioanalytical Chemistry	
CHM 6200	Organic Structures and Mechanisms	
CHM 6240	Organic Spectroscopy	
CHM 6270	Advanced Bioorganic Chemistry and Drug Design	
CHM 6680	Clinical and Molecular Aspects of Cancer	
CHM 6700	Green Chemistry: Mindful Design in Science, Engineering, and Medicine	
BIO 5280	Bioinformatics	
BIO 5330	Principles and Applications of Biotechnology I	
BIO 5640	Cancer Biology	
BIO 6000	Molecular Cell Biology I	
BIO 6010	Molecular Cell Biology II	
BIO 6160	Proteins and Proteomics	
PHC 6500	Drugs and the Addictive Process	
PHC 7010	Pharmacology Lecture	
PHC 7410	Principles of Toxicology	
IM 7010	Fundamentals of Immunology	
IM 7020	Fundamentals of Microbiology	
IM 7030	Molecular Biology of Viruses	
PHY 2130	Physics for the Life Sciences I	4
or PHY 2170	University Physics I for Scientists and Engineers	
PHY 2131	Physics for the Life Sciences Experimental Laboratory	1
or PHY 2171	University Physics I Experimental Laboratory	
PHY 2140	Physics for the Life Sciences II	4
or PHY 2180	University Physics II for Scientists and Engineers	
PHY 2141	Physics for the Life Sciences Laboratory	1
or PHY 2181	University Physics II Experimental Laboratory	
MAT 2010	Calculus I	4
STA 1020	Elementary Statistics	3

BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
Select one of the following:		4-5
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	
BIO 2600	Introduction to Cell Biology	
BIO 2870	Anatomy and Physiology	
BIO 3250 & BIO 3251	Molecular Mechanisms of Microbiology and Molecular Mechanisms of Microbiology Lab	
Total Credits		**77-82**

[1] By the first semester of the senior year, the student must enroll for at least two credits in independent research (CHM 5999 or CHM 5998) or two credits of CHM 5900. The student must work under the direction of a faculty member of the Department of Chemistry. It is advised that the student consult with the faculty during the term prior to beginning work, in order to choose the area and staff member under whose direction this research will be carried out. At the conclusion of the project, the student must present a written report for approval by the Chairperson of the Department. With prior approval by the Chairperson of the Department, students may be allowed to substitute to 2 credits of an internship experience (CHM 6991) in place of a research project.

A minimum grade of C is required in prerequisite chemistry courses.

At least fifteen credits in chemistry plus Research in Chemistry (CHM 5999) must be earned at Wayne State University.

Biochemistry and Chemical Biology Honors (B.S. Program)

1. All regular requirements for the Bachelor of Science with a major in Biochemistry and Chemical Biology degree must be fulfilled (no substitutions).
2. Minimum g.p.a.: 3.3 overall; 3.3 in chemistry courses.
3. Minimum of four credits must be earned in independent research (CHM 5998); this should commence in the junior year (or earlier).
4. Completion of one semester of an HON 42xx-level honors seminar. (For information about honors-designated coursework available each semester, including the required 42xx-level Honors seminar, visit the Honors College website (https://honors.wayne.edu/).) This course may be used to partially fulfill college Group Requirements and can be elected in either the junior or senior year.
5. Submission of a B.S. thesis (covering the undergraduate independent research project), or of a manuscript suitable for publication in a refereed chemical journal, to the Honors Subcommittee in Chemistry which will act to accept or reject the thesis (or manuscript).
6. An oral examination covering the B.S. Honors Research Project, by the Honors Subcommittee in Chemistry.

The AGRADE program enables highly qualified students pursuing a B.S. with a major in Chemistry or a B.S. with a major in Biochemistry and Chemical Biology to enroll simultaneously in the M.A. with a major in Chemistry. Students will be able to apply up to a maximum of 16 credits towards both the undergraduate and graduate degrees. AGRADE applicants must have a cumulative grade point average (g.p.a.) of 3.50 or better. Applicants are also expected to have performed at a superior level in the major, as determined by the department, *and the required g.p.a. in the major shall not be less than 3.6 at the time of application.* The earliest students may be admitted into the AGRADE Program is the semester in which they complete 90 credits towards the undergraduate degree. Students should consult with an undergraduate advisor in their major department to seek advice about the appropriate time to apply for AGRADE status.

Requirements

Depending on the degree, students may use up to 16 credits from the following courses to count towards their B.S. and M.A. degrees. Only those AGRADE-approved courses in which the student has earned a B or higher will transfer to the graduate transcript. Once in the master's program, students may be required to repeat an AGRADE course in which they earn less than a B grade.

Code	Title	Credits
CHM 6070	Advanced Bioinorganic Chemistry	3
CHM 6090	Organometallic Chemistry	3
CHM 6170	Advances in Bioanalytical Chemistry	3
CHM 6240	Organic Spectroscopy	3
CHM 6270	Advanced Bioorganic Chemistry and Drug Design	3
CHM 6440	Computational Chemistry	3
CHM 6610	Biological Chemistry Laboratory	3
CHM 6620	Metabolism: Pathways and Regulation	3
CHM 6635	Tools of Molecular Biology	3
CHM 6640	Molecular Biology	3

Chemistry (B.A.)

This curriculum allows students to major with a maximum of forty-six credits in chemistry while providing flexibility for exposure in other cognate fields. This degree is appropriate for students in science-oriented pre-professional programs such as medicine and dentistry, as well as for students entering secondary science teaching. For individuals interested in entering a graduate program in chemistry or pursuing a position in the chemical industry upon graduation, it is recommended that the additional requirements for professional certification by the American Chemical Society (see *Requirements* tab) be completed.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students planning to major in chemistry should consult with an advisor in the Chemistry Department not later than the beginning of their sophomore year.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Those who wish to follow the general curriculum in the College of Liberal Arts and Sciences for the B.A. degree with a major in chemistry must complete the following courses:

Code	Title	Credits
CHM 1100	General Chemistry I	4
CHM 1130	General Chemistry I Laboratory	1
CHM 1140	General Chemistry II	4
CHM 1150	General Chemistry II Laboratory	1

CHM 1240	Organic Chemistry I	4
CHM 1250	Organic Chemistry I Laboratory	1
CHM 2220	Organic Chemistry II	4
CHM 2230	Organic Chemistry II Laboratory	1
CHM 3020	Intermediate Inorganic Chemistry I	3
or CHM 3000	Metals in Biology	
CHM 3120	Analytical Chemistry	3
CHM 3130	Analytical Chemistry Laboratory	1
CHM 5400	Biological Physical Chemistry	3
or CHM 5420	Physical Chemistry I	
CHM 5550	Physical Chemistry Laboratory	2-3
or CHM 5510	Chemical Synthesis Laboratory	
or CHM 5020	Intermediate Inorganic Chemistry II	
CHM 5600	Survey of Biochemistry	3
or CHM 6620	Metabolism: Pathways and Regulation	
Select at least one of the following that is not being used in a different category:		3-4
CHM 5020	Intermediate Inorganic Chemistry II	
CHM 5160	Instrumental Analytical Chemistry	
CHM 5440	Physical Chemistry II	
CHM 5510	Chemical Synthesis Laboratory	
CHM 6060	Materials Chemistry and Engineering	
CHM 6070	Advanced Bioinorganic Chemistry	
CHM 6090	Organometallic Chemistry	
CHM 6100	Theory of Analytical Chemistry	
CHM 6120	Electroanalytical Chemistry	
CHM 6160	Separation Science	
CHM 6170	Advances in Bioanalytical Chemistry	
CHM 6180	Mass Spectrometry	
CHM 6200	Organic Structures and Mechanisms	
CHM 6220	Organic Reactions and Synthesis	
CHM 6240	Organic Spectroscopy	
CHM 6270	Advanced Bioorganic Chemistry and Drug Design	
CHM 6410	Statistical Thermodynamics	
CHM 6440	Computational Chemistry	
CHM 6500	Modern Methods in Experimental Chemistry	
CHM 6620	Metabolism: Pathways and Regulation	
CHM 6635	Tools of Molecular Biology	
CHM 6640	Molecular Biology	
CHM 6680	Clinical and Molecular Aspects of Cancer	
CHM 6700	Green Chemistry: Mindful Design in Science, Engineering, and Medicine	
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2171	University Physics I Experimental Laboratory	1
PHY 2180	University Physics II for Scientists and Engineers	4
PHY 2181	University Physics II Experimental Laboratory	1
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2250	Elementary Linear Algebra	3
Total Credits		**59-61**

A minimum grade of 'C' is required in prerequisite chemistry courses.

At least fifteen credits in chemistry must be earned at Wayne State University.

ACS Certification

B.A. candidates may receive certification by the American Chemical Society upon graduation by completing the following in addition to the Chemistry courses required for the B.A. degree:

Code	Title	Credits
MAT 2030	Calculus III	4
CHM 5420	Physical Chemistry I	3
CHM 5440	Physical Chemistry II (rather than CHM 5400)	4
CHM 5160	Instrumental Analytical Chemistry	3
Select two of the following:		4-5
CHM 5510	Chemical Synthesis Laboratory	
CHM 5570	Instrumental Analytical Chemistry Laboratory	
CHM 5999	Research in Chemistry	
Total Credits		**18-19**

To receive certification, students must submit an application along with a transcript to the Chemistry Department Curriculum Committee prior to the end of the final term.

Chemistry Honors (B.A. Program)

1. All B.A. requirements in chemistry must be fulfilled.
2. Minimum g.p.a.: 3.3 overall; 3.3 in chemistry courses.
3. Minimum of four credits in independent research (CHM 5998). Research should commence in the junior year (or earlier).
4. Completion of one semester of an Honors Program 4200-level seminar (consult the Schedule of Classes under 'Honors Program'). This course may be used in partial fulfillment of College Group Requirements and can be elected in either the junior or senior year.
5. At least twelve credits in honors-designated course work.
6. Submission of a B.A. thesis or of a manuscript suitable for publication in a refereed chemical journal (covering the undergraduate research project) to the Honors Subcommittee in Chemistry which will act to accept or reject the thesis (or manuscript).
7. An oral examination covering the B.A. Honors Research Project, by the Honors Subcommittee in Chemistry.

Chemistry (B.S.)

B.S. candidates may receive certification by the American Chemical Society upon graduation. This degree offers a strong background for students interested in a career in chemistry or in a professional field with a strong reliance on chemistry. It is particularly recommended for students planning to do graduate work in chemistry and chemically-related fields. The degree is offered with three options:

1. Bachelor of Science in Chemistry
2. Bachelor of Science in Chemistry with a concentration in biochemistry
3. Bachelor of Science in Chemistry with a concentration in materials

The first option is designed primarily for those planning to enter the chemical profession and other professional fields. The second option is designed primarily for students planning careers in biochemical and biomedical areas. The third option is designed primarily for students interested in materials science. (Note: Those interested in Phi Beta Kappa should consult with the secretary of the Wayne State University Chapter in order to determine the maximum number of chemistry credits allowed.)

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students planning to major in chemistry should consult with an advisor in the Chemistry Department not later than the beginning of their sophomore year.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Chemistry B.S. - Option One

Major Requirements

Those who wish to follow the curriculum in the College for the B.S. in Chemistry degree must complete the following courses:

Code	Title	Credits
CHM 1100	General Chemistry I	4
CHM 1130	General Chemistry I Laboratory	1
CHM 1140	General Chemistry II	4
CHM 1150	General Chemistry II Laboratory	1
CHM 1240	Organic Chemistry I	4
CHM 1250	Organic Chemistry I Laboratory	1
CHM 2220	Organic Chemistry II	4
CHM 2230	Organic Chemistry II Laboratory	1
CHM 3020	Intermediate Inorganic Chemistry I	3
CHM 3120	Analytical Chemistry	3
CHM 3130	Analytical Chemistry Laboratory	1
CHM 5020	Intermediate Inorganic Chemistry II	3
CHM 5160	Instrumental Analytical Chemistry	3
CHM 5420	Physical Chemistry I	3
CHM 5440	Physical Chemistry II	4
CHM 5510	Chemical Synthesis Laboratory	3
CHM 5550	Physical Chemistry Laboratory	2
CHM 5600	Survey of Biochemistry	3
CHM 5570	Instrumental Analytical Chemistry Laboratory	2
Select one of the following:		3-4
CHM 6060	Materials Chemistry and Engineering	
CHM 6070	Advanced Bioinorganic Chemistry	
CHM 6090	Organometallic Chemistry	
CHM 6100	Theory of Analytical Chemistry	
CHM 6120	Electroanalytical Chemistry	
CHM 6160	Separation Science	
CHM 6170	Advances in Bioanalytical Chemistry	
CHM 6180	Mass Spectrometry	
CHM 6200	Organic Structures and Mechanisms	
CHM 6220	Organic Reactions and Synthesis	
CHM 6240	Organic Spectroscopy	
CHM 6270	Advanced Bioorganic Chemistry and Drug Design	
CHM 6410	Statistical Thermodynamics	
CHM 6470	Quantum Chemistry	
CHM 6440	Computational Chemistry	
CHM 6500	Modern Methods in Experimental Chemistry	
CHM 6620	Metabolism: Pathways and Regulation	
CHM 6635	Tools of Molecular Biology	
CHM 6640	Molecular Biology	
CHM 6680	Clinical and Molecular Aspects of Cancer	
CHM 6700	Green Chemistry: Mindful Design in Science, Engineering, and Medicine	
CHM 5999	Research in Chemistry [1]	2-4
or CHM 5998	Honors Thesis Research in Chemistry	
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2171	University Physics I Experimental Laboratory	1
PHY 2180	University Physics II for Scientists and Engineers	4
PHY 2181	University Physics II Experimental Laboratory	1
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2250	Elementary Linear Algebra	3
Total Credits		**76-79**

[1] By the first semester of the senior year, the student must enroll for at least two credits in independent research (CHM 5999 or CHM 5998). The student must work under the direction of a faculty member of the Department of Chemistry. It is advised that the student consult with the faculty during the term prior to beginning work, in order to choose the area and staff member under whose direction this research will be carried out. At the conclusion of the project, the student must present a written report for approval by the Chairperson of the Department. With prior approval by the Chairperson of the Department, students may be allowed to substitute to 2 credits of an internship experience (CHM 6991) in place of a research project.

A minimum grade of C is required in prerequisite chemistry courses.

At least fifteen credits in chemistry plus Research in Chemistry (CHM 5999) must be earned at Wayne State University.

Substitutions in B.S. Curriculum (Option One ONLY): In recognition of the diverse backgrounds required for various careers in chemistry, students may petition the Chemistry Curriculum Committee for approval to substitute advanced courses numbered 5000 or above from another discipline (such as physics, mathematics, biology, engineering) for the following B.S. requirements:

Code	Title	Credits
MAT 2250	Elementary Linear Algebra	3
CHM 5510	Chemical Synthesis Laboratory	3
CHM 5570	Instrumental Analytical Chemistry Laboratory	2
Chemistry elective		

Such petitions for substitutions must be submitted in writing accompanied by a detailed statement of justification and a current transcript, and must be approved prior to registration in the alternative courses. Decisions regarding approval of such requests will be based on their legitimacy in terms of the student's professional goals. It is suggested that students consult the Chairperson of the Chemistry Curriculum Committee before filing such a petition.

Chemistry B.S. - Option Two (Biochemistry)

Major Requirements

Those who wish to follow the curriculum for the B.S. in Chemistry with a concentration in biochemistry must complete the following courses (NO

substitutions are allowed in the Option Two program: B.S. in Chemistry with a concentration in biochemistry):

Code	Title	Credits
CHM 1100	General Chemistry I	4
CHM 1130	General Chemistry I Laboratory	1
CHM 1140	General Chemistry II	4
CHM 1150	General Chemistry II Laboratory	1
CHM 1240	Organic Chemistry I	4
CHM 1250	Organic Chemistry I Laboratory	1
CHM 2220	Organic Chemistry II	4
CHM 2230	Organic Chemistry II Laboratory	1
CHM 3020	Intermediate Inorganic Chemistry I	3
CHM 3120	Analytical Chemistry	3
CHM 3130	Analytical Chemistry Laboratory	1
CHM 5020	Intermediate Inorganic Chemistry II	3
CHM 5160	Instrumental Analytical Chemistry	3
CHM 5400	Biological Physical Chemistry	3
or CHM 5420	Physical Chemistry I	
CHM 5550	Physical Chemistry Laboratory	2
CHM 5570	Instrumental Analytical Chemistry Laboratory	2
CHM 6610	Biological Chemistry Laboratory	3
CHM 6620	Metabolism: Pathways and Regulation	3
CHM 6640	Molecular Biology	3
Select one of the following:		3-4
CHM 5510	Chemical Synthesis Laboratory	
MAT 2250	Elementary Linear Algebra	
CHM 5999	Research in Chemistry [1]	2-4
or CHM 5998	Honors Thesis Research in Chemistry	
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2171	University Physics I Experimental Laboratory	1
PHY 2180	University Physics II for Scientists and Engineers	4
PHY 2181	University Physics II Experimental Laboratory	1
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
Select one of the following:		4-5
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	
BIO 2600	Introduction to Cell Biology	
BIO 3250 & BIO 3251	Molecular Mechanisms of Microbiology and Molecular Mechanisms of Microbiology Lab	
BIO 3070	Genetics	4
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
Total Credits		**84-88**

[1] By the first semester of the senior year, the student must enroll for at least two credits in independent research (CHM 5999 or CHM 5998). The student must work under the direction of a faculty member of the Department of Chemistry. It is advised that the student consult with the faculty during the term prior to beginning work, in order to choose the area and staff member under whose direction this research will be carried out. At the conclusion of the project, the student must present a written report for approval by the Chairperson of the Department. With prior approval by the Chairperson of the Department, students may be allowed to substitute to 2 credits of an internship experience (CHM 6991) in place of a research project.

A minimum grade of C is required in prerequisite chemistry courses.

At least fifteen credits in chemistry plus Research in Chemistry (CHM 5999) must be earned at Wayne State University.

Chemistry B.S. - Option Three (Materials)

Major Requirements

Those who wish to follow the curriculum for the B.S. in Chemistry with a concentration in materials must complete the following courses (NO substitutions are allowed in the Option Three program: B.S. in Chemistry with a concentration in materials):

Code	Title	Credits
CHM 1100	General Chemistry I	4
CHM 1130	General Chemistry I Laboratory	1
CHM 1140	General Chemistry II	4
CHM 1150	General Chemistry II Laboratory	1
CHM 1240	Organic Chemistry I	4
CHM 1250	Organic Chemistry I Laboratory	1
CHM 2220	Organic Chemistry II	4
CHM 2230	Organic Chemistry II Laboratory	1
CHM 3020	Intermediate Inorganic Chemistry I	3
CHM 3120	Analytical Chemistry	3
CHM 3130	Analytical Chemistry Laboratory	1
CHM 5020	Intermediate Inorganic Chemistry II	3
CHM 5160	Instrumental Analytical Chemistry	3
CHM 5420	Physical Chemistry I	3
CHM 5440	Physical Chemistry II	4
CHM 5550	Physical Chemistry Laboratory	2
CHM 5570	Instrumental Analytical Chemistry Laboratory	2
CHM 5600	Survey of Biochemistry	3
CHM 6060	Materials Chemistry and Engineering	3
or MSE 5350	Polymer Science	
CHM 5999	Research in Chemistry [1]	2-4
or CHM 5998	Honors Thesis Research in Chemistry	
PHY 2170	University Physics I for Scientists and Engineers	4
PHY 2171	University Physics I Experimental Laboratory	1
PHY 2180	University Physics II for Scientists and Engineers	4
PHY 2181	University Physics II Experimental Laboratory	1
BE 1300	Basic Engineering II: Materials Science for Engineering Applications	3
BE 1310	Materials Science for Engineering: Laboratory	1
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2250	Elementary Linear Algebra	3
MSE 5650	Surface Science	3
Total Credits		**80-82**

[1] In addition, students must enroll for at least two credits in independent research (CHM 5999 or CHM 5998) by the first semester of their senior year. Research must be conducted under the direction of a faculty member of the Department of Chemistry. It is advised that the student consult with the faculty during the term prior to beginning work, in order to choose the area and staff member under whose direction this research will be carried out. At the conclusion of the project, the student must present a written report for approval by the Chairperson of the Department. With prior approval by the Chairperson of the

Department, students may be allowed to substitute to 2 credits of an internship experience (CHM 6991) in place of a research project.

A minimum grade of C is required in prerequisite chemistry courses.

At least fifteen credits in chemistry plus Research in Chemistry (CHM 5999 or CHM 5998) must be earned at Wayne State University.

Chemistry Honors (B.S. Program)

1. *All* regular requirements for the Bachelor of Science in Chemistry degree must be fulfilled (no substitutions).
2. Minimum g.p.a.: 3.3 overall; 3.3 in chemistry courses.
3. Minimum of four credits must be earned in independent research (CHM 5998); this should commence in the junior year (or earlier).
4. Completion of one semester of an HON 4200-level honors seminar. This course may be used to partially fulfill college Group Requirements and can be elected in either the junior or senior year.
5. Submission of a B.S. thesis (covering the undergraduate independent research project), or of a manuscript suitable for publication in a refereed chemical journal, to the Honors Subcommittee in Chemistry which will act to accept or reject the thesis (or manuscript).
6. An oral examination covering the B.S. Honors Research Project, by the Honors Subcommittee in Chemistry.

The AGRADE program enables highly qualified students pursuing a B.S. with a major in Chemistry or a B.S. with a major in Biochemistry and Chemical Biology to enroll simultaneously in the M.A. with a major in Chemistry. Students will be able to apply up to a maximum of 16 credits towards both the undergraduate and graduate degrees. AGRADE applicants must have a cumulative grade point average (g.p.a.) of 3.50 or better. Applicants are also expected to have performed at a superior level in the major, as determined by the department, *and the required g.p.a. in the major shall not be less than 3.6 at the time of application.* The earliest students may be admitted into the AGRADE Program is the semester in which they complete 90 credits towards the undergraduate degree. Students should consult with an undergraduate advisor in their major department to seek advice about the appropriate time to apply for AGRADE status.

Requirements

Depending on the degree, students may use up to 16 credits from the following courses to count towards their B.S. and M.A. degrees. Only those AGRADE-approved courses in which the student has earned a B or higher will transfer to the graduate transcript. Once in the master's program, students may be required to repeat an AGRADE course in which they earn less than a B grade.

Code	Title	Credits
CHM 6070	Advanced Bioinorganic Chemistry	3
CHM 6090	Organometallic Chemistry	3
CHM 6170	Advances in Bioanalytical Chemistry	3
CHM 6240	Organic Spectroscopy	3
CHM 6270	Advanced Bioorganic Chemistry and Drug Design	3
CHM 6440	Computational Chemistry	3
CHM 6610	Biological Chemistry Laboratory	3
CHM 6620	Metabolism: Pathways and Regulation	3
CHM 6635	Tools of Molecular Biology	3
CHM 6640	Molecular Biology	3

Biochemistry and Chemical Biology Minor

Students majoring in other fields who desire to obtain a minor in biochemistry and chemical biology must complete the following:

Code	Title	Credits
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
CHM 2220	Organic Chemistry II	4
CHM 6620	Metabolism: Pathways and Regulation	3
Select three additional credits at Wayne State University from the following:		3
CHM 6270	Advanced Bioorganic Chemistry and Drug Design	
CHM 6635	Tools of Molecular Biology	
CHM 6640	Molecular Biology	
Total Credits		**25**

Chemistry Minor

Students majoring in other fields who desire to obtain a minor in chemistry must complete the following courses:

Code	Title	Credits
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
CHM 2220	Organic Chemistry II	4
Select six additional credits earned at Wayne State University in Chemistry courses numbered 3000 or above, typically satisfied from a combination of the following: [1]		6
CHM 3000	Metals in Biology	
CHM 3020	Intermediate Inorganic Chemistry I	
CHM 3120	Analytical Chemistry	
CHM 5020	Intermediate Inorganic Chemistry II	
CHM 5160	Instrumental Analytical Chemistry	
CHM 5400	Biological Physical Chemistry	
CHM 5420	Physical Chemistry I	
CHM 5440	Physical Chemistry II	
CHM 5600	Survey of Biochemistry	
CHM 5510	Chemical Synthesis Laboratory	
CHM 6060	Materials Chemistry and Engineering	
CHM 6070	Advanced Bioinorganic Chemistry	
CHM 6120	Electroanalytical Chemistry	
CHM 6160	Separation Science	
CHM 6170	Advances in Bioanalytical Chemistry	
CHM 6180	Mass Spectrometry	
CHM 6200	Organic Structures and Mechanisms	
CHM 6220	Organic Reactions and Synthesis	
CHM 6240	Organic Spectroscopy	
CHM 6270	Advanced Bioorganic Chemistry and Drug Design	

CHM 6410	Statistical Thermodynamics	
CHM 6440	Computational Chemistry	
CHM 6620	Metabolism: Pathways and Regulation	
CHM 6635	Tools of Molecular Biology	
CHM 6640	Molecular Biology	
CHM 6680	Clinical and Molecular Aspects of Cancer	
CHM 6700	Green Chemistry: Mindful Design in Science, Engineering, and Medicine	
Total Credits		**25**

[1] Excluding research courses (CHM 2999, CHM 5998, CHM 5999, etc.).

Cannabis Chemistry (Undergraduate Certificate)

Cannabis chemistry is a field of chemistry that focuses on the chemistry of cannabinoid-containing compounds such as cannabis and CBD oils. The certificate in cannabis chemistry will give students both the theoretical and practical knowledge of how to perform analysis in this area of study. In addition to learning the science of cannabis, students will explore topics such as ethics, law, politics and regulation of the cannabis industry.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students holding any previous undergraduate degree from an accredited institution with a minimum of a 2.5 g.p.a. are eligible to apply.

Program Requirements

The Cannabis Chemistry Undergraduate Certificate requires the completion of a minimum of 15 credits. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship.

Code	Title	Credits
Required Courses		
CHM 3120 & CHM 3130	Analytical Chemistry and Analytical Chemistry Laboratory	4
CHM 5999	Research in Chemistry	3
CHM 5570	Instrumental Analytical Chemistry Laboratory	2
CHM 6160	Separation Science	3
CHM 4850	Frontiers in Chemistry *	1
CHM 6740	Laboratory Safety *	2
Total Credits		**15**

* Due to the nature of the topic, ethics will be presented in the seminar course (CHM 4850) and the responsible conduct of research course (CHM 6740).

Classical and Modern Languages, Literatures, and Cultures

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https://clas.wayne.edu/languages

This Department offers courses and programs of instruction in fourteen different languages. In addition to language learning and Global Studies, the Department focuses on the cultures and literatures of ancient Greece and Rome, as well as the modern world, in courses taught both in languages indigenous to these regions as well as in English translation. The study of other languages, literatures, and cultures not only provides important perspectives on the world, but also sharpens analytical and reasoning skills, deepens understanding of English, and enhances the quality of one's writing. Linguistic and broadly-based cultural studies provide excellent grounding for various professional programs, including law, business, medicine or health sciences, teaching at the high school or university level, library and information science, and museum practice. Languages, literatures, and cultures are also excellent foundations for students interested in pursuing careers that do not require post-graduate education, for example, in government, publishing, tourism, and business, any field in which intelligence, communication skills, and a broad liberal education are valued.

The Department offers programs in both major and minor concentration as well as cognate course work that can provide perspectives for majors in other departments. A student who wishes to major or minor in one of our degree programs should meet with a Departmental advisor as soon as possible after entering the University.

Majors

- Global Studies (B.A.) (p. 262)
- World Languages, Literatures, and Cultures (B.A.) (p. 265)

Minors

- Arabic Minor (p. 269)
- Asian Studies Minor (p. 270)
- Classical Civilization Minor (p. 270)
- Folklore and Fairy-Tale Studies Minor (p. 270)
- French Minor (p. 270)
- German Minor (p. 270)
- Global Studies Minor (p. 271)
- Israeli Studies Minor (p. 271)
- Italian Minor (p. 271)
- Latin Minor (p. 272)
- Modern Greek Studies Minor (p. 271)
- Near Eastern Studies Minor (p. 272)
- Polish Minor (p. 272)
- Russian Minor (p. 272)
- Spanish Minor (p. 272)

Certificates

- Arabic for the Health Care Professions (Undergraduate Certificate) (p. 272)
- Professional Arabic (Undergraduate Certificate) (p. 273)
- Conversational and Professional French (Undergraduate Certificate) (p. 273)

- Practical French (Undergraduate Certificate) (p. 273)
- Practical German (Undergraduate Certificate) (p. 274)
- Practical Italian (Undergraduate Certificate) (p. 274)

CMLLC Program Requirements

Degree Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Placement: Students continuing the study of any of the languages cited at Foreign Language (p. 242) and begun in high school or in another college should consult with the Department undergraduate advisor to determine the level of at which to continue coursework (phone: 313-577-3002). The main criteria for placement of these students is the Departmental placement exam. The number of years of high school language study does not effectively correspond to language course sequences at the university level. Students with sufficiently high placement exam scores will be deemed to have satisfied the Foreign Language Group Requirement. For information on the Placement Examination, contact the Department at 313-577-3002. Examinations are scheduled by appointment at the Department Office, 487 Manoogian Hall. (A fee is charged.)

Departmental Honors Program

Total number of Honors credits required (including Honors seminar and thesis): 15 credits

Minimum GPA required: 3.3 overall and in the major

Requirements

To enter the CMLLC departmental honors program track, students must have achieved academic excellence in previous work, such as a college or university GPA of 3.3.

To earn honors in the major, students must meet all regular major requirements including the following:

- Three honors-option courses (9 credits) within their major (internships cannot satisfy this requirement)
- One HON 42xx seminar (HON 4200 - HON 4280) (3 credits)
- A senior honors thesis (3 credits) under the direction of a full-time faculty adviser in their major area
- A GPA of 3.3 within the major

Prerequisite: Admission to the departmental honors program; a proposal accepted and given written consent by the thesis adviser. The honors thesis involves a closely supervised research project that results in a paper of approximately 20 to 25 pages.

Application

Submit a statement of interest to a full-time faculty adviser in your major area that, in 400 to 500 words, please addresses the following:

1. Describe your interest in the language(s) and culture(s) that you focus on.
2. Describe an issue that you are highly motivated to address and to invest time and effort exploring. Why are you motivated to study this issue?
3. Discuss your career goals and your after-graduation plans.
4. Provide any additional information.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Department encourages academically-superior majors to petition for admission into the College's 'AGRADE' program. Qualified seniors may apply a maximum of fifteen credits toward both a bachelor's and a master's degree. For more details, contact the graduate director (Classics, French, German, Italian, or Spanish): 313-577-3002. Students should consult with the director in their junior year regarding this opportunity.

Study Abroad

Students should consult the department and the Study Abroad and Global Programs Office (p. 67) for more details on the following programs:

Arabic Language and Culture at the American University of Cairo or Lebanese American University

Junior Year in Munich Program
Juniors, seniors, or graduate students who would like to spend a year studying at the University of Munich are encouraged to contact the Junior Year in Germany Office, 401 Manoogian Hall; 313-577-4605.

Study Abroad in Poland
A two-week study-abroad program is offered in May. Contact department for details.

Study Abroad in Russia
A four-week program offered in June. Students study and live in St. Petersburg, and make a side-trip to Moscow.

Summer Homestay and Study Tour Program in Japan
A two-week study tour trip (trip after spring semester) is offered in spring and summer. Contact department for details.

Global Studies (B.A.)

The Global Studies program is designed for students passionate about understanding and being active participants in a globalized world. Students learn about global institutions, issues, and movements from an interdisciplinary perspective by:

1. developing language skills, which are essential to global communication and cultural understanding;
2. taking core courses in humanities and social sciences that provide students with an interdisciplinary and theoretical introduction to global studies; and,
3. specializing in global politics and economies, health and environment, and cultures and identities.

Throughout the curriculum students will think critically about questions related to global justice, inequality, how globalization impacts different cultures and regions around the world, and the responsibilities of global citizenship. A Global Studies major can prepare students for careers in government, diplomacy, law, health professions, teaching, research, non-governmental organizations, development, and business.

Through the program students will.

1. demonstrate intermediate-level skills in reading, writing, speaking, and listening in one language other than English, or elementary-level skills in reading, writing, speaking, and listening in two languages other than English.

2. analyze ways in which global issues intersect with the individual and the social with respect to gender, sexuality, class, race, and ethnicity.
3. describe the processes of globalization from economic, political, environmental, historical, and cultural perspectives and how these processes impact social structures and people's everyday lives.
4. connect globalization and global issues to the local, the regional (as it relates to regional issues within nation states), and the national.

Global Experience

Students must fulfill a "Global Experience" requirement. Options for fulfilling the Global Experience requirement include:

1. an internship at a local agency that deals with global issues or is a global organization or company (GLS 5500);
2. study abroad or internship abroad;
3. field work or study abroad that is part of a specific course

All majors are also required to present their work in the form of a paper of poster session in a WSU venue.

Students wishing to pursue the major in global studies should meet with the program director and the undergraduate advisor in Classical and Modern Languages, Literatures, and Cultures for advising.

Program Requirements

Students should refer to the CMLLC program requirements (p. 262) for admission, degree, and general education requirements.

Major requirements consist of a minimum of 33 credits distributed as follows:

Code	Title	Credits
Language Courses		
Select a minimum of three courses or 9 credits beyond 2010 in the same language sequence or complete the three-semester basic language sequence in a second language. [1]		9-12
Core Courses		
Select 3 of the 4 core courses		9
GLS 2700	Introduction to Global Stories (Select 3 of the 4 core courses)	
GLS 2800	Introduction to Global Issues and Institutions	
GLS 2900	Intercultural Competence for a Global World	
GLS 3700	Globalization: Theories, Practices, Implications	
Global Experience		
Students must fulfill a Global Experience requirement. Options for fulfilling the requirement include: 1) an internship at a local agency that deals with global issues or is a global organization (GLS 5500); 2) study abroad or internship abroad; 3) field work or study abroad that is part of a specific course.		
Electives from Three Focus Areas		**15**
Students must take a minimum of fifteen credits from the following areas of focus: Global Politics and Economics, Global Health and Environment, Global Culture and Identities.		
Global Cultures and Identities		
This focus area centers on questions related to global cultures, belief systems expressed through various types of cultural artifacts (including visual art, artisanry, literature, film and media), and peoples and identities, over time and geographical areas, in conjunction with questions of gender, sexuality, class, race, and ethnicity.		
AFS 3250	Politics and Culture in the Caribbean	
AFS 3610	Africa: Politics, Culture and Society	
ANT 3100	World Cultures	
ANT 3111	Digital Storytelling and Ethnic Detroit	
ANT 3220	The Inca and their Ancestors	
ANT 2200	Lost Cities and Ancient Civilizations	
ANT 3310	Language and Culture	
ANT 3520	Understanding Africa: Past, Present and Future	
ANT 3530	Native Americans	
ANT 3540	Cultures and Societies of Latin America	
ANT 3550	Arab Society in Transition	
ANT 5060	Urban Anthropology	
ANT 5510	Pre-Columbian and Mesoamerican Civilization	
ARB 5100	Teaching of Arabic as a Foreign/Second Language (TAFL)	
ARB 5210	Arabic Sociolinguistics	
ASN 1710	History of Modern East Asia	
ASN 3870	History of Japanese Pop Culture	
ASN 3995	Special Topics in East Asian Studies	
ASN 5855	Pre-Modern Japan	
ASN 5865	Modern Japan	
ASN 5875	Gender in Modern East Asia	
CHI 2050	Gateway to Chinese Civilizations	
CHI 3000	Chinese Mythology and the Supernatural	
CHI 3010	Contemporary Chinese Pop Culture	
CHI 3022	Introduction to Chinese Literature	
CLA 3720	Greek Identity from Antiquity to Modernity	
ENG 2540	Global Literatures: Writing about Texts	
ENG 5080	Topics in Global and Transnational Studies	
FRE 2700	Anguish and Commitment: European Existentialist Literature	
FRE 2710	French Civilization: Beginnings to the French Revolution	
FRE 2720	Modern French and Francophone Culture	
FRE 2991	Understanding the Fairy Tale	
GER 2710	Resistance, Rebellion, Revolution: Transitional Moments in German Culture and History	
GER 2991	Understanding the Fairy Tale	
GER 2700	Anguish and Commitment: European Existentialist Literature	
GER 3410	New Soil, Old Roots: The Immigrant Experience	
GER 5790	Topics in German Studies	
GLS 2900	Intercultural Competence for a Global World	
GKM 3590	Byzantine Civilization	
GKM 3710	Modern Greek Literature and Culture in English	
GKM 3720	Greek Identity from Antiquity to Modernity	
GLS 3111	Digital Storytelling and Ethnic Detroit	
GLS 4200	Orientalism and Occidentalism, Past and Present	
GSW 5875	Gender in Modern East Asia	
HIS 1600	African Civilizations to 1800	
HIS 1610	African Civilizations Since 1800	
HIS 1710	History of Modern East Asia	
HIS 1800	The Age of Islamic Empires: 600-1600	
HIS 1810	The Modern Middle East	
HIS 3140	African American History I: 1400-1865	
HIS 3150	African American History II: 1865-1968	
HIS 3320	Twentieth Century Middle East	
HIS 3330	Civilizations of the Nile Valley: Egypt and Nubia	

HIS 5360	The Early Middle Ages: 300-1000
HIS 5480	Nazi Germany
HIS 5490	History of Russia and Eurasia to 1917
HIS 5495	History of the Russian Revolution
HIS 5500	The Soviet Union
HIS 5555	Britain in the Age of Empire
HIS 5556	History of Modern Britain
HIS 5855	Pre-Modern Japan
HIS 5865	Modern Japan
HIS 5875	Gender in Modern East Asia
HIS 5960	Globalization, Social History and Gender in the Arabian Gulf
ITA 2700	Anguish and Commitment: European Existentialist Literature
ITA 2710	Italy and Italians I
ITA 2720	Italy and Italians II
ITA 2991	Italian Fairy Tales
ITA 5150	Italian Cinema
JPN 2800	Culture Studies in Japan (Homestay and Study Abroad Tour)
LAS 2100	Chicano/a Literature and Culture
LAS 2110	Puerto Rican Literature and Culture
LAS 2410	History of Mexico
LAS 2420	History of Puerto Rico and Cuba
LAS 5560	Spanish American Cultures and their Traditions
LIN 5210	Arabic Sociolinguistics
NE 2000	Introduction to Islamic Civilization of the Near East
NE 2030	The Age of Islamic Empires: 600-1600
NE 2040	The Modern Middle East
NE 2060	Trends and Themes in Films of the Middle East
NE 2170	Islamic and Near Eastern Philosophy
NE 2700	Topics in Middle Eastern Studies
NE 3225	Modern Israeli Culture: A Pluralistic Perspective
NE 3550	Arab Society in Transition
NE 5000	Globalization, Social History and Gender in the Arabian Gulf
NE 5210	Arabic Sociolinguistics
NE 5220	Muslim Personal Law
NE 5300	Quran: History and Interpretation
NE 5710	Islam and the Challenge of Modernity
PHI 2150	Chinese Philosophy
PHI 2170	Islamic and Near Eastern Philosophy
POL 2710	Survey of Polish Culture
POL 3111	Digital Storytelling and Ethnic Detroit
POL 3410	New Soil, Old Roots: The Immigrant Experience
POL 3750	Polish and Yugoslavian Cinema
POL 3800	Topics in Slavic Studies
RUS 2710	Introduction to Russian Culture
RUS 2991	Understanding the Fairy Tale
RUS 3111	Digital Storytelling and Ethnic Detroit
RUS 3410	New Soil, Old Roots: The Immigrant Experience
RUS 3600	Nineteenth Century Russian Literature
RUS 3650	Russian Literature Since 1900
RUS 3810	Topics in Slavic Studies
SLA 2310	Short Fiction from Central Europe and Russia
SLA 3410	New Soil, Old Roots: The Immigrant Experience
SLA 3710	Russian and East European Film
SLA 3750	Polish and Yugoslavian Cinema
SLA 3800	Topics in Slavic Studies
SPA 2400	Chicano/a Literature and Culture
SPA 2500	Puerto Rican Literature and Culture
SPA 5550	Spanish Culture and Its Tradition
SPA 5570	Topics in Hispanic Culture or Language
US 4510	Cities and Regions

Global Health and Environment

This focus area concentrates on issues related to global public health, medical systems, and environmental issues such as population, pollution, and climate change over time and geographical areas, in conjunction with questions of gender, sexuality, class, race, and ethnicity.

ANT 2400	Food and Culture
ANT 3400	Introduction to Medical Anthropology
ANT 5400	Anthropology of Health and Illness
BIO 3500	Ecology and the Environment
GLS 3410	Global Health
GLS 5700	Climate, Environment, and Media
GLS 5540	World Environmental History since 1900
ITA 3300	Science, History, and Culture of Italian Cuisine
NFS 3300	Science, History, and Culture of Italian Cuisine
PHI 1130	Environmental Ethics
PHI 1110	Ethical Issues in Health Care

Global Politics and Economies

This focus area takes into account global political, sociological, economic, labor, and business theories, trends, histories, and configurations over time and geographical areas, in conjunction with questions related to gender, sexuality, class, race, and ethnicity.

AFS 3250	Politics and Culture in the Caribbean
AFS 3420	Pan Africanism and the Diaspora
ANT 2050	Anthropology of Business
ANT 2400	Food and Culture
ANT 3550	Arab Society in Transition
ANT 5165	Shop 'Til You Drop: Consumer Society and Culture
ASN 1710	History of Modern East Asia
ASN 5855	Pre-Modern Japan
ASN 5865	Modern Japan
ASN 5875	Gender in Modern East Asia
COM 2300	Intercultural Communication
COM 4560	Telecommunications Policy: A Political Economy Approach
ECO 5300	International Trade
ECO 5310	International Finance
ECO 5600	Introduction to Development Economics
FIN 5320	Principles of International Finance
GSC 5620	Global Supply Chain Management
GSC 5680	Production Planning and Control
GSW 5875	Gender in Modern East Asia
HIS 1400	The World Since 1945
HIS 1600	African Civilizations to 1800
HIS 1610	African Civilizations Since 1800
HIS 1710	History of Modern East Asia
HIS 1810	The Modern Middle East
HIS 1910	Latin America from Independence to the Present

HIS 2440	History of Mexico
HIS 3320	Twentieth Century Middle East
HIS 5130	American Foreign Relations Since 1933
HIS 5440	Twentieth Century Europe
HIS 5490	History of Russia and Eurasia to 1917
HIS 5495	History of the Russian Revolution
HIS 5500	The Soviet Union
HIS 5556	History of Modern Britain
HIS 5875	Gender in Modern East Asia
HIS 5855	Pre-Modern Japan
HIS 5865	Modern Japan
HIS 5960	Globalization, Social History and Gender in the Arabian Gulf
ITA 3200	Italian Rebels
MKT 5750	International Marketing Management
NE 3040	Twentieth Century Middle East
NE 5000	Globalization, Social History and Gender in the Arabian Gulf
PCS 3100	Human Trafficking and Modern Slavery
PHI 1100	Contemporary Moral Issues
PHI 2330	Introduction to Social and Political Philosophy
PS 2700	Introduction to Canadian Studies
PS 2710	Introduction to Comparative Politics
PS 2810	World Politics
PS 3710	Politics of Western Europe
PS 3715	Politics of Russia and Eastern Europe
PS 3735	Politics of Latin America
PS 3795	Latin America in World Affairs
PS 3770	Politics of East Asia
PS 3811	Theory of World Politics
PS 3835	Middle East Conflict
PS 4725	Globalization and Politics
PS 4810	Foreign Policies of Major Powers
PS 5740	Ethnicity: The Immigrant Experience
PS 6870	United States Foreign Relations Law
Total Credits	**33-36**

[1] For language courses, please see languages offered in Classical and Modern Languages, Literatures, and Cultures. Students must receive a passing grade (C) in their language courses for them to count towards the GLS major.

[3] Areas of focus allow students to specialize within the program in ways that enhance their academic and professional goals. A minimum of 6 credits must be at the 4000-level or above.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Classical & Modern Languages, Literatures and Cultures Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

World Languages, Literatures, and Cultures (B.A.)

Students majoring in the B.A. in World Languages, Literatures, and Cultures will gain proficiency in one or more world languages, which include Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, and Spanish. As part of their course of study, students are encouraged to participate in a study abroad program, such as the Junior Year in Munich (Germany); the semester or year program in Japan through the JCMU (Japan Center for Michigan Universities); a semester or year in Tours (France); spring break study abroad in Paris (France); as well as in other study programs in Italy, Latin America, Lebanon, Poland, and Spain. Students will attain a broad knowledge of one of the cultural geographies explored in our courses—East Asia, the Ancient Mediterranean, the Francophone world, German-speaking Europe, Italy, the Near East, and the Spanish-speaking world. The World Languages, Literatures, and Cultures program will develop students' linguistic and critical-analytical skills involving various types of texts. Students will also explore humanistic and social scientific approaches to world cultures. Linguistic and broadly-based cultural studies provide excellent grounding for various career paths, including law, business, medicine or health sciences, non-profit sector careers, teaching at the high school or university level, library and information science, museum practice, among others.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (https://bulletins.wayne.edu/undergraduate/general-information/general-education/) and the College of Liberal Arts and Sciences Group Requirements (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/bachelors-degree-requirements/), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (https://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) and the College (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/academic-regulations/) governing undergraduate scholarship and degrees.

Students should refer to the CMLLC program requirements page (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/classical-modern-languages-literatures-cultures/requirements/) for admission, degree, and general education requirements.

Concentrations

- Asian Studies (p. 265)
- Chinese (p. 266)
- Classics, Greek, and Latin (p. 266)
- French and Francophone Studies (p. 267)
- German (p. 267)
- Italian (p. 268)
- Japanese (p. 268)
- Near Eastern Languages and Cultures (p. 268)
- Spanish (p. 269)

Asian Studies Concentration

Students will complete a minimum of 36 credits in Asian Studies coursework. Of these, at least 6 credits must be at the 5000 level.

Code	Title	Credits
Language Requirement		
Select eight credits from the following courses in Language 1:		8
CHI 2010 & CHI 2020	Intermediate Chinese and Intermediate Chinese II	
JPN 2010 & JPN 2020	Intermediate Japanese I and Intermediate Japanese II	
Select sixteen credits from the following courses in Language 2:		16
CHI 1010	Elementary Chinese I	
or JPN 1010	Elementary Japanese I	
CHI 1020	Elementary Chinese	
or JPN 1020	Elementary Japanese II	
CHI 2010	Intermediate Chinese	
or JPN 2010	Intermediate Japanese I	
CHI 2020	Intermediate Chinese II	
or JPN 2020	Intermediate Japanese II	
Select three credits from the following:		3
CHI 3100	Advanced Chinese I	
or JPN 3010	Advanced Japanese I	
Literature, Culture, and History Requirement		
Select three credits from the following courses:		3
ASN/HIS 1700	East Asia to the 1700s	
ASN/HIS 1710	History of Modern East Asia	
CHI/JPN 5220/LIN 5100	Languages of Asia	
PS 3770	Politics of East Asia	
Select six credits from the following courses:		6
ASN/HIS 3870	History of Japanese Pop Culture	
ASN/HIS 5855	Pre-Modern Japan	
ASN/HIS 5865	Modern Japan	
ASN/HIS 5875	Gender in Modern East Asia	
CHI 2030	Chinese Character Writing	
CHI 2050	Gateway to Chinese Civilizations	
CHI 3000	Chinese Mythology and the Supernatural	
CHI 3022	Introduction to Chinese Literature	
CHI 5000	Space and Everyday Life in Chinese Literature and Film	
CHI 5210	Introduction to Chinese Linguistics	
CHI 5230/ LIN 5240	Grammar of Chinese	
JPN 2720	Japanese Culture through Myth, Fairy Tales, and Media	
JPN 2800	Culture Studies in Japan (Homestay and Study Abroad Tour)	
PHI 2150	Chinese Philosophy	
Students will complete a research project linked to a 5000-level course or higher.		
Total Credits		**36**

Chinese Concentration

Students will complete a minimum of 35 credits in Chinese studies coursework. Of these, at least 6 must be at the 5000 level.

Code	Title	Credits
Language Requirement		
Select eight credits from the following:		8
CHI 2010	Intermediate Chinese	
CHI 2020	Intermediate Chinese II	
Select nine credits from the following:		9
CHI 3100	Advanced Chinese I	
CHI 3200	Advanced Chinese II	
CHI 4010	Business Chinese	
Literature, Culture, and History Requirement		
Select six credits from the following:		6
ASN/HIS 1700	East Asia to the 1700s	
ASN/HIS 1710	History of Modern East Asia	
CHI/JPN 5220/LIN 5100	Languages of Asia	
PS 3770	Politics of East Asia	
Select six credits from the following:		6
ASN 3995	Special Topics in East Asian Studies	
CHI 2000	Chinese Phonetics	
CHI 2030	Chinese Character Writing	
CHI 2050	Gateway to Chinese Civilizations	
CHI 3000	Chinese Mythology and the Supernatural	
CHI 3010	Contemporary Chinese Pop Culture	
CHI 3022	Introduction to Chinese Literature	
CHI 5000	Space and Everyday Life in Chinese Literature and Film	
CHI 5210	Introduction to Chinese Linguistics	
CHI 5230	Grammar of Chinese	
PHI 2150	Chinese Philosophy	
Electives		
Select six credits from any courses in ASN, CHI, or JPN outside the language of study.		6
Students will complete a research project linked to a 5000-level course or higher.		
Total Credits		**35**

Classics, Greek, and Latin Concentration

Students will complete a minimum of 32 credits in Classics, Greek, and Latin coursework. Of these, at least 6 credits must be at the 5000 level or higher.

Code	Title	Credits
Language Requirement		
Select eight credits from the following:		8
GKA 2010 & GKA 2020	Intermediate Ancient Greek I and Intermediate Ancient Greek II	
LAT 2010 & LAT 2020	Intermediate Latin and Intermediate Latin II	
GKM 2010 & GKM 2020	Intermediate Modern Greek I and Intermediate Modern Greek II	
Joint Language Study		
GKA 2010 & LAT 2010	Intermediate Ancient Greek I and Intermediate Latin	
GKA 2010 & GKM 2010	Intermediate Ancient Greek I and Intermediate Modern Greek I	
LAT 2010 & ITA 2010	Intermediate Latin and Intermediate Italian	
Literature, Culture, and History Requirement		
Select six credits from the following:		6
CLA 1010	Classical Civilization	
CLA 2000	Greek Mythology	

Select twelve credits from the following:		12
CLA 3150/5150	Athens and the Ancient Greek World	
CLA 3590/5590/ GKM 3590/559	Byzantine Civilization	
CLA 3700/5700	The Golden Age of Rome	
CLA 3800/5800	Survey of Greek Literature	
CLA 3825/5825	Survey of Latin Literature	
GKM 3710	Modern Greek Literature and Culture in English	
ITA 2710	Italy and Italians I	
ITA 2720	Italy and Italians II	
Electives		
Select six credits from the following:		6
Any course beyond 2020 in the primary language. Any course in a second language (from GKA, GKM, ITA, or LAT). In joint language studies, any course beyond 2010 in either language.		
CLA 2200	Introduction to Greek Tragedy	
CLA 2300	Ancient Comedy	
CLA 3050/5050	Cleopatra	
CLA 3060	Medea in African American Literature	
CLA 3350/5350		
CLA 3530/5530/ GKM 3530/5530	The World of Early Christianity	
CLA 3590/5590/ GKM 3590/559	Byzantine Civilization	
CLA 3700/5700	The Golden Age of Rome	
CLA 3720/5720/ GKM 3720/372	Greek Identity from Antiquity to Modernity	
CLA 3800/5800	Survey of Greek Literature	
CLA 3825/5825	Survey of Latin Literature	
CLA 3999/6260	Further Studies in Mythology	
CLA 5200	Special Studies	
ITA 2710	Italy and Italians I	
ITA 2720	Italy and Italians II	
ITA 2991	Italian Fairy Tales	
ITA 3300	Science, History, and Culture of Italian Cuisine	
ITA 3500	Dante in Translation: The Divine Comedy	
GKM 3710	Modern Greek Literature and Culture in English	
GLS 2700	Introduction to Global Stories	
GLS 2800	Introduction to Global Issues and Institutions	
GLS 3700	Globalization: Theories, Practices, Implications	
GLS 4200	Orientalism and Occidentalism, Past and Present	
HIS 5330	History of Ancient Greece	
HIS 5340	History of Ancient Rome	
PHI 2100	Ancient Greek Philosophy	
PHI 2140	Ancient Greek Medicine and Psychology	
PHI 5410	Plato	
PHI 5420	Aristotle	
PS 3530	Classical Political Philosophy: What is Justice?	
Students will complete a research project for two 5000-level courses.		
Total Credits		**32**

French and Francophone Studies Concentration

Students will complete a minimum of 37 credits in French and Francophone Studies coursework. Of these, at least 6 credits must be at the 5000 level or higher.

Code	Title	Credits
Language Requirement		
Select twelve credits from the following:		12
FRE 2010	Intermediate French	
FRE 2100	French through Film I	
FRE 2110	French through Film II	
Literature, Culture, and History Requirement		
Select sixteen credits from the following:		16
FRE 3200	French Cafe	
FRE 3300	Professional French through Literary and Filmic Texts	
FRE 4620	Topics in Sociocultural Analysis	
FRE 5100	Advanced French Composition and Conversation through Cultural Analysis	
FRE 5600	Translation Studies	
Select three credits from the following:		3
FRE 2710	French Civilization: Beginnings to the French Revolution	
FRE 2720	Modern French and Francophone Culture	
FRE 2991	Understanding the Fairy Tale	
Select six credits from the following:		6
FRE 5410	Topics in French and Francophone Culture	
FRE 5415	Topics in French and Francophone Literature	
FRE 6200	Renaissance to Revolution	
FRE 6300	Modernity, Postmodernity, and Extreme Contemporain	
FRE 6620	Topics in Sociocultural Analysis	
Total Credits		**37**

German Concentration

Students will complete a minimum of 35 credits in German studies coursework. Of these, at least 6 credits must be at the 5000 level or higher.

Code	Title	Credits
Language Requirement		
Select fourteen credits from the following:		14
GER 2010	Intermediate German	
GER 2020	Everyday Encounters in Language and Culture	
GER 3100	Engaging Historical Moments	
GER 3200	Exploring Modern Identities	
Literature, Culture, and History Requirement		
GER 2710	Resistance, Rebellion, Revolution: Transitional Moments in German Culture and History	3
Select six credits from the following:		6
GER 2991	Understanding the Fairy Tale	

or GLS 2700	Introduction to Global Stories	
GLS 2900	Intercultural Competence for a Global World	
HIS 5480	Nazi Germany	
Select six credits from the following:		6
GER 4600	Products, Perspectives, and Practices of Culture	
GER 5100	Advanced Communication in Oral and Written Discourse	
GER 5210	German Translation Studies	
Select six credits from the following:		6
GER 5390	Holocaust Studies	
GER 5400	Cultural Studies and Criticism	
GER 5770	Modernism	
GER 5780	Texts and Contexts Since 1945	
GER 5790	Topics in German Studies	
GER 5800	Literature and Cultures of Minorities	
GER 5999	Internship in German Studies	
LGL 5850	Foreign Language Instruction	
Students will complete a research project linked to a 5000-level course or higher.		
Total Credits		**35**

Italian Concentration

Students will complete a minimum of 34 credits in Italian language and culture coursework. Of these, at least 6 credits must be at the 5000 level or higher.

Code	Title	Credits
Language Requirement		
ITA 2010	Intermediate Italian	4
Literature, Culture, and History Requirement		
Select nine credits from the following:		9
ITA 2020	Italian through Film	
ITA 3030	Made in Italy: Language, Culture, and the Business of Italian Excellence	
ITA 3100	Caffe Italia	
ITA 3200	Italian Rebels	
Select nine credits from the following:		9
CLA 3700/5700	The Golden Age of Rome	
ITA 2710	Italy and Italians I	
ITA 2720	Italy and Italians II	
ITA 2991	Italian Fairy Tales	
ITA 3300	Science, History, and Culture of Italian Cuisine	
ITA 3500	Dante in Translation: The Divine Comedy	
Select twelve credits from the following:		12
ITA 3100	Caffe Italia	
ITA 3200	Italian Rebels	
ITA 4610	The Birth of Italian Language and Literature	
ITA 5570	Topics in Italian Studies	
ITA 5999	Internship in Italian Studies	
ITA 6400	Languages of Italy	
ITA 6610	Dante's Comedy I: Inferno	
ITA 6680	Love, Politics and the Art of Elegance	
ITA 6700	Performing Italy	
Total Credits		**34**

Japanese Concentration

Students will complete a minimum of 35 credits in Japanese studies coursework. Of these, at least 6 must be at the 5000 level.

Code	Title	Credits
Language Requirement		
JPN 2010	Intermediate Japanese I	4
JPN 2020	Intermediate Japanese II	4
JPN 3010	Advanced Japanese I	3
JPN 3020	Advanced Japanese II	3
JPN 2110	Listening Japanese with Media and Animation	3
or JPN 3030	Japanese Reading and Writing	
or JPN 4010	Business Japanese I	
Literature, Culture, and History Requirement		
Select six credits from the following:		6
ASN 1700	East Asia to the 1700s	
ASN 1710	History of Modern East Asia	
JPN/CHI 5220/LIN 5100	Languages of Asia	
PS 3770	Politics of East Asia	
Select six credits from the following:		6
ASN/HIS 3870	History of Japanese Pop Culture	
ASN/HIS 5855	Pre-Modern Japan	
ASN/HIS 5865	Modern Japan	
JPN 2720	Japanese Culture through Myth, Fairy Tales, and Media	
JPN 2800	Culture Studies in Japan (Homestay and Study Abroad Tour)	
JPN 4550	Japanese Culture and Society I	
JPN 4560	Japanese Culture and Society II	
JPN 5999	Internship in Japanese Studies	
Electives		
Select six credits of any courses in ASN, CHI, or JPN outside the language of study.		6
Students will complete a research project linked to a 5000-level course or higher.		
Total Credits		**35**

Near Eastern Languages and Cultures Concentration

Students will complete a minimum of 34 credits in Near Eastern Languages and Cultures coursework. Of these, at least 6 credits must be at the 5000 level or higher.

Code	Title	Credits
Language Requirement		
ARB 2010	Intermediate Arabic I	4
ARB 2020	Intermediate Arabic II	4
Select nine credits from the following:		9
ARB 3010	Business Arabic	
ARB 3110	Advanced Arabic I	
ARB 3210	Spoken Arabic	
ARB 3300	Conversation and Composition	
ARB 5020	Media Arabic	
ARB 5700	Arabic for Healthcare Professions	
Literature, Culture, and History Requirement		
Select eleven credits from the following:		11
ARB 5010	Medieval Arabic Texts	

ARB 5100	Teaching of Arabic as a Foreign/Second Language (TAFL)	
ARB 5140	Modern Arabic Literature in Arabic and English	
ARB 5210	Arabic Sociolinguistics	
ARB 5230	Structure of Arabic	
ARB 5240	Quranic Arabic	
ARB 6700	History of Arabic	
HEB 1010	Elementary Hebrew I	
HEB 1020	Elementary Hebrew II	
Select six credits from the following:		6
NE 2000	Introduction to Islamic Civilization of the Near East	
NE 2030	The Age of Islamic Empires: 600-1600	
NE 2040	The Modern Middle East	
NE 2060	Trends and Themes in Films of the Middle East	
NE 2700	Topics in Middle Eastern Studies	
NE 2170	Islamic and Near Eastern Philosophy	
NE 3225	Modern Israeli Culture: A Pluralistic Perspective	
NE 3550	Arab Society in Transition	
NE 5220	Muslim Personal Law	
NE 5300	Quran: History and Interpretation	
NE 5710	Islam and the Challenge of Modernity	
PS 5760	History and Development of Islamic Political Thought	
Total Credits		**34**

Spanish Concentration

Students will complete a minimum of 34 credits in Spanish studies coursework. Of these, at least 12 credits must be at the 5000 level or higher.

Code	Title	Credits
Language Requirement		
SPA 2010	Intermediate Spanish	4
SPA 2025	Cultural Connections, Grammar and Composition I	3
SPA 3025	Cultural Connections, Grammar and Composition II	3
Select six credits from the following:		6
SPA 3040	Spanish for Business and the Legal Professions	
SPA 3050	Spanish for the Health Care Profession	
SPA 3200	Conversation	
SPA 5100	Advanced Composition	
SPA 5200	Spanish Phonetics	
SPA 5300	Advanced Grammar and Stylistics	
SPA 5400	Introduction to Professional and Literary Translation	
SPA 5600	Advanced Conversation	
SPA 5990	Directed Study	
SPA 5999	Internship in Spanish	
SPA 6400	Introduction to Hispanic Linguistics	
Literature, Culture, and History Requirement		
Select nine credits from the following:		9
SPA 3300	Introduction to Cultural and Literary Analysis	
SPA 4610	Introduction to Early Modern Spanish Literature	
SPA 4620	Introduction to Modern and Contemporary Spanish Literature	
SPA 4630	Introduction to Colonial Latin American Literature	
SPA 4640	Introduction to Modern and Contemporary Latin American Literature	
SPA 5550	Spanish Culture and Its Tradition	
SPA 5560	Spanish American Cultures and their Traditions	
SPA 5570	Topics in Hispanic Culture or Language	
SPA 6410	Spanish Medieval Literature: Origins to 1500	
SPA 6420	Early Modern Spanish Studies	
SPA 6440	Spanish Literature of the Eighteenth Century	
SPA 6450	Spanish Romanticism	
SPA 6470	The Spanish Novel of the Twentieth Century	
SPA 6490	Spanish Poetry of the Nineteenth and Twentieth Centuries	
SPA 6560	Cervantes	
SPA 6570	The Comedia	
SPA 6590	Genres and Topics in Peninsular Spanish Literature	
SPA 6600	Colonial Latin American Studies	
SPA 6610	Latin American Novel to 1900	
SPA 6620	Latin American Novel in the 20th and 21st Centuries	
SPA 6630	Spanish American Poetry	
SPA 6690	Genres and Topics in Spanish American Literature	
SPA 6700	Spanish Literature of the Silver Age: 1900-1936	
SPA 6710	Unamuno's Existential Fiction	
Electives		
Select nine credits from the following:		9
An additional three credits in SPA at the 3000 level or higher		
An additional six credits in SPA at the 5000 level or higher		
Students will complete exit interviews and a research project linked to a 5000-level course or higher.		
Total Credits		**34**

'AGRADE' Program (Accelerated Graduate Enrollment)

The Classical & Modern Languages, Literatures and Cultures Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Arabic Minor

A minor in Arabic consists of twenty credits.

Code	Title	Credits
Required intermediate language courses		**8**
ARB 2010	Intermediate Arabic I	
ARB 2020	Intermediate Arabic II	
Select six credits of advanced language courses		**6**
ARB 3110	Advanced Arabic I	
ARB 3120	Advanced Arabic II	
ARB 3010	Business Arabic	
ARB 3210	Spoken Arabic	
ARB 3300	Conversation and Composition	
ARB 5020	Media Arabic	
ARB 5700	Arabic for Healthcare Professions	

Select six credits of Linguistics, History, Literature, and Culture courses		**6**
ARB 5010	Medieval Arabic Texts	
ARB 5100	Teaching of Arabic as a Foreign/Second Language (TAFL)	
ARB 5140	Modern Arabic Literature in Arabic and English	
ARB 5210	Arabic Sociolinguistics	
ARB 5230	Structure of Arabic	
ARB 5240	Quranic Arabic	
ARB 6700	History of Arabic	
NE 2000	Introduction to Islamic Civilization of the Near East	
NE 2030	The Age of Islamic Empires: 600-1600	
NE 2040	The Modern Middle East	
NE 2170	Islamic and Near Eastern Philosophy	
NE 2700	Topics in Middle Eastern Studies	
NE 3040	Twentieth Century Middle East	
NE 3061	Oral History in Middle Eastern Tradition	
NE 3550	Arab Society in Transition	
NE 5110	History and Development of Islamic Political Thought	
NE 5220	Muslim Personal Law	
NE 5300	Quran: History and Interpretation	
NE 5700	Topics in Middle Eastern Studies	
NE 5710	Islam and the Challenge of Modernity	
Total Credits		**20**

Asian Studies Minor

A minor in Asian Studies consists of a minimum of twenty-two credits.

Code	Title	Credits
Select sixteen credits in the first four semesters of the language sequences in Chinese or Japanese		16
Select six credits in elective courses related to the language		6
Total Credits		**22**

Classical Civilization Minor

A minor in Classical Civilization consists of twenty credits distributed as follows:

Code	Title	Credits
Select one of the following:		8
GKA 1010 & GKA 1020	Elementary Ancient Greek I and Elementary Ancient Greek II	
or		
LAT 1010 & LAT 1020	Elementary Latin I and Elementary Latin II	
CLA 1010	Classical Civilization	3
or CLA 2000	Greek Mythology	
CLA 3150	Athens and the Ancient Greek World	3
or CLA 3700	The Golden Age of Rome	
CLA 3800	Survey of Greek Literature	3
or CLA 3825	Survey of Latin Literature	
Elective course		3
Total Credits		**20**

Folklore and Fairy-Tale Studies Minor

The minor in Folklore and Fairy-Tale Studies aims to provide students with an interdisciplinary foundation in the field of folklore and fairy-tale studies. The core courses include the study of 1) Greek mythology; 2) French, German, Italian, and Russian tales; and 3) Anthropology. Together they provide a solid background to understand the history of European, African, Native American, Asian and other world traditions of myth, ritual, folklore, and fairy tale. Students appreciate the different historical, social, political, and cultural contexts in which tale telling and other cultural narratives are produced, and it also introduces them to different genres and medias in which storytelling and cultural practices occur.

A minor in Folklore and Fairy-Tale Studies can be completed with eighteen credits of coursework.

Code	Title	Credits
Required courses		
ANT 3100	World Cultures	3
CLA 2000	Greek Mythology	3
Select two from the following three courses:		6
CHI 3000	Chinese Mythology and the Supernatural	
FRE/GER 2991	Understanding the Fairy Tale	
ITA 2991	Italian Fairy Tales	
Electives *		
Select 6 credits from the following list:		6
ANT 2200	Lost Cities and Ancient Civilizations	
ANT 3520	Understanding Africa: Past, Present and Future	
ANT 3530	Native Americans	
CLA 3060	Medea in African American Literature	
CLA 3999	Further Studies in Mythology	
ENG 2560	Children's and Young Adults' Literature: Writing about Texts	
GER 5790	Topics in German Studies	
Total Credits		**18**

* Courses that share the learning objectives of the minor and that are not listed here may count towards the minor. Please consult with the CMLLC undergraduate advisor about available courses each semester.

French Minor

Requirements:

Code	Title	Credits
FRE 2010	Intermediate French	4
FRE 3200	French Cafe	3
FRE 3300	Professional French through Literary and Filmic Texts	3
FRE 4620	Topics in Sociocultural Analysis	3
Three 5000- or 6000-level courses		9
Total Credits		**22**

German Minor

A minor in German requires a minimum of 19 credits that include:

Code	Title	Credits
Intermediate German		**10**
GER 2020	Everyday Encounters in Language and Culture	

GER 3100	Engaging Historical Moments	
GER 3200	Exploring Modern Identities	
German Culture		**3**
GER 2710	Resistance, Rebellion, Revolution: Transitional Moments in German Culture and History	
Electives (select one course from two of the following categories)		**6**
German History:		
HIS 5480	Nazi Germany	
Intercultural Communication:		
GLS 2900	Intercultural Competence for a Global World	
Internship:		
GER 5999	Internship in German Studies	
Textual Analysis in the Context of Global Literature:		
GER 2991	Understanding the Fairy Tale	
or GLS 2700	Introduction to Global Stories	
Total Credits		**19**

Global Studies Minor

Minor Requirements consist of a minimum of twenty-two credits distributed as follows:

Code	Title	Credits
Language Requirement		
1010 or equivalent		4
1020 or equivalent		4
Core Courses		
Select two of the four courses		
GLS 2700	Introduction to Global Stories	3
GLS 2800	Introduction to Global Issues and Institutions	3
GLS 2900	Intercultural Competence for a Global World	3
GLS 3700	Globalization: Theories, Practices, Implications	3
Select a minimum of eight credits from among the focus areas of: Global Politics and Economies, Global Health and Environment, and Global Cultures and Identities. [1]		8

[1] Focus areas allow students to specialize within the program in ways that enhance their academic and professional goals. Students are expected to consult with the Global Studies advisor when choosing their electives See list of focus area courses under the Global Studies major. (p.)

Modern Greek Studies Minor

A Minor in Modern Greek Studies consists of a minimum of twenty-two credits distributed as follows:

Code	Title	Credits
Select four courses in Modern Greek language studies from the following list:		16
GKM 1010	Elementary Modern Greek I	
GKM 1020	Elementary Modern Greek II	
GKM 2010	Intermediate Modern Greek I	
GKM 2020	Intermediate Modern Greek II	
Select one course in Byzantine and Modern Greek studies from the following list:		3-4
GKM 3530/ CLA 5530	The World of Early Christianity	
GKM 3590/5590	Byzantine Civilization	
GKM 3710	Modern Greek Literature and Culture in English	
GKM 3720/5720	Greek Identity from Antiquity to Modernity	
GKM 3930	Topics in Byzantine and Modern Greek Studies	
GKM 3990	Directed Study	
GKM 5990	Directed Study	
Select one course from the following list:		3-4
CLASSICAL STUDIES		
CLA 1010	Classical Civilization	
CLA 2000	Greek Mythology	
CLA 2200	Introduction to Greek Tragedy	
CLA 2300	Ancient Comedy	
CLA 3150	Athens and the Ancient Greek World	
CLA 3800	Survey of Greek Literature	
GKA 1010	Elementary Ancient Greek I	
HIS 5330	History of Ancient Greece	
ANCIENT PHILOSOPHY		
PHI 2100	Ancient Greek Philosophy	
PHI 2140	Ancient Greek Medicine and Psychology	
PHI 5410	Plato	
PHI 5420	Aristotle	
PS 3530	Classical Political Philosophy: What is Justice?	
THE CONTEMPORARY WORLD		
GLS 2700	Introduction to Global Stories	
GLS 2800	Introduction to Global Issues and Institutions	
GLS 3410	Global Health	
GLS 3700	Globalization: Theories, Practices, Implications	
PS 2710	Introduction to Comparative Politics	
PS 3710	Politics of Western Europe	
Total Credits		**22-24**

Students who place out of any of the GKM language sequence courses by exam must fulfill the corresponding credits in GKM at the 3000 level or above.

Israeli Studies Minor

A minor in Israeli Studies consists of eighteen credits.

Code	Title	Credits
HEB 1010	Elementary Hebrew I	4
HEB 1020	Elementary Hebrew II	4
NE 2060	Trends and Themes in Films of the Middle East	3
NE 3040	Twentieth Century Middle East	3
NE 3225	Modern Israeli Culture: A Pluralistic Perspective	3
NE 3990	Directed Study	1
or NE 5990	Directed Study	
Total Credits		**18**

Italian Minor

A minor in Italian can be completed with eighteen credits of course work beyond the basic language sequence (ITA 1010, ITA 1020, and ITA 2010).

Code	Title	Credits
ITA 2020	Italian through Film	3
Select fifteen additional credits in Italian [1]		15
Total Credits		**18**

[1] At least one 5000 or 6000 level course in Italian is required.

Latin Minor

A minor in Latin consists of twenty credits.

Code	Title	Credits
16 credits of LAT courses, excluding LAT 1010 and LAT 1020		16
Select one of the following:		3
CLA 3700	The Golden Age of Rome	
CLA 3825	Survey of Latin Literature	
Total Credits		**19**

Near Eastern Studies Minor

A minor in Near Eastern Studies consists of seventeen credits.

Code	Title	Credits
Select nine credits in NE courses beyond NE 1900		9
Select eight credits in Arabic or Hebrew courses beyond ARB 1020 or HEB 1020		8
Total Credits		**17**

Polish Minor

Students wishing to obtain a minor in Polish shall complete:

Code	Title	Credits
POL 2060	Composition and Conversation	4
POL 3000	Polish Grammar and Usage	4
POL 3030	Language Skills: Advanced Speaking and Writing	2-4
POL 2710	Survey of Polish Culture	3
Select one of the following:		3-4
SLA 2310	Short Fiction from Central Europe and Russia	
SLA 3710	Russian and East European Film	
POL 3750	Polish and Yugoslavian Cinema	
or POL 3800	Topics in Slavic Studies	
Total Credits		**16-19**

Russian Minor

Students wishing to obtain a minor in Russian shall complete:

Code	Title	Credits
RUS 2020	Intermediate Russian II	4
RUS 3010	Intermediate-Advanced Russian I	4
RUS 3020	Intermediate-Advanced Russian II	4
RUS 2710	Introduction to Russian Culture	3
Select 3-4 credits of the following:		3-4
RUS 2030		
RUS 3600	Nineteenth Century Russian Literature	
RUS 2991	Understanding the Fairy Tale	
RUS 3010	Intermediate-Advanced Russian I	
RUS 3020	Intermediate-Advanced Russian II	
RUS 3050	Russian Practicum	
RUS 3070		
RUS/SLA/POL/ARM 3410	New Soil, Old Roots: The Immigrant Experience	
RUS 3650	Russian Literature Since 1900	
RUS 3810/SLA 3800	Topics in Slavic Studies	
SLA 2310	Short Fiction from Central Europe and Russia	
SLA 3710	Russian and East European Film	
SLA 3750	Polish and Yugoslavian Cinema	
Total Credits		**18-19**

Spanish Minor

Requirements: A minor in Spanish requires the completion of 18 credits beyond SPA 2010:

Code	Title	Credits
SPA 3300	Introduction to Cultural and Literary Analysis	3
Select five other courses from the following (with guidance of undergraduate advisor):		15
SPA 2025	Cultural Connections, Grammar and Composition I	
SPA 3025	Cultural Connections, Grammar and Composition II	
SPA 3040	Spanish for Business and the Legal Professions	
SPA 3050	Spanish for the Health Care Profession	
SPA 3200	Conversation	
SPA 5100	Advanced Composition	
SPA 5200	Spanish Phonetics	
SPA 5300	Advanced Grammar and Stylistics	
SPA 5400	Introduction to Professional and Literary Translation	
SPA 6400	Introduction to Hispanic Linguistics	
SPA 5550	Spanish Culture and Its Tradition	
SPA 5560	Spanish American Cultures and their Traditions	
SPA 5570	Topics in Hispanic Culture or Language	
SPA 4610	Introduction to Early Modern Spanish Literature	
SPA 4620	Introduction to Modern and Contemporary Spanish Literature	
SPA 4630	Introduction to Colonial Latin American Literature	
SPA 4640	Introduction to Modern and Contemporary Latin American Literature	
Any 6000-level literature course		
Total Credits		**18**

Arabic for the Health Care Professions (Undergraduate Certificate)

NGOs, language service employers, healthcare and health insurance companies, medical schools, and medical providers increasingly seek candidates with adequately certified specialized language and cultural skills. These skills are particularly important in Michigan, given its location as a hub for industry and a haven for Arabic-speaking communities, where Arabic is an asset and used in the domains of religion, commerce, education, administration, and other industries. The Undergraduate Certificate in Arabic for the Health Care Professions

provides students with the ability to read, write, listen, and speak in Modern Standard and dialectal Arabic; carry out specialized and routine relevant tasks. Students also gain knowledge about cultural differences and practices that allow them to better understand health care contexts and function within an Arab/Arabic cultures.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students who want to apply for the certificate must first finish one year of Arabic classes (ARB 1010 and ARB 1020) or pass the placement exam and have a minimum of a 2.5 g.p.a. The program shall also be open to students who have previously earned a baccalaureate level degree at Wayne State or another accredited institution.

Program Requirements

The Arabic for the Health Care Professions Undergraduate Certificate requires the completion of a minimum of 16 credits. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship.

Code	Title	Credits
Required Courses		
ARB 2010	Intermediate Arabic I	4
ARB 3210	Spoken Arabic	3
ARB 3300	Conversation and Composition	3
ARB 5700	Arabic for Healthcare Professions	3
NE 5999	Internship in Near Eastern Studies	3
Total Credits		**16**

Professional Arabic (Undergraduate Certificate)

Both NGOs and employers increasingly seek candidates with adequate certified language and cultural skills. These skills are particularly important in Michigan, given its location as a hub for industry and a haven for Arabic speaking communities, where Arabic is an asset and used in the domains of religion, commerce, education, administration, and other industries. The Undergraduate Certificate in Professional Arabic provides students with the ability to read, write, listen, and speak in Modern Standard Arabic; carry out daily and routine tasks such as asking for directions, ordering in a restaurant, describing people and things; and narrate information in the past, present, and future. Students also gain knowledge about cultural differences and practices that allow them to better understand and function within Arabic cultures.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students who want to apply for the certificate must first finish one year of Arabic classes (ARB 1010 and ARB 1020) or pass the placement exam and have a minimum of a 2.5 g.p.a. The program shall also be open to students who have previously earned a baccalaureate level degree at Wayne State or another accredited institution.

Program Requirements

The Professional Arabic Undergraduate Certificate requires the completion of a minimum of 14 credits. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship.

Code	Title	Credits
Required Courses		
Select eight credits from the following:		8
ARB 2010	Intermediate Arabic I	
ARB 2020	Intermediate Arabic II	
Select three credits from the following:		3
ARB 3010	Business Arabic	
ARB 3110	Advanced Arabic I	
ARB 3210	Spoken Arabic	
ARB 3300	Conversation and Composition	
Select three credits from the following:		3
NE 5999	Internship in Near Eastern Studies	
Total Credits		**14**

Conversational and Professional French (Undergraduate Certificate)

Graduate programs and employers increasingly seek candidates with language and cultural skills. These skills are particularly important in Michigan, given its proximity to Canada, where French is an official language used in the domains of commerce, education, administration, and other industries. The Undergraduate Certificate in Conversational and Professional French provides students with opportunities to gain concrete conversational experience with native speakers and hone their speaking, reading, writing, and listening skills to be able to work within French-speaking environments. Students learn about the cultures of France and other Francophone countries, their geography, history, political and administrative structures, and main industries. Upon completing the certificate, they will be able to function quite effectively in different French-speaking work and educational environments.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. The program shall be open to regularly admitted Wayne State University undergraduate students who are in good academic standing, as well as students who have previously earned a baccalaureate level degree at Wayne State or another accredited institution.

Program Requirements

The Conversational and Professional French Undergraduate Certificate requires the completion of a minimum of 13 credits. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship.

Code	Title	Credits
Required Courses		
FRE 2010	Intermediate French	4
FRE 3200	French Cafe	3
FRE 3300	Professional French through Literary and Filmic Texts	3
1 course at the 4000-level or above in French		3
Total Credits		**13**

Practical French (Undergraduate Certificate)

Graduate programs and employers increasingly seek candidates with language and cultural skills. These skills are particularly important

in Michigan, given its proximity to Canada, where French is an official language and used in the domains of commerce, education, administration, and other industries. The Undergraduate Certificate in Practical French provides students with the ability to read, write, listen, and speak in the past, present, and future; carry out basic tasks necessary to everyday life in a Francophone country; describe people and things; understand and express opinions; and understand the main points of various media. Students also gain knowledge about cultural differences and practices that allow them to better understand and function within French and Francophone cultures.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. The program shall be open to regularly admitted Wayne State University undergraduate students who are in good academic standing, as well as students who have previously earned a baccalaureate level degree at Wayne State or another accredited institution.

Program Requirements

The Practical French Undergraduate Certificate requires the completion of a minimum of 12 credits. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship.

Code	Title	Credits
Required Courses		
FRE 1010	Beginning French I	4
FRE 1020	Beginning French II	4
FRE 2010	Intermediate French	4
Total Credits		**12**

Practical German (Undergraduate Certificate)

Graduate programs and employers increasingly seek candidates with language skills and cultural knowledge. These skills are particularly important in Michigan, given the number of German businesses located here. German is an official language in five European countries and is used in the domains of engineering, technology, the arts, commerce, administration, and other fields. The Certificate in Practical German (B1) provides students with the ability to read, write, listen, and speak in the past, present, and future; carry out basic tasks necessary to everyday life in a German-speaking country or environment; describe people and things; understand and express opinions; and understand the main points of various media. Students also gain knowledge about cultural differences and practices that allow them to better understand and function within German cultures at an independent user level (B1).

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. The program shall be open to regularly admitted Wayne State University undergraduate students who are in good academic standing, as well as students who have previously earned a baccalaureate level degree at Wayne State or another accredited institution.

Program Requirements

The Practical German Undergraduate Certificate requires the completion of a minimum of 12 credits. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship.

Code	Title	Credits
GER 1010	Elementary German I	4
GER 1020	Elementary German II	4
GER 2010	Intermediate German	4
GER 2020	Everyday Encounters in Language and Culture	4
Total Credits		**16**

Practical Italian (Undergraduate Certificate)

Graduate programs and employers increasingly seek candidates with language and cultural skills. These skills are particularly important in Michigan, and in our Detroit area, where there is a vibrant Italian business community with major automotive, OEM, service, and technological companies that use Italian, since their headquarters are located in Italy. The Certificate in Practical Italian provides students with the ability to read, write, listen, and speak in the past, present, and future; carry out basic tasks necessary to everyday life in Italy or in an Italian context; describe people and things; understand and express opinions; and understand the main points of various media. Students also gain knowledge about cultural differences and practices that allow them to better understand and function in Italy and its culture.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. The program shall be open to regularly admitted Wayne State University undergraduate students who are in good academic standing, as well as

students who have previously earned a baccalaureate level degree at Wayne State or another accredited institution.

Program Requirements

The Practical Italian Undergraduate Certificate requires the completion of a minimum of 12 credits. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship.

Code	Title	Credits
ITA 1010	Beginning Italian I	4
ITA 1020	Beginning Italian II	4
ITA 2010	Intermediate Italian	4
Total Credits		**12**

Communication Sciences and Disorders

Office: 103 Prentis Building; 313-577-3339
Chairperson: Jinsheng Zhang
Graduate Officer: Derek Daniels
Undergraduate Advisor: Dana Johns
Clinical Program Coordinators: Tausha Moore, Mary Kassa
https://clas.wayne.edu/csd

This department offers courses related to the study of communication and communication disorders and sciences. Specialized coursework prepares students to work with speech-language and hearing disabled children and adults in a variety of settings, including public schools, hospitals, clinics, rehabilitation centers and private practice. College teaching and research are also career possibilities.

Initial questions about the major or minor should be directed to the Undergraduate & Post Bachelor Academic Advisor, Dana Johns. Location room: 105 Prentis Building (313-577-8804 or email: dana.johns@wayne.edu).

- Communication Sciences and Disorders (B.A.) (p. 275)
- Communication Sciences and Disorders Minor (p. 276)

Communication Sciences and Disorders (B.A.)

This department offers courses related to the study of communication and communication disorders and sciences. Specialized coursework prepares students to work with speech-language and hearing disabled children and adults in a variety of settings, including the public schools, hospitals, clinics, rehabilitation centers and private practice. College teaching and research are also career possibilities.

Undergraduate students in this specialization should note that graduate study is required for clinical certification by the American Speech-Language-Hearing Association (ASHA). A master's degree is required for speech-language pathologists and a doctoral degree is required for audiologists. Study in this major at the undergraduate level provides a scientific foundation for graduate study in both audiology and speech-language pathology as well as other science and health professions.

Students interested in pursuing doctoral study should contact the graduate officer.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students must receive a grade of C-minus or better in all biology courses.

It is expected that a major will complete at least thirty-three credits in SLP and AUD course work. Any credits elected over the maximum forty-six must have prior approval of both advisor and Chairperson if the additional credits are to count toward the degree (120 credits). A proper distribution of courses approved by the student's advisor is important. It is desirable that students intending to major in communication sciences and disorders begin their work in the Department in their sophomore year. Courses in the major should be selected in consultation with a Departmental undergraduate advisor. Students are encouraged to begin consulting with the undergraduate advisor during their freshman year. The declaration of major form should be completed as soon as possible in their undergraduate program. In addition, students should see the department advisor to discuss grade point average (GPA) policies and the course sequence. The Department allows one repeat of undergraduate courses. The specific courses that can be repeated depend on whether the student has met the GPA requirements.

The Communication Science and Disorders (CSD) program has **temporarily suspended** the current CSD GPA policy, which states: CSD-BA and Post Bachelor program students must have and maintain an overall undergraduate GPA of 2.75 and must maintain a cumulative 3.0 GPA in the CSD major courses (specifically to register for the CSD Advanced courses).

NOTE: The suspension will remain in effect for 2 academic years (Fall 2020-Spring/Summer 2022). At the end of the Spring/Summer 2022 term, the GPA policy will be revisited and revised as needed.

The temporary GPA policy is as follows:
CSD-BA and Post Bachelor program students must have an overall undergraduate GPA of 2.0, and a minimum 2.0 GPA for all CSD major courses.

Major Requirements for a Bachelor of Arts degree in this discipline consist of the following courses:

Code	Title	Credits
SLP 5080	Phonetics	3
SLP 5090	Anatomy and Physiology of the Speech Mechanism	3
SLP 5120	Speech Science	3
SLP 5300	Introduction to Speech-Language Pathology	3
SLP 5310	Clinical Methods in Communication Disorders	3
SLP 5320	Normal Language Acquisition and Usage	3
SLP 5360	Clinical Practice in Speech-Language Pathology	3
SLP 6460	Language and Phonological Disorders	3
SLP 6480	Neurogenic Communication Disorders	3
AUD 5400	Introduction to Audiology	3
AUD 5420	Introduction to Aural Rehabilitation	3
Total Credits		**33**

It is departmental policy that students must complete the following courses with a 2.0 or higher (SLP 5300 SLP 5320, SLP 5080, SLP 5090, and AUD 5400 for permission to register for advanced coursework.

Departmental permission is required to register for the six advanced courses in the major which are:

Code	Title	Credits
SLP 5120	Speech Science	3
SLP 5310	Clinical Methods in Communication Disorders	3
SLP 5360	Clinical Practice in Speech-Language Pathology	3
AUD 5420	Introduction to Aural Rehabilitation	3
SLP 6460	Language and Phonological Disorders	3
SLP 6480	Neurogenic Communication Disorders	3

Students will not be granted permission to register for the advanced coursework unless they have and maintain an overall GPA of 2.0 and major GPA of 2.0 within the CSD coursework. Students who do not meet these requirements will not be able to complete the major courses required to earn the Bachelor of Arts in Communication Sciences and Disorders. In addition, in order to meet certification requirements of the American Speech-Language-Hearing Association after graduate school, it is strongly recommended that all undergraduate majors complete the following courses:

Code	Title	Credits
STA 1020	Elementary Statistics	3
PHY 1020	Conceptual Physics: The Basic Science	4
or CHM 1000	Chemistry and Your World	
BIO 1050	An Introduction to Life (with laboratory)	3
or BIO 1030	Biology Today	
PSY 1010	Introductory Psychology (with laboratory)	4
or PSY 1020	Elements of Psychology	
SOC 1010	Understanding Human Society	3
or ANT 1100	Introduction to Anthropology	
Transfer equivalents		

For transfer equivalent: please contact departmental advisor for questions regarding transfer courses within the major.

Communication Sciences and Disorders Minor

The minor in Communication Sciences and Disorders will provide students with a foundation in the science of human communication and communication disorders across the life span. The minor requires a minimum of 18 credits.

Code	Title	Credits
Requirements		
SLP 5080	Phonetics	3
SLP 5090	Anatomy and Physiology of the Speech Mechanism	3
SLP 5300	Introduction to Speech-Language Pathology	3
SLP 5320	Normal Language Acquisition and Usage	3
AUD 5400	Introduction to Audiology	3
SLP 3990	Directed Study	3
Total Credits		**18**

Criminology and Criminal Justice

Office: 3054 Faculty/Administration Building; 313-577-2705
Chairperson: Brad Smith
Undergraduate Director: Shanhe Jiang
Academic Services Officer/Advisor: Marianka Holloway
Academic Services Officer II: Bibi Ahmed
https://clas.wayne.edu/cj

Criminal Justice is society's primary formal means of social control. Generally, it is the practice of public and private institutions working to deter crime and delinquency, prosecute, defend, adjudicate, punish, and rehabilitate individuals who enter the system. The core of the criminal justice system is comprised of law enforcement agencies, prosecutors, defense attorneys, courts, and institutional and community corrections departments. This system enforces state and federal laws and is part of a larger administration of justice complex, involving court administration, juvenile justice, and private security.

The study of crime and criminal justice begins with a multidisciplinary examination of the causes and correlates of crime and critical analysis of the criminal justice system as a force for social order. Advanced study involves attention to the political, organizational, social, and behavioral components of crime and the criminal justice system. Students develop analytical and research skills that enable them to identify and critically assess the often-conflicting objectives of the criminal justice system. Legal courses foster an awareness of the values of due process and the limits of governmental power in a democratic society. Innovative and theoretically based programs in the criminal justice system to reduce the incidence of crime are also examined.

The department advances a multidisciplinary understanding of the sources of criminal behaviors, including perspectives from criminology, psychology, and sociology. The curriculum exposes students to knowledge of the major types of crime, including crimes of violence, property crime, public order crime, sex crime, organized crime, delinquency, and beyond. The curriculum also includes attention to innovative and theoretically based programs in the criminal justice system that aim to reduce the incidence of crime.

Career opportunities in criminal justice include roles as police officers, supervisors, and executives; criminal justice investigators; public defenders; prosecutors; correctional officers; probation officers and parole officers; community corrections specialists; and a range of roles with organizations focused on criminal justice reform. Other specialized roles in criminal justice include juvenile intake officers, juvenile probation officers, criminologists, forensic psychologists, and research and policy analysts.

- Criminal Justice (B.S.) (p. 276)
- Criminal Justice Minor (p. 277)
- Forensics and Investigation Minor (p. 278)

Criminal Justice (B.S.)

The Bachelor of Science program is structured to provide students with a multidisciplinary understanding of crime and justice within the framework of broader social processes. Required courses expose a criminology and criminal justice major to all elements of crime and the criminal justice system to foster a systematic understanding of how the entire system functions. Practical field experience can be arranged under the guidance of the internship coordinator.

The curriculum is designed to offer students a comprehensive education by providing a fundamental understanding of the causes and correlates of crime and the criminal justice system. Both analytical and writing skills

are developed to prepare students for professional roles or advanced study in graduate or law school.

Core Criminal Justice courses include classes on theories of criminal behavior, criminal justice institutions, criminal justice research methods, and the criminal justice process. These courses are designed to give students an advanced understanding of crime, the criminal justice system, and contemporary criminal justice reform. Criminal justice majors must maintain a minimum 2.0 grade point average overall and in the major.

Criminal Justice electives: A minimum of twenty-seven credits must be selected for elective course work in criminal justice. Criminal justice electives provide students with an opportunity to explore and critically analyze areas of personal interest.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

It is the student's responsibility to meet with a Criminal Justice Academic Advisor to officially declare their Major and to identify all major and degree requirements.

Code	Title	Credits
Required Core Courses		
CRJ 1010	Introduction to Criminal Justice	3
CRJ 2550	Race, Crime and Justice	3
CRJ 3550	Research Methods in Criminal Justice	3
CRJ 3800	Criminological Theories	3
Approved Electives		
Select a minimum of twenty-seven credits in any CRJ course that is not part of the required core (a minimum of 12 credits must be at the 3000-level or higher)		27
Total Credits		**39**

Transfer Credit

Students should visit the transfer credit website (http://www.transfercredit.wayne.edu) and consult with a Criminal Justice Academic Advisor to determine the applicability of transfer credits toward the major.

Criminal Justice Honors (B.S. Program)

The Honors Program in Criminal Justice is open to students majoring in criminal justice who maintain a cumulative grade point average of at least 3.3 and at least a 3.3 major GPA. Requirements for Criminal Justice honors are:

1. Two criminal justice courses with the honors designation
2. An approved honors thesis (CRJ 4998)
3. At least one 4200-level seminar (HON 4200-HON 4280) offered through the Honors College

Honors students must complete an original Honors Thesis during their senior year. For information about the requirements of the department's honors curriculum, contact a Criminal Justice Academic Advisor.

'AGRADE' Program (Accelerated Graduate Enrollment)

The College of Liberal Arts and Sciences Accelerated Graduate Enrollment (AGRADE) Program allows qualified seniors to apply a maximum of fifteen credits toward both the Bachelor of Science and Master of Science in Criminal Justice degrees. Qualifications for AGRADE include Senior status and a minimum major g.p.a. of 3.3. For additional eligibility information, interested students should contact your Criminal Justice Advisor.

Senior Rule Study

Minimum requirements for Senior Rule study include: a 3.0 grade point average for the junior and senior years of study, and at least one (but not more than ten) credits remaining to be completed for the undergraduate degree. Additional limitations and requirements apply for this status and for continuing graduate study in criminal justice. Interested seniors should consult with their Academic Advisor for further information.

Pre-Law Advising and Curriculum

Students considering legal careers and wishing to major or minor in criminal justice should notify their Criminal Justice Academic Advisor at the beginning of their coursework in criminal justice.

Criminal Justice Minor

The minor in Criminal Justice introduces undergraduate students to the general components and procedures of criminal justice system in the U.S., criminological theories of crime and criminality, and an understanding of race, ethnicity, and diversity issues affecting the criminal justice system. This program will also allow students to choose courses about topics of interest in Criminal Justice.

The minimum requirement for a minor in Criminal Justice is six courses, or eighteen credits of coursework, of which a maximum of six credits can be transferred from other institutions. The Department offers a minor in Criminal Justice for which the notation of a minor appears on the student's transcript. The required Criminal Justice courses are:

Code	Title	Credits
CRJ 1010	Introduction to Criminal Justice	3
CRJ 3800	Criminological Theories	3
Select one of the following:		3
CRJ 2550	Race, Crime and Justice	
CRJ 2750	Diversity Issues in Criminal Justice	
Select one of the following:		3
CRJ 3200	Police and Society	
CRJ 3350	Corrections	
CRJ 3700	The Judicial Process	
CRJ elective credits		6
Total Credits		**18**

Students wishing to minor in criminal justice are encouraged to visit the Departmental Offices for information and advising. A minor must be declared prior to filing for graduation.

Forensics and Investigation Minor

The Forensics and Investigation minor is 21-22 credits of coursework, of which a maximum of 6 credits can be transferred from other institutions for the CRJ courses only.

Code	Title	Credits
Required Courses		
CRJ 1010	Introduction to Criminal Justice	3
CRJ 3260	Investigation	3
CRJ 4220	Criminalistics	3
CRJ 3270	Public Safety: sUAS (Drone) Technology Programs	3
ANT/CRJ 2130	Introduction to Forensic Anthropology and Human Rights	3
Select two of the following:		
CSC 5272	Principles of Cyber Security	3
CSC 5372	Digital Forensics	3
GPH 3600	Introduction to Geographic Information Systems	4

Economics

Office: 2074 Faculty/Administration Building; 313-577-3345
Chairperson: Kevin Cotter
Academic Advisor: Monika Saladiak
Administrative Assistant II: Katie Francek
https://clas.wayne.edu/economics

Economics is the study of how individuals and societies allocate limited resources to try to satisfy unlimited wants; it is therefore a study of choices. Households and business firms must decide what and how much to consume or produce and how much labor, land and capital to supply. Governments make decisions affecting inflation and unemployment, taxation and expenditures, the monetary system and international trade. Together these public and private choices determine the nation's prosperity and shape the distribution of its wealth. Since every social relationship has economic aspects, an understanding of economic principles and systems is an integral part of a liberal education.

Economics majors have a wide choice of careers. Many supplement their major with cognate courses to prepare for careers in business, journalism, health care administration or public service. Others find it excellent preparation for law school. Ph.D. graduates in economics are in demand at universities, corporations, financial institutions and government agencies. M.A. graduates may teach at junior colleges but more typically go into business or public service.

- Economics (B.A.) (p. 278)
- Economics Minor (p. 280)
- Health Economics Minor (p. 281)
- Mathematical Economics (B.A.) (p. 279)

Economics (B.A.)

Economics is the study of how individuals and societies allocate limited resources to try to satisfy unlimited wants; it is therefore a study of choices. Households and business firms must decide what and how much to consume or produce and how much labor, land and capital to supply. Governments make decisions affecting inflation and unemployment, taxation and expenditures, the monetary system and international trade. Together these public and private choices determine the nation's prosperity and shape the distribution of its wealth. Since every social relationship has economic aspects, an understanding of economic principles and systems is an integral part of a liberal education. Economics majors have a wide choice of careers. Many supplement their major with cognate courses to prepare for careers in business, journalism, health care administration or public service. Others find it excellent preparation for law school.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. The Economics Department assumes that students taking economics courses have had at least two years of high school-level algebra and one year of geometry.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University

(p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students considering an economics major should take ECO 2010 and ECO 2020 (Principles of Microeconomics and Macroeconomics) as soon as possible. They should also pass MAT 1800 prior to the junior year or demonstrate eligibility for MAT 2010 in the Mathematics Placement Examination.

A major consists of at least thirty-two credits in economics courses including:

Code	Title	Credits
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
ECO 5000	Intermediate Microeconomics	4
ECO 5050	Intermediate Macroeconomics	4
ECO 5100	Introductory Statistics and Econometrics	4
ECO 5993	Writing Intensive Course in Economics	0
Select at least three courses in two or more economics fields C to H, or ECO 2550 and at least two additional courses in fields C to H [1]		12
Total Credits		**32**

[1] Economics courses are listed by field in the department's undergraduate course list (p.).

The Department recommends that majors complete all of these courses by the end of their junior year. At least sixteen credits in economics must be earned at Wayne State University.

Each student should choose the economics electives best suited to his/her intellectual and professional aims.

To satisfy the General Education Major Competency Requirement, Economics majors must have a cumulative grade point average of 2.0 in their economics courses.

Minimal Grade Requirements

The following courses must be passed with a grade of C or better in order to be applicable as economics major credit:

Code	Title	Credits
MAT 1800	Elementary Functions	4
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
ECO 5000	Intermediate Microeconomics	4
ECO 5050	Intermediate Macroeconomics	4
ECO 5100	Introductory Statistics and Econometrics	4

A grade of C-minus or better must be achieved for the three field course electives.

Writing Proficiency/Writing Intensive Requirement

To enable the Department to evaluate their writing proficiency, economics majors must register for ECO 5993, the zero-credit WI course. All economics majors must satisfy this requirement, even if they are not subject to the University General Education Requirements.

Combined Curriculum for Teaching Certificate

Economics majors wishing to enter secondary teaching should see the Secondary Education Curriculum guide for the procedures for combining a degree in Liberal Arts with a teaching certificate. Students must complete the Economics major requirements as part of their program of study.

Student's Responsibility

It is each student's responsibility to learn the requirements, policies, and procedures governing the program they are following and to act accordingly. Students should consult the Economics program advisor regularly in order to verify that Economics requirements are being met in a timely fashion. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Economics Honors (B.A. Program)

Economics majors with strong academic records and an interest in research are urged to apply to the Departmental undergraduate advisor for admission to the Honors Program. Applicants should have overall grade point averages of 3.3 or above.

In addition to the Bachelor of Arts requirements cited above, honors majors must take ECO 4997 (Senior Honors Research) during their last semester before graduation and therefore completing thirty-six credits in economics courses. In this seminar they will conduct research under the close supervision of an Economics faculty member. The results of this research are written as an honors thesis, the length of which depends on the nature of the research project.

Honors majors also must elect at least one 4200-level seminar offered by the Honors College. Finally, the student must accumulate at least fifteen credits in honors-designated course work, including ECO 4997 and the Honors College Seminar. These honors credits need not all be in the Economics Department. Those who successfully complete these requirements and finish their undergraduate course work with an overall grade point average of 3.3 or above will graduate with the degree designation "with Honors in Economics."

'AGRADE' Program (Accelerated Graduate Enrollment)

The Economics Department actively participates in the 'AGRADE' Program, which enables qualified seniors in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree in economics. Students interested in 'AGRADE' should contact the Director of Undergraduate Studies: 313-577-3345.

Mathematical Economics (B.A.)

The purpose of the program is to provide rigorous training in mathematics and economics for students whose career goals require a high level of technical proficiency in these subjects. The program will be valuable for students who intend to pursue graduate work in economics, finance or applied mathematics, or pursue a career in economic analysis, finance, underwriting, actuarial sciences, banking, international trade, applied statistics, or operations research.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students considering a mathematical economics major should take ECO 2010 and ECO 2020 (Principles of Microeconomics and Macroeconomics) and MAT 2010 (Calculus 1) as soon as possible.

To satisfy the university bachelor's degree requirement, Mathematical Economics majors must have a cumulative grade point average of 2.0 in their major courses. Also, students must receive a grade of 'C-' or better in all mathematics, statistics and economics courses.

A major consists of at least forty-six credits total - at least twenty-two credits in mathematics courses and twenty-four credits in economics courses. At least fifteen credits (eight credits of economics and seven credits of math) must be earned at Wayne State University.

Code	Title	Credits
Economics Requirements		
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
ECO 5000	Intermediate Microeconomics	4
ECO 5050	Intermediate Macroeconomics	4
ECO 6000	Price and Allocation Theory	4
Select one of the following: [1]		4
ECO 5020	Fundamentals of Economic Analysis I	
ECO 5030		
ECO 5100	Introductory Statistics and Econometrics	
ECO 5230	Environmental Economics	
ECO 5250	Economic Analysis of Law	
ECO 5260	Economic Analysis of Law II: Applications of Statistics and Econometrics	
ECO 5270	Games of Strategy	
ECO 5300	International Trade	
ECO 5500	Public Finance	
ECO 5560	Pharmaceutical Economics	
ECO 5700	Money and Banking	
ECO 6050	Macroeconomics	
ECO 6100	Introduction to Econometrics	
ECO 5993	Writing Intensive Course in Economics (This course is taken in conjunction with an approved 5000-level economics, mathematics or statistics elective course.) [3]	0
Mathematics Requirements		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
MAT 5700	Introduction to Probability Theory	4
One MAT or STA course at or above 5030. Recommended courses are: [1, 2]		3-4
STA 5030	Statistical Computing and Data Analysis	
MAT 5100	Numerical Methods I	
MAT 5210	Advanced Calculus	
MAT 5220	Partial Differential Equations	
MAT 5230	Complex Variables and Applications	
MAT 5280	Methods of Differential Equations	
MAT 5710	Introduction to Stochastic Processes	
MAT 5750	Mathematics of Finance	
MAT 5770	Mathematical Models in Operations Research	
MAT 5870	Methods of Optimization	
STA 5800	Introduction to Mathematical Statistics	
Total Credits		**46-47**

1 This course could be done in conjunction with ECO 5993.
2 Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, MAT 6150, MAT 6200 and MAT 6210.
3 This is a paper completed in conjunction with an approved 5000-level economics, mathematics or statistics elective course. You must register for this course during the same semester that the 5000-level elective taken. Permission from the instructor is required.

Minimal Grade Requirements

Students must receive a grade of 'C- ' or better in all economics, mathematics and statistics courses. An overall grade point average of 2.0 ('C') is required for graduation.

Writing Proficiency/Writing Intensive Requirement

To enable the Department to evaluate their writing proficiency, mathematical economics majors must register for ECO 5993, the zero-credit WI course. This is a paper completed in conjunction with a 5000-level economics, mathematics or statistics elective course. They must register for this during the same semester that the 5000-level elective course is taken. All mathematical economics majors must satisfy this requirement, even if they are not subject to the University General Education Requirements.

Student's Responsibility

It is each student's responsibility to learn the requirements, policies, and procedures governing the program they are following and to act accordingly. Students should consult both Mathematical Economics program advisors regularly in order to verify that Mathematical Economics requirements are being met in a timely fashion. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Economics Minor

A minor in economics requires the completion of the following course work. Twelve credits must be taken at Wayne State University. Students must maintain a cumulative g.p.a. of 2.0 or better in the Economics courses.

Code	Title	Credits
MAT 1800	Elementary Functions [1]	4
ECO 2010	Principles of Microeconomics [1]	4
ECO 2020	Principles of Macroeconomics [1]	4

Three ECO courses at the 2500-level or above [2]	12
Total Credits	**24**

1 Must be passed with a grade of C or better.
2 ECO 5000, 5050, and 5100 must be passed with a grade of C or better (if included in the minor).

Health Economics Minor

The Health Economics minor explores the economic forces impacting the health status of individuals. These forces include the health care sector consisting of physician and other provider services, hospital and health facilities, pharmaceutical drugs, medical technology and innovation, health insurance, and government programs. Other economic forces impacting health such as poverty and discrimination are also examined.

A minor in health economics requires the completion of the following coursework. A grade of C or better is required in all courses counted toward the minor.

Code	Title	Credits
Math Prerequisite		
MAT 1800 or higher, or placement into MAT 2010 in the Mathematics Placement Examination, is required.		
Required Economics Courses		
ECO 2010	Principles of Microeconomics	4
ECO 2550	U.S. Health Care: Policy and Economics	4
ECO 5000	Intermediate Microeconomics	4
ECO 5100	Introductory Statistics and Econometrics	4
ECO 5550	Economics of Health Care	4
or ECO 5560	Pharmaceutical Economics	
Total Credits		**20**

Employment and Labor Relations

Office: 255 Walter P. Reuther Library
313-577-5382 or 313-577-0175
https://clas.wayne.edu/labor-studies

- Employment and Labor Relations (B.A.) (p. 281)
- Employment and Labor Relations Minor (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/employment-labor-relations/employment-labor-relations-minor/)

Employment and Labor Relations (B.A.)

The Employment and Labor Relations major provides students with the critical skills necessary to analyze employment, labor, and workplace issues. An interdisciplinary program that draws from fields as varied as anthropology, economics, history, law, literature, management, political science, psychology and sociology, the ELR program trains professionals in labor relations and human resources. As an interdepartmental unit, the ELR program provides students with a knowledge of employment and labor law, human resource management, compensation and benefits, conflict resolution and negotiation in the workplace, and other focused skills in the context of a broad liberal arts education. Through their course of study, students will gain the competencies necessary for work in management, government, non-profit organizations, and labor unions. Graduates with a BA-ELR find careers as labor organizers and union researchers, labor and community educators and advocates, human resource and personnel managers, and dispute resolution arbitrators, among other positions, in business, labor, public sector, and non-profit organizations. The BA-ELR program is good preparation for pursuing a professional degree in business or law, particularly in the area of labor and employment law.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Code	Title	Credits
Required Core Courses		
ELR 1110	Work and Democracy: An Introduction	3
ELR 2500	Introduction to Labor Studies	4
PSY 2100	Psychology and the Workplace	3
HIS 5290	American Labor History	4
ECO 5480	Economics of Work	3
ELR 4700	Senior Seminar	3
Applied and Specialized Curriculum		
Select four of the following:		12
ANT 2050	Anthropology of Business	
ELR 4500	Applied Labor Studies (twelve credits may be elected as: Labor Relations: 3 cr.; Collective Bargaining: 3 cr.; Labor Law: 3 cr.; and Labor, Politics and Public Policy: 3 cr.)	
ELR 2400	Survey of the Music Business and Labor	
ELR 3220	Labor in Media and Popular Culture	

ELR 3650	The Philosophy of Work
HIS 3360	Black Workers in American History
MGT 5700	Human Resource Management
PSY 5710	Dispute Resolution
MGT 5740	Employee Relations
PSY 6550	Training and Employee Development
PS 3020	Political Parties and Elections
PS 3030	Political Interest Groups
PS 3040	The Legislative Process
SOC 2203	Social Psychology
SOC 2300	Social Inequality
Total Credits	**32**

Students are referred to the program director for information concerning courses, directed study, internships, career information, and graduate study.

The MAELR degree offers the College of Liberal Arts and Sciences' Accelerated Graduate Enrollment (AGRADE) program to qualified undergraduates. AGRADE provides the opportunity for top students to enroll simultaneously in an undergraduate and graduate degree program, and to apply a maximum of 16 credits toward both their undergraduate and master's degrees in the student's major or closely aligned field.

Students electing AGRADE programs may expect to complete both their bachelor's and master's degrees in only five years of full-time study. This allows students to save both time and money as they pursue their undergraduate and graduate degrees simultaneously, making the most of their experiences at Wayne State. Students must apply for the AGRADE program during the semester that they earn 90 credits toward an undergraduate degree (typically during junior year). Applicants must have a minimum cumulative GPA of 3.3 and final approval from their major department.

Requirements

In addition, the ELR program requires the following materials for application to AGRADE:

- completion of the WSU ELR AGRADE application; a copy of the student's unofficial transcript(s);
- a one-page single-spaced letter of interest that conveys clearly and concisely the student's tentative career goals, how the program will help them achieve these goals, and what the student seeks to achieve in the MAELR program;
- a letter of recommendation from a faculty member (the faculty member should email their recommendation directly to the Director of Labor@Wayne).

English

Office: Room 9408, 5057 Woodward; 313-577-2450
Chairperson: Jaime Goodrich
Associate Chairperson and Director of Undergraduate Studies: Lisa Ze Winters
Director of Graduate Studies: Richard Marback
Academic Services Officer: Anglesia Brown
Undergraduate advisor: Royanne R. Smith
https://clas.wayne.edu/english/

Located in the heart of Detroit, Wayne State University's Department of English is committed to critical engagement with language, texts, and media. Our students learn how to read, write, analyze, create arguments, and conduct research by taking classes in Composition, Creative Writing, Linguistics, Literary and Cultural Studies, Media Studies, Professional Writing, and Rhetoric. Through our research and teaching, we prepare students to pursue a range of career paths and to engage with the world in all its complexity.

- English (B.A.) (p. 282)
- Film Studies (B.A.) (p. 285)
- Creative Writing Minor (p. 286)
- English Minor (p. 286)
- Film and Media Studies Minor (p. 286)
- Professional Writing Minor (p. 287)

English (B.A.)

Building upon the cultural diversity and urban experience that distinguishes Wayne State University, the English Department's mission is to provide its students with the intellectual knowledge and practical tools to thrive in an increasingly diverse and interconnected world, by teaching them to understand the power and influence of literature and other forms of textual and media production, circulation, and interpretation; and by imparting skill and fluency in close reading, critical thinking, rhetorical analysis, and writing in multiple genres. The English major curriculum is designed to introduce students to these skills and to provide a challenging and flexible liberal arts education as well as a pre-professional program for students interested in careers in education, law, business, and other professions.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students may satisfy the major in either of two ways: with a traditional concentration or with a concentration in editing, publishing, and writing.

In both concentrations, students must complete twelve English courses beyond the University General Education Competency Requirement and

Liberal Arts and Sciences Group Requirements. Ten of these courses must be beyond the 2000-level.

Traditional Concentration

Code	Title	Credits
Foundations Courses		
Select two courses from the following list:		6
ENG 2200	Shakespeare: Writing about Texts	
ENG 2250	British Literature: Writing about Texts	
ENG 2350	American Literature: Writing about Texts	
ENG 2390	Introduction to African-American Literature: Writing about Texts	
ENG 2395	Stories of Detroit: Writing about Texts	
ENG 2415	Geopolitics and Literature: Writing about Texts	
ENG 2420	Environmental Writing: Writing about Texts	
ENG 2425	Rhetoric and Social Change: Writing about Texts	
ENG 2430	Digital Literacies: Writing about Texts	
ENG 2440	Introduction to Visual Culture: Writing about Texts	
ENG 2445	Comics and Graphic Novels: Writing about Texts	
ENG 2470	Television Culture: Writing about Texts	
ENG 2500	Literature and Religion: Writing about Texts	
ENG 2510	Popular Culture: Writing about Texts	
ENG 2530	Queer Literatures: Writing about Texts	
ENG 2540	Global Literatures: Writing about Texts	
ENG 2560	Children's and Young Adults' Literature: Writing about Texts	
ENG 2570	Women Writers: Writing about Texts	
Methodologies and Skills		
Select two courses from the following list:		6
ENG 3085	Introduction to Rhetorical Theory	
ENG 3090	Introduction to Cultural Studies	
ENG 3095	Introduction to Race and Ethnic Studies	
ENG 3100	Introduction to Literary Studies	
ENG 3105	Introduction to Film and Media Theory	
ENG 3200	Grant Writing	
ENG 3210	Public Humanities	
ENG 3250	Professional Editing	
ENG 3800	Living Writers	
Research Colloquium		
ENG 4850	Research Methods Colloquium	3
Senior Seminar		
ENG 5992	Senior Seminar	3
Additional Requirements		
Select six additional courses in English. [1]		18
Total Credits		**36**

[1] Three of these courses must be at the 4000 or 5000 level. No English course below the 2000-level may count toward the English B.A. program.

Editing, Publishing, and Writing Concentration

Code	Title	Credits
Foundations Courses		
Select two of the following courses:		6
ENG 2200	Shakespeare: Writing about Texts	
ENG 2250	British Literature: Writing about Texts	
ENG 2350	American Literature: Writing about Texts	
ENG 2390	Introduction to African-American Literature: Writing about Texts	
ENG 2395	Stories of Detroit: Writing about Texts	
ENG 2415	Geopolitics and Literature: Writing about Texts	
ENG 2420	Environmental Writing: Writing about Texts	
ENG 2425	Rhetoric and Social Change: Writing about Texts	
ENG 2430	Digital Literacies: Writing about Texts	
ENG 2440	Introduction to Visual Culture: Writing about Texts	
ENG 2445	Comics and Graphic Novels: Writing about Texts	
ENG 2470	Television Culture: Writing about Texts	
ENG 2500	Literature and Religion: Writing about Texts	
ENG 2510	Popular Culture: Writing about Texts	
ENG 2530	Queer Literatures: Writing about Texts	
ENG 2540	Global Literatures: Writing about Texts	
ENG 2560	Children's and Young Adults' Literature: Writing about Texts	
ENG 2570	Women Writers: Writing about Texts	
Professional Editing		
ENG 3250	Professional Editing	3
Publishing Practicum		
ENG 5695	Publishing Practicum	3
Internship Practicum		
ENG 5820	Internship Practicum	3
Course in Writing		
Select one of the following courses:		3
ENG 2800	Foundations of Creative Writing	
ENG 3200	Grant Writing	
ENG 3800	Living Writers	
ENG 5005	Digital Storytelling	
ENG 5825	Grant, Proposal, and Public Writing	
ENG 5830	Writing in the Workplace	
ENG 5840	Topics in Professional Writing	
ENG 5895	Topics in Environmental, Nature, and Science Writing	
Elective in Editing, Publishing, and Writing		
Select one of the following:		3
AGD 2230	Introduction to Typography: Skills and Concepts	
AGD 2240	Introduction to Graphic Design: Skills and Concepts	
COM 2030	Media Writing Toolkit	
COM 2210	Media Writing and Storytelling	
COM 2310	Introduction to Web Design	
ENG 2720	Basic Concepts in Linguistics	
ENG 3200	Grant Writing	
ENG 3800	Living Writers	
ENG 5005	Digital Storytelling	
ENG 5010	Topics in the Essay	
ENG 5530	Topics in Poetry	
ENG 5550	Topics in Fiction	
ENG 5860	Topics in Creative Writing	
ENG 5685	Topics in Editing	
ENG 5690	Topics in Book History	
ENG 5700	Introduction to Linguistic Theory	
ENG 5730	English Grammar	
ENG 5790	Writing Theory	

ENG 5825	Grant, Proposal, and Public Writing	
ENG 5830	Writing in the Workplace	
ENG 5840	Topics in Professional Writing	
ENG 5870	Poetry Writing Workshop	
ENG 5880	Fiction Writing Workshop	
ENG 5885	Topics in Creative Non-Fiction Writing	
ENG 5895	Topics in Environmental, Nature, and Science Writing	
Research Colloquium		
ENG 4850	Research Methods Colloquium	3
Senior Seminar		
ENG 5992	Senior Seminar	3
Additional Requirements		
Select three additional courses in English.		9
Total Credits		**36**

[1] Students must take at least two courses at the 3000 level and at least three courses at the 5000 level in addition to the Senior Seminar. No English course below the 2000-level may count toward the English B.A. program.

Combined Curriculum for Secondary Teaching

An English major who wishes to prepare for a career in secondary school teaching can earn a bachelor's degree in English with a secondary teaching certificate. In close consultation with Department of English and College of Education advisors, the student will develop a plan of work that satisfies the requirements of the English B.A. program and includes the subject area and professional courses required for teacher certification.

Note: Students seeking Elementary Education Certification with a Language Arts Group Major should consult with an advisor in the School of Education.

English Honors (B.A. Program)

To graduate with honors in English an undergraduate student must have a minimum 3.5 g.p.a. in English courses and a minimum cumulative g.p.a of 3.3. Students must complete the English major with a minimum of thirty-six credits in English courses beyond the Liberal Arts and Sciences Group requirements and General Education requirements, three courses of which must be in Honors: ENG 4991, ENG 4992, and one 5000-level English course taken as an Honors-option course. Students must also complete at least one 4200-level interdepartmental Honors Seminar, HON 4200-HON 4280, to total four courses in Honors.

Required English Courses

Students may fulfill their required English courses for the English Honors B.A. through one of two concentrations in the major: the traditional concentration or the concentration in editing, publishing, and writing.

In both concentrations, students must complete twelve English courses beyond the University General Education Competency Requirement and Liberal Arts and Sciences Group Requirements. Ten of these courses must be beyond the 2000 level.

Traditional Concentration

Code	Title	Credits
Foundations Courses		
Select two courses from the following list:		6
ENG 2200	Shakespeare: Writing about Texts	
ENG 2250	British Literature: Writing about Texts	
ENG 2350	American Literature: Writing about Texts	
ENG 2390	Introduction to African-American Literature: Writing about Texts	
ENG 2395	Stories of Detroit: Writing about Texts	
ENG 2415	Geopolitics and Literature: Writing about Texts	
ENG 2420	Environmental Writing: Writing about Texts	
ENG 2425	Rhetoric and Social Change: Writing about Texts	
ENG 2430	Digital Literacies: Writing about Texts	
ENG 2440	Introduction to Visual Culture: Writing about Texts	
ENG 2445	Comics and Graphic Novels: Writing about Texts	
ENG 2470	Television Culture: Writing about Texts	
ENG 2500	Literature and Religion: Writing about Texts	
ENG 2510	Popular Culture: Writing about Texts	
ENG 2530	Queer Literatures: Writing about Texts	
ENG 2540	Global Literatures: Writing about Texts	
ENG 2560	Children's and Young Adults' Literature: Writing about Texts	
ENG 2570	Women Writers: Writing about Texts	
Methodologies and Skills		
Select two courses from the following list:		6
ENG 3085	Introduction to Rhetorical Theory	
ENG 3090	Introduction to Cultural Studies	
ENG 3100	Introduction to Literary Studies	
ENG 3105	Introduction to Film and Media Theory	
ENG 3200	Grant Writing	
ENG 3210	Public Humanities	
ENG 3250	Professional Editing	
ENG 3800	Living Writers	
Research Colloquium		
ENG 4850	Research Methods Colloquium	3
Honors Seminar		
ENG 4991	Honors Seminar (Max. 6)	3
Honors Project		
ENG 4992	Honors Project [1]	3
Other Requirements		
Select at least five additional courses in English [2]		15
Total Credits		**36**

[1] The Honors Project should be twenty to thirty pages long. Students pursuing both Department and University Honors may use the Departmental project (ENG 4992 (https://bulletins.wayne.edu/search/?P=ENG%204992)) to fulfill the University Honors thesis requirement.

[2] Three of these courses must be at the 4000 or 5000 level. At least one of these courses must be taken as an Honors-option course. Candidates for Honors in English will arrange for an Honors-option by contracting with any professor teaching a 5000-level course to do honors-level work in that course, beyond the standard requirements set forth in the syllabus. Supplementary work required for the Honors-option might consist of an extra paper, a significantly longer term paper, evidence of additional readings (for example, through journal entries), an oral or written report, or a special examination. No English course below the 2000 level may count toward the English B.A. program.

Editing, Publishing, and Writing Concentration

Code	Title	Credits
Foundations Courses		
Select two courses from the following list:		6
ENG 2200	Shakespeare: Writing about Texts	
ENG 2250	British Literature: Writing about Texts	
ENG 2350	American Literature: Writing about Texts	
ENG 2390	Introduction to African-American Literature: Writing about Texts	
ENG 2395	Stories of Detroit: Writing about Texts	
ENG 2415	Geopolitics and Literature: Writing about Texts	
ENG 2420	Environmental Writing: Writing about Texts	
ENG 2425	Rhetoric and Social Change: Writing about Texts	
ENG 2430	Digital Literacies: Writing about Texts	
ENG 2440	Introduction to Visual Culture: Writing about Texts	
ENG 2445	Comics and Graphic Novels: Writing about Texts	
ENG 2470	Television Culture: Writing about Texts	
ENG 2500	Literature and Religion: Writing about Texts	
ENG 2510	Popular Culture: Writing about Texts	
ENG 2530	Queer Literatures: Writing about Texts	
ENG 2540	Global Literatures: Writing about Texts	
ENG 2560	Children's and Young Adults' Literature: Writing about Texts	
ENG 2570	Women Writers: Writing about Texts	
Professional Editing		
ENG 3250	Professional Editing	3
Publishing Practicum		
ENG 5695	Publishing Practicum (Internship Practicum)	3
Internship Practicum		
ENG 5820	Internship Practicum	3
Course in Writing		
Select one course from the following list:		3
ENG 3200	Grant Writing	
ENG 3800	Living Writers	
ENG 5005	Digital Storytelling	
ENG 5825	Grant, Proposal, and Public Writing	
ENG 5830	Writing in the Workplace	
ENG 5840	Topics in Professional Writing	
ENG 5895	Topics in Environmental, Nature, and Science Writing	
Elective in Editing, Publishing, and Writing		
Select one from the following list:		3
AGD 2230	Introduction to Typography: Skills and Concepts	
AGD 2240	Introduction to Graphic Design: Skills and Concepts	
COM 2030	Media Writing Toolkit	
COM 2210	Media Writing and Storytelling	
COM 2310	Introduction to Web Design	
ENG 3200	Grant Writing	
ENG 3800	Living Writers	
ENG 5005	Digital Storytelling	
ENG 5685	Topics in Editing	
ENG 5690	Topics in Book History	
ENG 5825	Grant, Proposal, and Public Writing	
ENG 5830	Writing in the Workplace	
ENG 5840	Topics in Professional Writing	
ENG 5870	Poetry Writing Workshop	
ENG 5880	Fiction Writing Workshop	
ENG 5885	Topics in Creative Non-Fiction Writing	
ENG 5895	Topics in Environmental, Nature, and Science Writing	
Research Colloquium		
ENG 4850	Research Methods Colloquium	3
Honors Seminar		
ENG 4991	Honors Seminar	3
Honors Project		
ENG 4992	Honors Project [1]	3
Other Requirements		
Select at least two additional courses in English [2]		6
Total Credits		**36**

[1] The Honors Project should be twenty to thirty pages long. Students pursuing both Department and University Honors may use the Departmental project (ENG 4992 (https://bulletins.wayne.edu/search/?P=ENG%204992)) to fulfill the University Honors thesis requirement.

[2] Inclusive of the requirements for the "Course in Writing," "Elective in Editing, Publish, and Writing," and "Other Requirements," students must take at least two courses at the 3000 level and at least one course at the 4000 or 5000 level in addition to the Honors Seminar and Honors project. At least one of the 5000-level courses must be taken as an Honors-option course. Candidates for Honors in English will arrange for an Honors-option by contracting with any professor teaching a 5000-level course to do honors-level work in that course, beyond the standard requirements set forth in the syllabus. Supplementary work required for the Honors-option might consist of an extra paper, a significantly longer term paper, evidence of additional readings (for example, through journal entries), an oral or written report, or a special examination. No English course below the 2000 level may count toward the English B.A. program.

Students who wish to become candidates for degrees with honors in English are encouraged to consult early with the Undergraduate Advisor for the Department of English.

'AGRADE' Program (Accelerated Graduate Enrollment)

The English Department invites academically superior majors to apply for admission to the 'AGRADE' Program, which allows qualified seniors to enroll simultaneously in the undergraduate and graduate programs of the Department. Applications will be accepted no earlier than the semester in which ninety credits are completed. Applicants must have an overall grade point average of 3.5 and not less than a 3.6 g.p.a in the major courses already completed. A Plan of Work is required, and credit restrictions apply. Please see the departmental Undergraduate Advisor for more detail.

Film Studies (B.A.)

An admissions moratorium is in effect for this program.

The University offers two undergraduate degree programs related to film: the Bachelor of Arts with a Major in Film offered by the College of Fine, Performing, and Communications Arts, and the Bachelor of Arts with a Major in Film Studies as described below.

The English Department offers a program in film and media studies for students interested in the history and criticism of film and media.

Courses are designed to give students knowledge and critical skills in film analysis, key concepts in film theory, the major directors, emerging trends in new media scholarship, and an understanding of cultural and historical factors in film and media production and reception.

Please contact the Undergraduate Advisor in the Department of English for further information.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Students majoring in film studies must complete a minimum of thirty-four credits, distributed as follows:

Code	Title	Credits
Core Courses (Fourteen Credits)		
ENG 2450/ COM 2010	Introduction to Film	4
ENG 5993	Writing Intensive Course in English	0
Additional ENG courses		10
Elective Courses (Twenty Credits)		
Select twenty elective credits of the following: [1]		20
ADA 3210	Video Art	
ADA 4220	Experimental 2D Animation	
AFS 3200/ COM 3230	The African-American Film Experience	
AFS/COM 4240	African Americans in Television	
COM 1600	Introduction to Audio-Television-Film Production	
COM 5020	Studies in Film History (Max. 12)	
COM 5060	Documentary and Non-Fiction Film and Television	
COM 5270	Screenwriting (Max. 8)	
COM 5400	Techniques of Film and Video Production	
COM 5440	Film, Cinematography and Lighting	
ENG 5070	Topics in Film and Media (Max. 12)	
ENG 5990	Directed Study in English (Max. 6 (with film studies focus))	
ITA 5150	Italian Cinema (Max. 9)	
NE 2060	Trends and Themes in Films of the Middle East	
POL/SLA 3750	Polish and Yugoslavian Cinema	
SLA 3710	Russian and East European Film	
Total Credits		**34**

[1] Electives should be selected in conjunction with the Departmental Undergraduate Advisor. Three elective classes must be taken at the 5000-level or above.

Creative Writing Minor

The Creative Writing Minor is designed to allow focus and credentialing for the many students across the university who enjoy reading and writing poetry, fiction, and other creative forms. The minor requires a minimum of 18 credits. English majors can only apply two major courses to this minor.

Requirements

Code	Title	Credits
ENG 2800	Foundations of Creative Writing (Required for all Creative Writing Minors)	3
Select one of the following craft courses:		3
ENG 3810	The Craft of Poetry	
ENG 3820	The Craft of Prose	
Select one of the following workshops		3
ENG 5870	Poetry Writing Workshop	
ENG 5880	Fiction Writing Workshop	
ENG 5885	Topics in Creative Non-Fiction Writing	
Select three of the following literary and genre studies courses		9
ENG 2250	British Literature: Writing about Texts	
ENG 2350	American Literature: Writing about Texts	
ENG 2395	Stories of Detroit: Writing about Texts	
ENG 2500	Literature and Religion: Writing about Texts	
ENG 2530	Queer Literatures: Writing about Texts	
ENG 2540	Global Literatures: Writing about Texts	
ENG 2570	Women Writers: Writing about Texts	
ENG 3090	Introduction to Cultural Studies	
ENG 3095	Introduction to Race and Ethnic Studies	
ENG 3100	Introduction to Literary Studies	
ENG 3800	Living Writers	
ENG 5010	Topics in the Essay	
ENG 5030	Topics in Women's Studies	
ENG 5035	Topics in Gender and Sexuality Studies	
ENG 5080	Topics in Global and Transnational Studies	
ENG 5340	Topics in British Literature	
ENG 5480	Topics in African American Literature	
ENG 5490	Topics in American Literature	
ENG 5530	Topics in Poetry	
ENG 5550	Topics in Fiction	
ENG 5595	Topics in Global Literatures	
ENG 5860	Topics in Creative Writing	
ENG 5895	Topics in Environmental, Nature, and Science Writing	
Total Credits		**18**

English Minor

The minor in English permits study in literature, film and media, creative writing, and rhetoric and writing studies. It requires six English courses, excluding Basic Composition (BC) and Intermediate Composition (IC) requirements, for a minimum of at least eighteen credits:

Code	Title	Credits
Select two English courses at the 2000 level or above.		6
Select two English courses at the 3000 level or above.		6
Select two English courses at the 4000 level or above.		6
Total Credits		**18**

Film and Media Studies Minor

The English department offers a minor in Film and Media Studies for students interested in the history and criticism of film and media. Courses are designed to give students knowledge and critical skills in film and media analysis, key concepts in film and media theory, emerging trends in new media scholarship, and an understanding of cultural and

historical factors in film and media production and reception. The minor requires five courses. English majors can only apply two of their major courses to this minor.

Code	Title	Credits
ENG 2450/ COM 2010	Introduction to Film	4
Select four courses from the following, two of which must be at the 4000-level or above.		12-16
ENG 2430	Digital Literacies: Writing about Texts	
ENG 2440	Introduction to Visual Culture: Writing about Texts	
ENG 2445	Comics and Graphic Novels: Writing about Texts	
ENG 2470	Television Culture: Writing about Texts	
ENG 3090	Introduction to Cultural Studies	
ENG 5070	Topics in Film and Media	
ENG 5095	Topics in Visual Culture	
Allowed from other disciplines:		
AFS 3200/ COM 3230	The African-American Film Experience	
AFS/COM 4240	African Americans in Television	
CHI 3010	Contemporary Chinese Pop Culture	
COM 5270	Screenwriting	
FRE 2100	French through Film I	
FRE 2110	French through Film II	
ITA 2020	Italian through Film	
ITA 5150	Italian Cinema	
NE 2060	Trends and Themes in Films of the Middle East	
SLA 3710	Russian and East European Film	
SLA/POL 3750	Polish and Yugoslavian Cinema	

Professional Writing Minor

The Professional Writing minor is intended to provide students with training in the essentials of professional writing practices and with experience in composing in common genres of professional and technical communication. The minor requires the completion of a minimum of 18 credits.

Requirements

Code	Title	Credits
Select one of the following introductory courses:		3
ENG 3050	Technical Communication I: Reports	
ENG 3060	Technical Communication II: Presentations	
Select four courses from the following, two of which must be at the 5000-level:		12
ENG 3200	Grant Writing	
ENG 3250	Professional Editing	
ENG 3050	Technical Communication I: Reports	
ENG 3060	Technical Communication II: Presentations	
ENG 5010	Topics in the Essay	
ENG 5695	Publishing Practicum	
ENG 5795	Topics in Rhetoric and Writing	
ENG 5830	Writing in the Workplace	
ENG 5840	Topics in Professional Writing	
Required internship:		3
ENG 5820	Internship Practicum	
Total Credits		**18**

Environmental Science and Geology

Office: 0224 Old Main; (313) 577-2506
Chairperson: Sarah Brownlee
Academic Advisor: Dawn Niedermiller
Academic Services Officer: John Niedermiller
https://clas.wayne.edu/esg

Geology is the scientific study of planet Earth and involves the observation and interpretation of processes that form and change our world. Some of these processes, such as earthquakes, tsunamis, and volcanic eruptions, proceed rapidly, often with catastrophic consequences. Others, such as erosion or mountain building can progress so slowly that their results are scarcely noticeable over a human lifetime. Each of these processes, however, can exert a profound influence on human activities and can, in turn, be influenced intentionally or unintentionally by human activities.

The courses offered by this department are designed to serve the needs of five groups of students:

1. Those who desire a general knowledge of geology as part of a liberal education;
2. Those who need geological information as a cognate subject in other professions;
3. Those who wish to major in geology as part of a broad liberal arts education;
4. Those who wish to major in environmental science;
5. Those who plan to become professional geologists.

Introductory courses are primarily general, but they also provide a foundation in geology for the student who desires to continue an intensive program of study. Students with an interest in environmental problems will find a number of relevant courses among those offered by the Department of Geology. In addition, a variety of courses in various phases of geology is available to the general student. Intermediate and advanced courses are designed to develop the principles of geology beyond the elementary level and to give a firm technical foundation for advanced study.

Environmental Science investigates the many interconnected systems and processes that formed our world, continuously change it, and, ultimately, sustain life on it. The Environmental Science Program at Wayne State offers an interdisciplinary approach combining a strong foundation from both geological and ecological perspectives, and a broad choice of electives in its course work. This interdisciplinary program addresses human impacts on the environment, earth surface processes, and ecosystem science with an emphasis on the urban environments. It will prepare students for graduate study, or for careers in various areas of environmental science including conservation, restoration, watershed management, environmental impact assessment, air and water quality monitoring, regulatory compliance, and environmental remediation.

- Environmental Science (B.S.) (p. 288)
- Environmental Science Minor (p. 291)
- Geochemistry Minor (p. 291)
- Geology (B.A.) (p. 289)
- Geology (B.S.) (p. 290)
- Geology Minor (p. 291)
- Geophysics Minor (p. 291)

Environmental Science (B.S.)

Environmental Science investigates the many interconnected systems and processes that formed our world, continuously change it, and, ultimately, sustain life on it. The Environmental Science Program at Wayne State offers an interdisciplinary approach combining a strong foundation from both geological and ecological perspectives, and a broad choice of electives in its course work. This interdisciplinary program addresses human impacts on the environment, earth surface processes, and ecosystem science with an emphasis on the urban environments. It will prepare students for graduate study, or for careers in various areas of environmental science including conservation, restoration, watershed management, environmental impact assessment, air and water quality monitoring, regulatory compliance, and environmental remediation.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students must receive a grade of 'C-minus' or better in all Major and Cognate required courses. An overall grade point average of 2.0 ('C') in all coursework is required for graduation.

Major Requirements

B.S. candidates in Environmental Science must complete the following:

Code	Title	Credits
ESG 1500	Introduction to Environmental Science	3
ESG 3000	Introduction to Environmental Analysis Using Geographic Information Systems (GIS)	3
ESG 3100	Air and Water in Environmental Systems	3
ESG 1010	Geology: The Science of the Earth	3
ESG 1011	Geology: The Science of the Earth Laboratory	1
ESG 5150	Soils and Soil Pollution	4
ESG 5510	Environmental Fate and Transport of Pollutants	4
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 3500	Ecology and the Environment	3
BIO 5100	Aquatic Ecology	4
or BIO 5440	Terrestrial Ecology	
PHI 1130	Environmental Ethics	3
PS 3450	Environmental Policy and Politics	4
Environmental Humanities Course (Choose One):		**3-4**
ANT 5140	Biology and Culture	
ECO 5230	Environmental Economics	
HIS 5540	World Environmental History since 1900	
PS 5560	Biopolitics	
UP 4460	Sustainable Cities	

Elective Courses

Students must complete a minimum of 15 approved elective credits for the major; one course must be from the Department of Biology or the Department of Environmental Science and Geology.

Code	Title	Credits
Biology Options		
BIO 4130	General Ecology	4
BIO 4420	Biogeography	3
BIO 5040	Biometry	4
BIO 5100	Aquatic Ecology	4
BIO 5180	Field Investigations in Biological Sciences	12
BIO 5440	Terrestrial Ecology	4
BIO 5490	Population and Community Ecology	3
BIO 5540	Landscape Ecology	3
BIO 6190	Advanced Special Topics	6
BIO 6420	Ecotoxicology and Risk Assessment	3
Environmental Science and Geology Options		
ESG 2130	Mineralogy	4
ESG 3300	Structural Geology	4
ESG 3160	Petrology	4
ESG 3800	Team Research	2
ESG 3650	Field Geology	1-6
ESG 4200	Geomorphology	4
ESG 4900	Internship in Environmental Science	2
ESG 5000	Geological Site Assessment	4
ESG 5120	Environmental Geochemistry	4
ESG 5210	Environmental and Applied Geophysics	4
ESG 5360	Hydrology and Water Resources	4
ESG 5420	Mathematical Methods in Earth Science	4
ESG 5450	Hydrogeology	4
ESG 5600	Special Topics in Environmental Science and Geology	4
ESG 5610	Special Topics in Environmental Science and Geology	1
ESG 5650	Applied Geologic Mapping	4
ESG 6400	Isotopes: Applications in Geological and Environmental Sciences	4
Anthropology Options		
ANT 5140	Biology and Culture (Anthropology Course Options)	3
Civil Engineering Options		
CE 3250	Applied Fluid Mechanics	4
CE 4210	Introduction to Environmental Engineering	3
CE 5230	Water Supply and Wastewater Engineering	3
CE 6190	Groundwater	3
CE 6160	Principles of Atmospheric Chemistry and Applications	3
CE 6270	Sustainability Assessment and Management	3
Economics Options		
ECO 5230	Environmental Economics	4
Geography Options		
GPH 3600	Introduction to Geographic Information Systems	4
GPH 4600	Advanced Geographic Information Systems	4
Honors Options		
HON 4220	Seminar in Life Science	3
History Options		
HIS 5540	World Environmental History since 1900	4
Public Health Options		
PH 3500	Environmental Health	3
Urban Studies and Planning Options		
UP 4460	Sustainable Cities	3

Cognate Requirements

B.S. candidates in Environmental Science must take:

Code	Title	Credits
STA 1020	Elementary Statistics	3
or STA 2210	Probability and Statistics	
MAT 2010	Calculus I	4
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory (or CHM 1220/1230 if taken before Fall 2020)	5
Select one of the following Physics options:		5
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	

Majors should take the Placement Examination of the Department of Mathematics as soon as possible upon entry into the freshman year, although freshmen students may be placed by ACT/SAT scores (valid for 2 years).

Student's Responsibility: It is each student's responsibility to learn the requirements, policies, and procedures governing the program they are following and to act accordingly. Students should consult the Environmental Science Program Advisor regularly in order to verify that Environmental Science requirements are being met in a timely fashion. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Environmental Science Honors

To be recommended for an honors degree from this program, a student must maintain a cumulative grade point average of at least 3.30 and complete a minimum of twelve honors course credits including two Geology or Biological Science Honors or Honors Option courses (6 credits) and:

Code	Title	Credits
ESG 4998	Honors Thesis	3
BIO 6999	Honors Undergraduate Research Thesis	2
One 4200-level Honors Seminar		3

Geology (B.A.)

Geology is the scientific study of planet Earth and involves the observation and interpretation of processes that form and change our world. Some of these processes, such as earthquakes, tsunamis, and volcanic eruptions, proceed rapidly, often with catastrophic consequences. Others, such as erosion or mountain building can progress so slowly that their results are scarcely noticeable over a human lifetime. Each of these processes, however, can exert a profound influence on human activities and can, in turn, be influenced intentionally or unintentionally by human activities.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students must complete twenty-six credits in geology beyond ESG 1020. These must include:

Code	Title	Credits
ESG 2130	Mineralogy	4
ESG 3160	Petrology	4
ESG 3300	Structural Geology	4
ESG 3400	Principles of Sedimentology and Stratigraphy	4
GEL 5993	Writing Intensive Course in Geology	0
At least two credits in a geology field course		2

Cognate Requirements

At least one college course in each of two of the following fields is required: biology, chemistry, or physics. MAT 1800 and satisfaction of the Foreign Language Group Requirement are also required.

Geology majors should consult their advisor regarding additional recommended cognate courses. Depending on interest and future goals, supplementary courses in mathematics, physics and chemistry, as well as courses in biology, computer science, engineering, and urban studies might be of particular value.

Geology Honors

The Honors Program in Geology is open to students of superior academic ability who are majoring in geology. To be recommended for an honors degree from this department, a student must maintain a cumulative grade point average of at least 3.3. He/she must accumulate at least twelve credits in honors-designated courses including: two Geology Honors or Honors Option courses (min. 6 credits), GEL 4998 (https://bulletins.wayne.edu/search/?P=GEL%204998): Honors Thesis (3 credits), and one 4200-level Honors Seminar (3 credits).

Geology (B.S.)

Geology is the scientific study of planet Earth and involves the observation and interpretation of processes that form and change our world. Some of these processes, such as earthquakes, tsunamis, and volcanic eruptions, proceed rapidly, often with catastrophic consequences. Others, such as erosion or mountain building can progress so slowly that their results are scarcely noticeable over a human lifetime. Each of these processes, however, can exert a profound influence on human activities and can, in turn, be influenced intentionally or unintentionally by human activities.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students must complete at least thirty-four credits in geology exclusive of the introductory courses (1000-level) and must include the following:

Code	Title	Credits
Twenty of the thirty-four credits from advanced courses (numbered 3000 and above)		
ESG 2130	Mineralogy	4
ESG 3160	Petrology	4
ESG 3300	Structural Geology	4
ESG 3400	Principles of Sedimentology and Stratigraphy	4
GEL 5993	Writing Intensive Course in Geology	0
Credits in field mapping and field techniques, to be fulfilled by completed six credits in a summer field course [1]		6

[1] If the Geology Department at Wayne State University does not offer a summer field course in any given year, students should complete the field course requirement by attending an approved field course at another university. In certain unusual circumstances the required six credits in field mapping and field techniques may be earned through an extended field-oriented research project when this project involves extensive field mapping and is under the direct supervision of a faculty member or other qualified field geologist throughout the duration of the field work. Questions about appropriate Field Camp opportunities outside of Wayne State University should be directed to the program advisor and/or faculty members.

Cognate Requirements

Code	Title	Credits
MAT 1800 & MAT 2010	Elementary Functions and Calculus I (or equivalent)	8
Select one of the following sequences or equivalent:		8
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	
OR		
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory	
AND		
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory (or equivalent)	5
A semester of biology (BIO 1500 or equivalent) is strongly recommended		4

Although there are no required cognate courses beyond those listed above, geology majors should consult their advisor regarding cognate courses which might be of value to their particular program. Depending

on interest and future goals, additional courses in mathematics, physics, and chemistry, as well as courses in biology, computer science, civil engineering, and urban studies might be of particular value.

Geology Honors

The Honors Program in Geology is open to students of superior academic ability who are majoring in geology. To be recommended for an honors degree from this department, a student must maintain a cumulative grade point average of at least 3.3. He/she must accumulate at least twelve credits in honors-designated courses including: two Geology Honors or Honors Option courses (min. 6 credits), GEL 4998 (https://bulletins.wayne.edu/search/?P=GEL%204998): Honors Thesis (3 credits), and one 4200-level Honors Seminar (3 credits).

Environmental Science Minor

The Environmental Science minor requires a minimum of 24 credits for completion. All courses are currently utilized for the Environmental Science major. Environmental Science majors are not eligible for the Environmental Science minor.

Code	Title	Credits
Required Courses		**18**
ESG 1500	Introduction to Environmental Science	
ESG 1010	Geology: The Science of the Earth	
ESG 1011	Geology: The Science of the Earth Laboratory	
BIO 1500	Basic Life Diversity	
ESG 3100	Air and Water in Environmental Systems	
BIO 3500	Ecology and the Environment	
Elective courses (select two from the following)		**6-8**
Geology majors must select at least one BIO course; biological science majors must select at least one GEL course.		
BIO 4130	General Ecology	
BIO 4420	Biogeography	
BIO 5040	Biometry	
BIO 5100	Aquatic Ecology	
BIO 5180	Field Investigations in Biological Sciences	
BIO 5440	Terrestrial Ecology	
BIO 5490	Population and Community Ecology	
BIO 5540	Landscape Ecology	
BIO 6190	Advanced Special Topics	
ESG 4200	Geomorphology	
ESG 5000	Geological Site Assessment	
ESG 5120	Environmental Geochemistry	
ESG 5150	Soils and Soil Pollution	
ESG 5360	Hydrology and Water Resources	
ESG 5510	Environmental Fate and Transport of Pollutants	
ESG 5650	Applied Geologic Mapping	
Total Credits		**24-26**

Geology Minor

The Department offers a minor in geology for undergraduate students. The minor consists of twenty credits in geology (usually consisting of five courses). Although desirable courses for a student's minor program should be determined in consultation with Geology Department staff members. Anyone wishing to complete a minor in geology should contact the Department advisor as soon as possible, so that an appropriate program can be formulated.

Code	Title	Credits
Required courses:		**8**
ESG 1010	Geology: The Science of the Earth	
ESG 1020	Interpreting the Earth	
Elective coursework (at least four credits in the minor must be completed in courses at the 3000-level or above) [1]		**12**
Total Credits		**20**

[1] ESG 1050 may only be applied for credit to a minor with the permission of the student's advisor in consultation with the Chairperson of the Department

Geochemistry Minor

Geochemistry is a state-of-the-art science that studies the abundance and mobility of elements and compounds and their movement through Earth's continental crust, atmosphere, oceans, lakes, rivers and streams. The skills acquired through this minor are relevant to students interested in environmental and natural-resource topics associated with archaeological, anthropological, biological, chemical and geological studies.

The Geochemistry Minor requires 23-25 credits, including:

Code	Title	Credits
Core Courses		**16-17**
CHM 1100	General Chemistry I	
or CHM 1125	General Chemistry I for Engineers	
CHM 1130	General Chemistry I Laboratory	
CHM 1240	Organic Chemistry I	
ESG 1010	Geology: The Science of the Earth	
ESG 1011	Geology: The Science of the Earth Laboratory	
ESG 5120	Environmental Geochemistry	
Chemistry Elective Course (select one of the following)		**3-4**
CHM 1140	General Chemistry II	
CHM 2220	Organic Chemistry II	
or CHM 2225	Organic Chemistry II for Engineers	
CHM 3020	Intermediate Inorganic Chemistry I	
Geology Elective Course (select one of the following)		**4**
ESG 5150	Soils and Soil Pollution	
ESG 5510	Environmental Fate and Transport of Pollutants	
ESG 6400	Isotopes: Applications in Geological and Environmental Sciences	
Total Credits		**23-25**

Geophysics Minor

Geophysics seeks to understand the inner workings of inner earth and its surroundings. A variety of physical measurements – involving seismic waves, magnetic fields, gravity, electric potential and satellite-based geodesy – are made to probe the interior and study the surface and internal process of our planet. The geophysics study encompasses field work as well as theoretical and experimental studies, through which students will learn about the mechanics of landslides, earthquakes and other natural hazards. Employment opportunities include oil, gas, petroleum and mineral exploration companies and environmental consulting companies. This minor could also serve as a pathway for entry to a graduate program in seismology.

The Geophysics minor requires a minimum of 23-25 credits.

Code	Title	Credits
Geology courses [1]		
ESG 1010	Geology: The Science of the Earth	3
ESG 1011	Geology: The Science of the Earth Laboratory	1
ESG 5210	Environmental and Applied Geophysics	4
Select one of the following:		4
ESG 3300	Structural Geology	
ESG 5420	Mathematical Methods in Earth Science	
ESG 5450	Hydrogeology	
ESG 6400	Isotopes: Applications in Geological and Environmental Sciences	
Physics courses		
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	5
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory	5
Select one of the following:		3
PHY 3300	Introductory Modern Physics	
PHY 5100	Methods of Theoretical Physics I	
PHY 5200	Classical Mechanics I	
PHY 5340	Optics	
PHY 3310 & PHY 3750	Introductory Modern Physics Laboratory and Introduction to Computational Methods	
Another PHY course above the 4000 level [2]		
Total Credits		**25**

[1] Two courses must not have been applied toward major requirements or another minor

[2] The course should be chosen in consultation with an advisor.

Gender, Sexuality and Women's Studies

Office: 5057 Woodward, suite 9204; 313-577-6331
Director: Simone Chess
https://clas.wayne.edu/gender-studies

Wayne State's interdisciplinary gender, sexuality, and women's studies program (GSW) allows students to study gender and sexuality through the lenses of feminism, queer and trans studies, with special attention to critical intersections with race, class, religion, health, and geography. Our program prepares students to bring together theory and praxis, academic methods and social justice principles. GSW is also a place for feminist, queer, and ally students to find community.

Students with a degree from GSW go on to pursue careers in multicultural and interpersonal fields like education, law, social work, health care, public relations, or community development. Graduates from GSW are in-demand employees who thrive in these career fields because of their skills in communication and their rich understanding of diverse social and cultural contexts, honed through coursework in social science, literature, and the arts.

- Gender, Sexuality and Women's Studies (B.A.) (p. 292)
- Gender, Sexuality and Women's Studies Minor (p. 293)
- Queer Studies Minor (p. 294)

Gender, Sexuality and Women's Studies (B.A.)

With a major or minor in gender, sexuality and women's studies (GSW), you can study gender and sexuality through the lenses of feminism, queer and trans studies, with special attention to critical intersections with race, class, religion, health, and geography. GSW is also a place for feminist, queer, and ally students to find community. We come together outside of the classroom for programs, events and service learning on campus and throughout Detroit.

A degree in gender, sexuality and women's studies is flexible and interdisciplinary with a focus on social justice, real-world praxis, and community engagement. Students often chose GSW as a co-major to complement another program of study, or use our minors to amplify their expertise in gender and sexuality and enhance their qualifications by signaling their commitment to diversity and equity.

Our program offers a major in gender, sexuality, and women's studies and two minors, one in GSW and one in queer studies. A major or minor in GSW is great for careers in health, psychology, communications, business, law, education, and non-profit/community justice. Students wishing to pursue the major or minor in Gender, Sexuality, and Women's Studies or the minor in Queer Studies should meet with the undergraduate advisor.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Major requirements consist of thirty-one credits distributed as follows:

Code	Title	Credits
Foundations Courses		
Select two of the following course options:		6
GSW 2100	Introduction to Queer Studies	
GSW 2500	Humanities Perspectives on Gender, Sexuality, and Women	
GSW 2600	History of Women, Gender and Sexuality in the Modern World	
GSW 2700	Social Science Perspectives on Gender, Sexuality, and Women	
Interdisciplinary Gateway Course		
GSW 3200	Introduction to Gender, Sexuality, and Women's Studies	3
Two Additional GSW Courses		
Select two GSW courses at the 3000-level or above (minimum of 6 credits)		6
At least three Electives Courses		
Select nine credits from GSW electives list (see below); GSW courses beyond those meeting other requirements may also be counted toward elective credits.		9
Capstone Theory Course		
GSW 5200	Feminist, Gender, and Queer Theory	3
Senior Project		
GSW 5990	Senior Project Seminar	4
Total Credits		**31**

Electives

For elective credits toward the B.A. or minor in Gender, Sexuality, and Women's Studies, students may take any GSW course not fulfilling a requirement or any of the following:

Code	Title	Credits
AFS/GSW 5110	Black Women in America	3
ANT 5240	Cross Cultural Study of Gender	3
COM 4041	Rhetoric and the Body	3
COM 5360	Gender and Communication	3
CRJ 2650	Gender and Crime	3
CRJ 2750	Diversity Issues in Criminal Justice	3
ENG 2570	Women Writers: Writing about Texts	3
ENG/GSW 5030	Topics in Women's Studies	3
ENG 5035	Topics in Gender and Sexuality Studies	3
HIS 3250	The Family in History	3-4
HIS 5200	Women, Gender, and Sexuality in US History	3
HIS 5251	History of Feminism	4
PH 3900	LGBTQ Health	3
PHI 2360	Feminist Philosophy	3
PHI 5260	Philosophy of Sex and Gender	3
PS 3080	Gender and Politics	4
PSY 3250	Psychology of Gender	3
PSY 3380	Human Sexuality	3
SOC 2202	Gendered Worlds	3
SOC 3900	LGBTQ Health	3
SOC 3400	Exploring Marriage and Other Intimate Relationships	3
SOC 4202	Seminar in the Sociology of Gender	3
SW 3110	Diversity, Oppression and Social Justice	3

In some cases, courses not listed here may be counted toward the GSW electives requirement based on their content and assignments. Please contact the GSW advisor if you would like to request that a course not listed above be counted toward this requirement.

Gender, Sexuality and Women's Studies Honors

Qualified students, but especially those planning graduate studies in a GSW-related field or professional school, are encouraged to obtain a Bachelor of Arts degree 'With Honors in Gender, Sexuality and Women's Studies.' Honors majors must have a 3.3 g.p.a. in GSW courses and a 3.3 cumulative g.p.a. in all courses. Honors majors must complete a minimum of twelve credits in honors designated coursework, comprised of one 42xx-level seminar offered through the Honors College and the following three GSW courses taken with an Honors Option: GSW 3200 (Introduction to Gender, Sexuality, and Women's Studies), GSW 5200 (Advanced Feminism, Gender, and Queer Theory), and GSW 5990 (Honors-designated Senior Project Seminar). For information about honors-option coursework available each semester, visit the Honors College website (https://honors.wayne.edu/academics/courses).

Gender, Sexuality and Women's Studies Minor

Minor requirements consist of eighteen credits distributed as follows:

Code	Title	Credits
Foundations Courses		
Chose two of the following course options		6
GSW 2100	Introduction to Queer Studies	
GSW 2500	Humanities Perspectives on Gender, Sexuality, and Women	
GSW 2600	History of Women, Gender and Sexuality in the Modern World	
GSW 2700	Social Science Perspectives on Gender, Sexuality, and Women	
Interdisciplinary Gateway Course		
GSW 3200	Introduction to Gender, Sexuality, and Women's Studies (Capstone Theory Course)	3
Capstone Theory Course		
GSW 5200	Feminist, Gender, and Queer Theory	3
At least two Electives Courses		
Select at least two elective courses in GSW or from the GSW electives list below:		6
AFS 5110	Black Women in America	
ANT 5240	Cross Cultural Study of Gender	
COM 4041	Rhetoric and the Body	
COM 5360	Gender and Communication	
CRJ 2650	Gender and Crime	
CRJ 2750	Diversity Issues in Criminal Justice	
ENG 2570	Women Writers: Writing about Texts	
ENG 5030	Topics in Women's Studies	
ENG 5035	Topics in Gender and Sexuality Studies	
HIS 3250	The Family in History	
HIS 5200	Women, Gender, and Sexuality in US History	
HIS 5251	History of Feminism	
PH 3900	LGBTQ Health	
PHI 2360	Feminist Philosophy	

PHI 5260	Philosophy of Sex and Gender
PS 3080	Gender and Politics
PSY 3250	Psychology of Gender
PSY 3380	Human Sexuality
SOC 2202	Gendered Worlds
SOC 3400	Exploring Marriage and Other Intimate Relationships
SOC 3900	LGBTQ Health
SOC 4202	Seminar in the Sociology of Gender
SW 3110	Diversity, Oppression and Social Justice
In some cases, courses not listed here may be counted toward the GSW electives requirement based on their content and assignments. Please contact the GSW advisor if you would like to request that a course not listed above be counted toward this requirement.	
Total Credits	**18**

Queer Studies Minor

The Queer Studies minor is an interdisciplinary program that draws together courses in the College of Liberal Arts and Sciences, the College of Fine, Performing, and Communication Arts, the College of Education, and the School of Social Work. The minor is designed for students with a wide range of backgrounds who are interested in deepening their knowledge about queer genders and sexualities and the tools and methods used to study them.

The Queer Studies minor is comprised of a minimum of 18 credits. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Code	Title	Credits
Required Foundation Course		**3**
GSW 2100	Introduction to Queer Studies	
Required Upper Level Course [1]		**3**
GSW 5200 or GSW 530(	Feminist, Gender, and Queer Theory Topics in LGBTQ Studies	
At least two additional courses in Queer Studies [2]		**6**
GSW/COM 3240	Queer Film and Media	
ENG 5035	Topics in Gender and Sexuality Studies	
PHI 5260	Philosophy of Sex and Gender	
PSY 3380	Human Sexuality	
SOC/PH 3900	LGBTQ Health	
TED 5400	Topics in LGBTQ+ Studies in Education	
At least 2 elective courses in Gender and Sexuality		**6**
AFS 5110	Black Women in America	
COM 4041	Rhetoric and the Body	
COM 5360	Gender and Communication	
CRJ/GSW 2650	Gender and Crime	
PS 3080	Gender and Politics	
PSY 3250	Psychology of Gender	
SOC 2202	Gendered Worlds	
SOC 4202	Seminar in the Sociology of Gender	
SW 3110	Diversity, Oppression and Social Justice	
Total Credits		**18**

1 Students who take one of these upper-level courses to meet the requirement can count the second towards their additional course in queer studies requirement.

2 After the 6 credit requirement has been met, courses from this category can also be counted toward the elective requirement.

History

Office: 3094 Faculty/Administration Building; 313-577-2525
Acting Chairperson: Eric Ash
https://clas.wayne.edu/history

Why study history? Because it is a vital way to understand the world we live in and how it came to be. Historians explore the past, in all its diversity and complexity, by looking at cause and effect, investigating change, and examining human agency.

History is far from being just about memorizing "names and dates." The 21st century is a complicated place. Change comes fast and happens continually. The skills and tools we use in studying the past can also help us to make sense of our rapidly changing world and to find our place within it. Knowing our history is about knowing ourselves!

Studying History also gives students the tools they need to succeed in the future. An education in history promises an array of versatile and valuable skills that employers in many fields are looking for. History students at Wayne State conduct exciting research in archives, in Detroit and across the world. They learn to evaluate and interpret evidence, think critically, and communicate clearly and persuasively. They have opportunities to intern at museums and archives and to showcase their research at conferences and in public exhibits. They work with our department's award-winning faculty, who bring their cutting-edge scholarship on race, gender, economics, labor, colonialism, citizenship, culture, science, family networks, the environment, and so much more into the classroom. Many students pair their History education with double-majors and minors in a range of other disciplines such as anthropology, biological sciences, English, and political science. That interdisciplinary grounding combined with critical analysis, which lies at the heart of historical inquiry, prepares students for a host of different careers.

History at Wayne State opens doors! Our alumni have put their talents and skills to use in a range of professions, including in business, education, museums, public policy, intelligence, the nonprofit sector, publishing, and tourism. A history degree also provides a strong foundation for graduate work in the social sciences and humanities, and for professional programs in law and medicine.

Why study history? Because it is a vehicle for understanding the present, making the world a better place, and acquiring valuable skills that translate directly to successful and rewarding careers. Those are not the only reasons, though; studying history is fun, intellectually stimulating, and always rewarding!

- History (B.A.) (p. 295)
- History Minor (p. 296)
- History of Science, Technology, Environment, and Medicine Minor (p. 297)
- Public History (B.A.). (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/history/public-history-ba/)
- Public History Minor (p. 297)
- Society and the Environment Minor (p. 297)

History (B.A.)

A bachelor's degree in history promises not just a knowledge of the past, but also an array of versatile and valuable skills that employers in many fields are looking for. History students at Wayne State conduct exciting research in archives, in Detroit and across the world. They learn to evaluate and interpret evidence, think critically, and communicate clearly and persuasively. They have opportunities to intern at museums and archives and to showcase their research at conferences and in public exhibits. Many students pair their History education with double-majors and minors in a range of other disciplines such as anthropology, biological sciences, English, and political science. That interdisciplinary grounding combined with critical analysis, which lies at the heart of historical inquiry, prepares students for a host of different careers. Our alumni have put their talents and skills to use in a range of professions, including in business, education, museums, public policy, intelligence, the nonprofit sector, publishing, and tourism. A history degree also provides a strong foundation for graduate work in the social sciences and humanities, and for professional programs in law and medicine.

Located in the heart of Detroit's Cultural Center, Wayne State is the ideal place to study history! Detroit's rich local history and world-class archives offer an unparalleled opportunity to learn about our city's storied past and examine the complex political, social, and cultural history of the United States. Courses on Europe, Asia, Africa, Latin America, and the Middle East – as well as WSU's study abroad programs – encourage students to explore the world. Undergraduate courses are taught by world-renowned and award-winning faculty who are experts in their fields. Our program emphasizes both rigorous scholarship and public engagement. All of our students have opportunities to conduct original research, develop cutting-edge digital skills, and gain hands-on experience through internships.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Career Considerations

Law and the LawStart program
History is a common major for students interested in pursuing a law degree. Students interested in Law are encouraged to consider the LawStart program, which allows students to combine work on the B.A. and J.D. in the fourth year, saving a year in earning both degrees.

Non-Profit Management of Historical Agencies
Many history majors pursue careers in public history or in business and industry. A minor in business administration can help prepare majors for managing non-profit historical agencies as well as serve as background for an M.B.A. program.

Pre-Med Curriculum
With the current shift toward STEM disciplines, students are finding that combining a major in History may give their med school applications a second look by providing a more well-rounded undergraduate experience. Students interested in attending medical school are encouraged to look into the MedStart Program.

Teaching History at the High School Level
Majors who are interested in teaching History to teens rather than adults often pursue a B.A. in history and an M.A.T. through the College of Education. Students may need a provisional certificate to teach while earning their graduate education degree, depending on the setting.

Archives, Museums, and Libraries
Many of our alumni are employed as archivists, museum curators, or librarians in historical collections. Wayne State offers a nationally-recognized graduate certificate in Archival Administration, which can be undertaken on its own or in conjunction with a master's in History or a master's in Library and Information Science.

Continuing on in History
Undergraduate majors in History are often looking forward to graduate studies and becoming a professional historian, doing research and teaching in a university setting. Student pursuing this option should be aware that and overall GPA of at least a 3.00 and a major GPA of at

least 3.25 is required to be competitive for admission to graduate school. Students who intend to complete an M.A. at Wayne State before moving to another institution for the Ph.D. are encouraged to undertake the AGRADE program, which allows majors to double-count up to 16 hours of undergraduate coursework for their graduate degree.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students must complete thirty-six credits in History (which may include a maximum of 18 transfer credits). Specific requirements are as follows:

Code	Title	Credits
Survey Courses		**6-8**
HIS 1000	World Civilization to 1500	
HIS 1050	History of the Headlines: United States Since World War II	
HIS 1300	Europe and the World: 1500-1945	
HIS 1400	The World Since 1945	
HIS 1600	African Civilizations to 1800	
HIS 1610	African Civilizations Since 1800	
HIS 1700	East Asia to the 1700s	
HIS 1710	History of Modern East Asia	
HIS 1900	History of Colonial Latin America	
HIS 1910	Latin America from Independence to the Present	
HIS 1995	Nature and Societal Transitions	
HIS 2040	American Foundations to 1877	
HIS 2050	Modern America: Since 1877	
HIS 2240	History of Michigan	
HIS 2430	History of Latino/as in the United States	
HIS 2605	History of Women, Gender and Sexuality in the Modern World	
HIS 3000	**The Historian's Craft**	**3**
Advanced Courses		**18**
Select five History courses with at least 2 courses numbered above 5000. Excludes HIS 4990 and 5996. Of these 5 courses, students must have diversity in their study by including one course in three of the following four categories: Europe; United States; Latin America, Asia, Middle East, Africa; thematic, transnational or an internship.		
Chronological Distribution		
Within the work done to fulfill the survey sequence and the advanced coursework, two courses must be in the pre-1800 time period and two courses must be in the post-1800 time period so that every major has research experience with pre- and post-industrial history.		
HIS 5996	**Junior or Senior Research Seminar**	**3**
Additional History courses as needed to reach 36 total hours in the major.		**4-6**

History Honors (B.A. Program)

Students contemplating advanced degrees in History are encouraged to obtain the B.A. with Honors in History. Honors majors must complete the following in addition to the normal major requirements, above:

Code	Title	Credits
Cumulative GPA of a 3.30, and a major GPA of 3.50		
15 credits in honors-designated coursework, including:		
HON 4250	Seminar: Global Perspectives on Historical Studies	
6 credits in honors-option courses in History which are numbered above 3000		
One additional honor course in any discipline		
HIS 5995, the History Honors Seminar, which is taken after the completion of HIS 5996. Typically, students will begin their senior thesis in HIS 5996 and complete it in HIS 5995. This thesis will be directed by two regular faculty members; the student will also defend the thesis before them.		

History AGRADE Requirements

The History department's M.A. and M.A.P.H. degrees both offer the College of Liberal Arts and Sciences' Accelerated Graduate Enrollment (AGRADE) program to qualified undergraduates. AGRADE provides the opportunity for top students to enroll simultaneously in an undergraduate and graduate degree program, and to apply a maximum of 16 credits toward both their undergraduate and master's degrees in the student's major or closely aligned field.

Students electing AGRADE programs may expect to complete both their bachelor's and master's degrees in only five years of full-time study. This allows students to save both time and money as they pursue their undergraduate and graduate degrees simultaneously, making the most of their experiences at Wayne State. Students must apply for the AGRADE program during the semester that they earn 90 credits toward an undergraduate degree (typically during junior year). Applicants must have a minimum cumulative GPA of 3.3 and final approval from their major department. In addition, the Department of History requires the following materials for application to AGRADE:

- completion of the WSU History AGRADE application; a copy of the student's unofficial transcript(s);
- a copy of the student's HIS 3000 paper or another paper based on primary source research;
- a one-page single-spaced letter of interest that conveys clearly and concisely the student's proposed area(s) of study, including period, region, topic, and/or approach, tentative career goals, and the faculty member(s) with whom the student would like to work and why;
- a letter of recommendation from a faculty member (the faculty member should email their recommendation directly to the Director of Graduate Studies).

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

History Minor

A minor in history promises not just a knowledge of the past, but also an array of versatile and valuable skills that employers in many fields are looking for. History students learn to evaluate evidence, think critically, and communicate clearly and persuasively. The History minor is a great choice for any student with an interest in studying the past, whatever their future career goals, and it is an especially good match

for majors in fields such as Sociology, Anthropology, Political Science, English, or a foreign language.

Located in the heart of Detroit's Cultural Center, Wayne State is the ideal place to study history! Detroit's rich local history and world-class archives offer an unparalleled opportunity to learn about our city's storied past and examine the complex political, social, and cultural history of the United States. Courses on Europe, Asia, Africa, Latin America, and the Middle East – as well as WSU's study abroad programs – encourage students to explore the world. Undergraduate courses are taught by world-renowned and award-winning faculty who are experts in their fields. Our program emphasizes both rigorous scholarship and public engagement. All of our students have opportunities to conduct original research, develop cutting-edge digital skills, and gain hands-on experience through internships.

The minimum requirement for a minor in history is eighteen credits of history coursework, of which a maximum of nine credits can be transferred from other institutions. Minors must also have a 2.00 g.p.a. in history courses and complete:

Code	Title	Credits
HIS 3000	The Historian's Craft	3
At least six credits in courses numbered 3000 or above		6
Additional History courses as needed		9
Total Credits		**18**

History of Science, Technology, Environment, and Medicine Minor

The minor in History of Science, Technology, Environment, and Medicine aims to provide science majors as well as social science and humanities students with an interdisciplinary foundation in the history of science, environment, and medicine. The minor requires the completion of 18 credits.

Code	Title	Credits
Core Courses		**6**
HIS 1995	Nature and Societal Transitions	
HIS 3585	Science, Technology, and Society	
Elective Courses		**12**
Historical Studies (minimum 6 credits; maximum 12 credits)		
HIS 2510	Science, Technology, and War	
HIS 5407	The Scientific Revolution	
HIS 5540	World Environmental History since 1900	
Cognate Courses (maximum 6 credits)		
ANT 3400	Introduction to Medical Anthropology	
ANT 3410	Global Health	
ANT 5140	Biology and Culture	
ECO 5230	Environmental Economics	
PH 3500	Environmental Health	
PHI 1130	Environmental Ethics	
PHI 2140	Ancient Greek Medicine and Psychology	
PHI 2550	Introduction to Philosophy of Science	
PHI 2650	Minds and Machines	
PS 3450	Environmental Policy and Politics	
SOC 4205	Seminar in Medical Sociology	
Total Credits		**18**

Public History Minor

A student pursuing a Public History minor must complete a minimum of eighteen credits, including the following:

Code	Title	Credits
Core Courses		**12**
HIS 2900	Introduction to Public History	
HIS 3000	The Historian's Craft	
HIS 4997	Internship in Public History	
HIS 5832	History Practicum	
Elective courses [1]		**6**
Total Credits		**18**

[1] Students must take at least two additional History courses level 3000 or above, excluding HIS 3000 and HIS 5832.

Society and the Environment Minor

The Society and the Environment minor provides students with a fundamental understanding of the impact of humans on the environment through exposure to principles of ecology and related sciences, as well as insights derived from a variety of social science and humanities disciplines.

The Society and Environment minor requires a minimum of 18 credits.

Code	Title	Credits
Required Courses		**6-7**
ESG 1500	Introduction to Environmental Science	
HIS 5540	World Environmental History since 1900	
Elective courses (select four from the following list)		**12-14**
ANT 5140	Biology and Culture	
BIO 3500	Ecology and the Environment	
ECO 5230	Environmental Economics	
ENG 2420	Environmental Writing: Writing about Texts	
ESG 3100	Air and Water in Environmental Systems	
PH 3500	Environmental Health	
PHI 1130	Environmental Ethics	
PS 3450	Environmental Policy and Politics	
UP 4460	Sustainable Cities	
US 2000	Introduction to Urban Studies	
Total Credits		**18-21**

Latino/a and Latin American Studies

Office: 790 Student Center Building; 313-577-4378
Director: Jorge L. Chinea
Associate Director for Student Services and Program Administration: Melissa Miranda Morse
CBS Scholars Program Coordinator and Academic Advisor: Alex Resendez
College to Career Coordinator and Academic Advisor: Estenia Gomez Elisevich
Administrative Assistant: Juan Carlos Gutierrez

https://las.wayne.edu

Mission

The Center for Latino/a and Latin American Studies strives to promote equitable access to a quality university education to students interested in Latino/a and Latin American cultural studies, and to enhance diversity on the campus. The Center accomplishes its mission through a four-part program in:

1. student services;
2. research in the field of Latino/a and Latin American Studies;
3. internal University advocacy on Latino/a perspectives; and,
4. outreach to the Latino/a and larger off-campus communities.

The research and teaching specializations of the faculty associated with the Center (including those teaching its cross-listed courses) include medical sociology, Andean and Mesoamerican indigenous cultures, Afrolatinidad, Caribbean studies, Latin American literature, cinema and history, United States Latino/a studies and student learning strategies in higher education.

Student Success Programs

Latino/a Studies' comprehensive student services are based on a leadership development and an academic self-empowerment model. The Center hosts an annual Academia del Pueblo Research Conference and offers three distinct comprehensive student success programs:

- the Summer Enrichment Program (SEP), currently funded by DTE Energy Foundation;
- the Chicano-Boricua Studies (CBS) Scholars Program, a WSU learning community, which continues to bear the previous name of the Center in honor of its alumni as well as the many contribution of its former faculty and staff; and,
- the College to Career (C2C) Program, a second WSU learning community, which is designed to prepare graduating students for post-baccalaureate/professional degrees and future careers

Students in good standing who are enrolled in these programs may be eligible for supplemental financial support through the WSU Office of Financial Aid, the John Helfman Latino en Marcha (LEM) Grant, the Wiese-Rometsch Scholarship and the Cynthia Estrada Labor and Social Justice Award.

- Latino/a and Latin American Studies (Co-Major) (p. 298)
- Latino/a and Latin American Studies Minor (p. 298)

Latino/a and Latin American Studies (Co-Major)

Completion of the Center's Co-Major Program leads to a co-major degree in the field of Latino/a and Latin American Studies. This multidisciplinary program of study is designed to strengthen the career preparation of students in all majors who plan to work in national and international multicultural environments where knowledge about Latin America, the Caribbean, Latino/a Studies, and multicultural diversity would be a valuable asset. Completion of the co-major is noted on the student's transcript. Students submit a Declaration of Major Form at the beginning of their junior year.

Co-Major Requirements

Students must complete fifteen credits in the following core courses and a minimum of eighteen credits from the list of elective courses. Appropriate courses may be substituted with the prior approval of the Center's Director.

Code	Title	Credits
Core Courses		
Select five of the following:		15
LAS 2100	Chicano/a Literature and Culture	
LAS 2110	Puerto Rican Literature and Culture	
LAS 2410	History of Mexico	
LAS 2420	History of Puerto Rico and Cuba	
LAS 2430	History of Latino/as in the United States	
LAS 3610	Seminar in Latino/a Urban Problems	
Elective Courses		
Select eighteen credits of the following:		18
ANT 3220	The Inca and their Ancestors	
ANT 3540	Cultures and Societies of Latin America	
PS 3735	Politics of Latin America	
SPA 4630	Introduction to Colonial Latin American Literature	
or SPA 4640	Introduction to Modern and Contemporary Latin American Literature	
SPA 5560	Spanish American Cultures and their Traditions	
SPA 6600	Colonial Latin American Studies	
SPA 6610	Latin American Novel to 1900	
SPA 6620	Latin American Novel in the 20th and 21st Centuries	
SPA 6630	Spanish American Poetry	
Total Credits		**33**

Latino/a and Latin American Studies Minor

The Center's minor in Latino/a and Latin American Studies was created for all WSU students wishing to pursue a formal course of studies in U.S. Latino/a and Latin American cultural studies. It requires six courses for a minimum of eighteen credits. Students desiring to minor in Latino/a and Latin American Studies students must complete:

Code	Title	Credits
Introductory LAS research course		
LAS 1420	Introduction to Interdisciplinary Latino/a Studies Research	3
LAS core courses		
Select two of the following:		6
LAS 2100/ SPA 2400	Chicano/a Literature and Culture	
LAS 2110/ SPA 2500	Puerto Rican Literature and Culture	
LAS 2410/ HIS 2440	History of Mexico	
LAS 2420	History of Puerto Rico and Cuba	

LAS/HIS 2430	History of Latino/as in the United States	
LAS 3610	Seminar in Latino/a Urban Problems	
LAS community-based research course		
LAS/SOC 3710	Learning About Your Community Through Research	4
Other courses		
Select minimum of two of the following:		5-6
LAS 1410	Latino/a Studies Seminar	
LAS 1900	History of Colonial Latin America	
LAS/HIS 1910	Latin America from Independence to the Present	
LAS 2250	AfroLatino/a History and Culture	
LAS 3000	Special Topics in Latino/a and Latin American Studies	
LAS 3431	Revolutionary Movements in Latin America	
LAS 3434	Labor in Latin America	
LAS 3990	Directed Study	
LAS/HIS 5231/7231	The Conquest in Latin America	
LAS/SPA 5560	Spanish American Cultures and their Traditions	
ANT 3220	The Inca and their Ancestors	
ANT 3540	Cultures and Societies of Latin America	
ANT 5060	Urban Anthropology	
BEP 5000	Brazil Exchange Program	
PS 3735	Politics of Latin America	
PS 3795	Latin America in World Affairs	
SPA 3025	Cultural Connections, Grammar and Composition II	
SPA 3040	Spanish for Business and the Legal Professions	
SPA 3050	Spanish for the Health Care Profession	
SPA 3200	Conversation	
SPA 3300	Introduction to Cultural and Literary Analysis	
SPA 4610	Introduction to Early Modern Spanish Literature	
SPA 4620	Introduction to Modern and Contemporary Spanish Literature	
SPA 4630	Introduction to Colonial Latin American Literature	
SPA 4640	Introduction to Modern and Contemporary Latin American Literature	
Total Credits		**18-19**

Linguistics

Office: Room 10303, 5057 Woodward; 313-577-8642
e-mail: linguistics@wayne.edu
Director: Haiyong Liu
https://clas.wayne.edu/linguistics

Linguistics is devoted to the scientific study of language structure and use. The Linguistics Program at Wayne State offers an interdisciplinary approach to this field, permitting students to explore a wide range of topics and issues in language research. The core courses are offered on a regular basis. The program offers electives in the following areas:

1. linguistics and a language,
2. language structure,
3. language variation and change,
4. language acquisition and processing, and
5. sociolinguistics and discourse/pragmatics.

Training in linguistics prepares students for advanced work in linguistic research, as well as for employment in teaching English and foreign languages; computer systems (especially natural language processing); broadcasting, mass media and journalism; publishing and editing; translation; international business; intercultural communication and negotiation; law; and generally any profession requiring the precise use or analysis of speech or writing.

The Linguistics Program is administered by a director and an advisory committee of participating faculty who regularly teach courses for the program.

- Linguistics (B.A.) (p. 299)
- Linguistics Minor (p. 301)

Linguistics (B.A.)

Linguistics is devoted to the scientific study of language structure and use. The Linguistics Program at Wayne State offers an interdisciplinary approach to this field, permitting students to explore a wide range of topics and issues in language research. Training in linguistics prepares students for advanced work in linguistic research, as well as for employment in teaching English and foreign languages; computer systems (especially natural language processing); broadcasting, mass media and journalism; publishing and editing; translation; international business; intercultural communication and negotiation; law; and generally any profession requiring the precise use or analysis of speech or writing.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Course selections are to be planned in consultation with the linguistics program advisor. Students must complete a minimum of thirty credits in course work to satisfy the major requirements as outlined below.

Required Courses

The linguistics major requirements consist of:

1. three required general courses;
2. one required language use course involving either the analysis of speech data acquired in fieldwork or theories that address language use; and
3. a set of electives.

Also, in the senior year, majors must register for and complete LIN 5993, Writing Intensive Requirement (0 credits). This course is to be taken in conjunction with another course, as explained under Linguistics Courses. In the final semester of study, assessment of knowledge in the major is determined by review of a student portfolio and by an exit interview conducted by members of the faculty. Both the portfolio and the interview must be deemed acceptable before the Program will certify completion of all major requirements.

Code	Title	Credits
Required General Linguistics Courses		
LIN 2720	Basic Concepts in Linguistics	3
or LIN 5700	Introduction to Linguistic Theory	
LIN 5290	Phonology	3
LIN 5300	Syntax	3
Required Language Use Course		
Select one of the following:		3
LIN 3310	Language and Culture	
LIN 5210	Arabic Sociolinguistics	
LIN 5320	Language and Societies	
LIN 5770	Sociolinguistics	
LIN 5900	Culture, Language and Cognition	
LIN 6720	Topics in Language (Field Methods) [1]	
LIN 6720	Topics in Language (Pidgins and Creoles) [1]	
LIN 6720	Topics in Language (Pragmatics) [1]	
LIN 6720	Topics in Language (Language Variation) [1]	
Elective Courses		
Select 18 credits from the categories listed below, in consultation with advisor		18
Total Credits		**30**

Elective Option Areas

A. Linguistics and a Language

The student may complete up to nine credits in advanced language skills or in the linguistics of a chosen language, as part of their electives. Courses must be selected in consultation with the advisor.

B. Language Structure

Code	Title	Credits
LIN 1850	Symbolic Logic	3
or LIN 1860	Honors Symbolic Logic	
LIN 2730	Languages of the World	3
LIN 3080	Cognitive Psychology: Fundamental Processes	3
LIN 5050	Advanced Symbolic Logic	4
LIN 5220	Introduction to Chinese Linguistics	3
LIN 5230	Structure of Arabic	3
LIN 5240	Grammar of Chinese	3
LIN 5570	Philosophy of Language	4
LIN 5715	Morphology	3
LIN 5730	English Grammar	3
LIN 5745	Semantics	3
LIN 6720	Topics in Language (Field Methods) [1]	3
LIN 6720	Topics in Language (Typology) [1]	3
SPA 6400	Introduction to Hispanic Linguistics	3

C. Language Variation and Change

Code	Title	Credits
CHI 2000	Chinese Phonetics	1
LIN 2730	Languages of the World	3
LIN 3310	Language and Culture	3
LIN 5100	Languages of Asia	3
LIN 5220	Introduction to Chinese Linguistics	3
LIN 5320	Language and Societies	3
LIN 5715	Morphology	3
LIN 5770	Sociolinguistics	3
LIN 6720	Topics in Language (Historical Linguistics) [1]	3
LIN 6720	Topics in Language (History of English) [1]	3
LIN 6720	Topics in Language (Typology) [1]	3
LIN 6720	Topics in Language (Language Variation) [1]	3
LIN 6720	Topics in Language (Field Methods) [1]	3
LIN 6720	Topics in Language (Pidgins and Creoles) [1]	3
LIN 6720	Topics in Language (Language and Evolution) [1]	3
CLA 1230	Word Origins: English Words from Greek and Latin	3-4
ITA 6400	Languages of Italy	3

D. Language Acquisition and Processing

Code	Title	Credits
LIN 3080	Cognitive Psychology: Fundamental Processes	3
LIN 3310	Language and Culture	3
LIN 5080	Phonetics	3
LIN 5360	Child Language Acquisition	3
LIN 5900	Culture, Language and Cognition	3
LIN 6720	Topics in Language (Language and Evolution)	3
PSY 2030	Statistical Methods in Psychology	4
PSY 3120	Brain and Behavior	3
SLP 5300	Introduction to Speech-Language Pathology	3

E. Sociolinguistics and Discourse/Pragmatics

Code	Title	Credits
LIN 2730	Languages of the World	3
LIN 3310	Language and Culture	3
LIN 5210	Arabic Sociolinguistics	3
LIN 5320	Language and Societies	3
LIN 5770	Sociolinguistics	3
LIN 5900	Culture, Language and Cognition	3
LIN 6720	Topics in Language (Pragmatics) [1]	3
LIN 6720	Topics in Language (Language Variation) [1]	3
LIN 6720	Topics in Language (Language and Gender) [1]	3
LIN 6720	Topics in Language (Historical Linguistics) [1]	3
LIN 6720	Topics in Language (Pidgins and Creoles) [1]	3
LIN 6720	Topics in Language (Language and Evolution) [1]	3
ANT 5210	Anthropological Methods	4
PSY 2030	Statistical Methods in Psychology	4

[1] A maximum 12 credits may be earned in LIN 6720 predicated on topic selection.

Linguistics Honors Program

Students with an overall grade point average of 3.5 are eligible for admission to the Linguistics Honors Program. Satisfactory completion of the Honors Program will lead to a degree "with Linguistics Honors" on the diploma. Students interested in the program should obtain detailed information from the Linguistics Program Undergraduate Advising Office.

Students must complete one 5000-level or above Honors Option course as part of the major requirements, the Linguistics Honors Thesis (LIN 5993-H with approved LIN Writing Intensive course), one Honors Seminar from the HON 42XX series, and three additional Honors credits through any department to thereby complete the minimum twelve required Honors credits.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Linguistics Program invites academically superior majors to apply for admission to the 'AGRADE' Program. 'AGRADE' procedures enable qualified seniors to enroll simultaneously in the undergraduate and graduate programs in Linguistics and to apply a maximum of sixteen credits toward both a bachelor's and a master's degree.

Qualified students may apply for the AGRADE program no earlier than the semester in which ninety credits are completed. Applicants must have an overall grade point average of 3.5 and not less than a 3.6 grade point average in the major courses already completed.

For more details about the 'AGRADE' Program, contact the Linguistics Program office: 313-577-8642; or by e-mail at: linguistics@wayne.edu

Linguistics Minor

A minor consists of four required courses and two additional courses in the Linguistics program. The required courses are:

Code	Title	Credits
LIN 5290	Phonology	3
LIN 5300	Syntax	3
LIN 2720	Basic Concepts in Linguistics	3
or LIN 5700	Introduction to Linguistic Theory	
One language use course [1]		3
Total Credits		**12**

[1] As specified under required courses for the Bachelor of Arts (p. 299).

Programs should be planned in consultation with an advisor.

Mathematics

Office: 1150 Faculty/Administration Building; 313-577-2479
Chairperson: Hengguang Li
https://clas.wayne.edu/math/

The courses offered by the Department of Mathematics serve several purposes; they supply the mathematical preparation necessary for students specializing in the physical, life or social sciences, in business administration, in engineering, and in education; they provide a route by which students may achieve a level of competence to do research in any of several special mathematical areas; they allow students to prepare themselves for work as mathematicians and statisticians in industry and government; and they give an opportunity to all inquisitive students to learn something about modern mathematical ideas.

- Actuarial Mathematics (B.A.) (p. 304)
- Mathematical Economics (B.A.) (p. 305)
- Mathematics (B.A.) (p. 306)
- Mathematics (B.S.) (p. 308)
- Mathematics Minor (p. 311)
- Statistics (B.S.) (p. 310)
- Statistics Minor (p. 312)
- Advanced Courses for Non-Majors (p. 303)

Mathematics Placement Information

For details on Mathematics course placement, please see the Mathematics Placement Information (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/mathematics/placement/) section of this bulletin, or the Mathematics Placement Exam (http://testing.wayne.edu/register/math-placement-exam.php) information provided by the Office of Testing, Evaluation and Research Services.

Multiple Majors, Degrees, and Minors within the Mathematics Department

Multiple Major or Degrees

If a student wishes to complete more than one major or degree within the Mathematics Department (e.g. majors in Mathematics, Actuarial Mathematics, or Statistics),then each major must have at least 3 unique mathematics or statistics (MAT or STA) courses. This means that at least 3 MAT or STA courses used for each major/degree cannot be used for the other major(s)/degree(s). This includes courses from other departments that are approved by the Mathematics Department to meet a major requirement. Note that university policy states that double majors must either be both Bachelor of Arts or both Bachelor of Science majors. They cannot be one of each. For example, students can elect to do a double major which includes a BA in Actuarial Mathematics and a BA in Mathematics, but they cannot elect to do a double major which includes a BS in Statistics and a BA in Mathematics. On the other hand, students can do a double degree in any configuration they choose.

The Mathematical Economics major is a major jointly administered by the Mathematics Department and the Economics Department and it therefore follows a different set of guidelines. If a student wishes to major in Mathematical Economics and another major or majors within the Mathematics Department, the Mathematical Economics major must include one unique MAT or STA course that is not being used for the other major(s). This includes courses from other departments that are approved by the Mathematics Department to meet a major requirement.

Majors and Minors

If a student wishes to pursue at least one major and a minor, or two minors, within the Mathematics Department, there must be at least one unique course for each minor. This means that at least one MAT or STA course used for each minor cannot be used for the other minor or major(s). This includes courses from other departments that are approved by the Mathematics Department to meet a major requirement. Students cannot major and minor in Mathematics, nor can they major and minor in Statistics.

Secondary Mathematics Teaching

An excellent option for student who would like to become secondary mathematics teachers is to complete any of the mathematics major concentrations or the B.S. in Statistics, along with teacher certification requirements. Please see a Mathematics Department advisor for more details.

Emerging Scholars Program

The Emerging Scholars Program is a special honors program at the levels of MAT 1800, MAT 2010, and MAT 2020, that features collaborative learning through a challenging corequisite problem-solving workshop attached to the lecture section. Note that students need not be enrolled in the Honors College to take these courses. Each ESP calculus course (MAT 2010 and MAT 2020) carries four honors credits, however, MAT 1800 does not offer honors credits. The Emerging Scholars Program seeks dedicated, hard-working students who want to excel in mathematics. Students who place into the level below MAT 1800 are encouraged to enroll in the Rising Scholars Program sections of MAT 1070 and/or MAT 1010 depending on placement, as preparation for the program. Contact the Emerging Scholars Program at emergingscholars@wayne.edu for further information.

AGRADE Program (Accelerated Graduate Enrollment)

Our AGRADE program provides the opportunity for top students to enroll simultaneously in an undergraduate and graduate program. Students can apply a maximum of 16 credits toward both an undergraduate and a graduate degree in the student's major field. Students electing AGRADE program may expect to complete the bachelor's or master's degrees in five years of full-time study if they take full advantage of the program. There is a GPA requirement and students must apply to the program and complete a plan of work for the masters degree with the masters advisor. For more details about the AGRADE program, emailmathgrad@wayne.edu, or visit the Graduate Office of the College of Liberal Arts and Sciences website (https://clas.wayne.edu/programs/accelerated-graduate-enrollment).

Senior Rule

In their last undergraduate semester, Wayne State student with a 3.0 (or above) upper division grade point average have the option of taking a limited number of graduate credits. Graduate credit is awarded only for those courses taken in excess of baccalaureate degree requirements. Undergraduate and graduate courses combined may not exceed sixteen credits for the final semester of baccalaureate degree course work. For more information look under Graduate Admissions (https://bulletins.wayne.edu/graduate/general-information/admission/) in the Graduate Bulletin or email mathgrad@wayne.edu.

Mathematics Placement Information

All students, including transfer and guest students, who plan to take MAT 1070, MAT 1110, MAT 1120 ,MAT 1800, or MAT 2010 as their first mathematics course at Wayne State must:

1. have a satisfactory ACT or SAT Math score (see below) that has been validated by the Testing Office OR
2. take the Mathematics Placement Assessment.

Results of the Mathematics Placement Assessment (MPA) and/or the ACT or SAT Math score to determine the course into which the student is placed consistent with the following:

MAT 1070: Students qualify by having achieved one of the following:

1. a satisfactory score on the Mathematics Placement Assessment within the previous year (See the Testing website (http://testing.wayne.edu) for more details),
2. a grade of C- or above within the previous year in MAT 1010 taken at WSU
3. a validated ACT Math score of 21 or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)
4. a validated SAT score of 500 (old version) or 530 (new version) or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)

For placement at this level, students should have a command of numerical and beginning algebra concepts and techniques corresponding approximately to one year of high school algebra.

MAT 1110: Students qualify by having achieved one of the following within the previous year.

1. a satisfactory score on the Mathematics Placement Assessment within the previous year (See the Testing website (http://testing.wayne.edu) for more details)
2. a grade of at least C- within the previous year in MAT 1070 taken at WSU
3. a validated ACT Math score of 26 or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)
4. a validated SAT Math score of 600 (old version) or 620 (new version) or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)

For placement at this level, students should have a command of algebra and basic geometry, corresponding approximately to three years of college-preparatory mathematics.

MAT 1120: Students qualify by having achieved one of the following:

1. a satisfactory score on the Mathematics Placement Assessment within the previous year (See the Testing website (http://testing.wayne.edu) for more details)
2. a grade of at least C- within the previous year in MAT 1110 taken at W.S.U.
3. a validated ACT Math score of 26 or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)
4. a validated SAT Math score of 600 (old version) or 620 (new version) or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)

MAT 1800: Students qualify by having achieved one of the following:

1. satisfactory score on the Mathematics Placement Assessment within the previous year (See the Testing website (http://testing.wayne.edu) for more details)
2. a grade of at least C- within the previous year in MAT 1070 taken at W.S.U.
3. a validated ACT Math score of 26 or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)
4. a validated SAT Math score of 600 (old version) or 620 (new version) or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)

For placement at this level, students should have a command of algebra and basic geometry, corresponding approximately to three years of college-preparatory mathematics.

MAT 2010: Students qualify by having achieved one of the following:

1. a satisfactory score on the Mathematics Placement Assessment within the previous year (See the Testing website (http://testing.wayne.edu) for more details)
2. a grade of at least C- within the previous year in MAT 1800
3. a validated ACT Math score of 29 or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)
4. a validated SAT Math score of 650 (old version) or 670 (new version) or higher within the previous two years (See the Testing website (http://testing.wayne.edu) for more details)

For placement at this level, students should have a command of algebra, geometry, trigonometry, and elementary functions corresponding approximately to four years of college-preparatory mathematics.

Mathematics Placement Assessment: The MPA must be taken before classes begin for the semester in which you plan to take the course. Any student who does not place into a MAT course using an ACT or SAT Mathematics score as described above must take the MPA to determine MAT (mathematics) or STA (statistics) course placement. Students are also welcome to take the MPA if they have taken the ACT and/or SAT and would like to attempt to place into a higher course. Students should enroll in the course they are placed into the first time they take the assessment. However, all students may use the review material from the ALEKS program used for the assessment and try again. An assessment placement is only good for the following 3 semesters after it was taken, so students should register for a course they placed into within that time frame. Visit the Testing website (http://testing.wayne.edu) for further information on assessment procedures and placement.

Advanced Courses for Non-Majors

Because of the fundamental role that mathematics plays in all types of scientific and technical endeavor, the advanced course offerings of the Mathematics Department must serve a group considerably larger than those preparing for a career in mathematics exclusively.

Economics, Business Administration and Computer Science

The following basic subjects are recommended to master's degree candidates as preparation for work in their profession; they also provide a solid background for students who intend to pursue doctoral studies after completion of the master's program:

Code	Title	Credits
Numerical Methods		
MAT 5100	Numerical Methods I	3
Algebra		
MAT 5420	Algebra I	4
Operations Research		
MAT 5770	Mathematical Models in Operations Research	3
Probability Theory		
MAT 5700	Introduction to Probability Theory	4
Statistical Methods, Applied Time Series and Design of Experiments		
STA 5800	Introduction to Mathematical Statistics	4
STA 5830	Applied Time Series	3

Engineering and Physical Applications

The Mathematics Department has several sequences in applied mathematics that provide experienced engineers and scientists from industry and government the means to acquire and maintain the technical competence needed to work at the frontiers of their fields (for additional courses to those listed below, see the Graduate Bulletin):

Code	Title	Credits
Numerical Methods		
MAT 5100	Numerical Methods I	3
Applied Analysis		
MAT 5220	Partial Differential Equations	4
MAT 5230	Complex Variables and Applications	4
Probability Theory and Random Processes		
MAT 5700	Introduction to Probability Theory	4
Differential Geometry		
MAT 5530	Elementary Differential Geometry and its Applications	3

Students who feel that they eventually would like to pursue mathematical studies beyond the level of the above sequences should make every effort to take the mathematics sequences that begin with MAT 5600, and MAT 5420, respectively, and MAT 6600. These courses will help them to understand and work with abstract concepts in advanced courses.

Statistics

Students requiring only an introduction to basic statistics are referred to STA 1020 or STA 2210. Those whose work demands a good foundation in mathematical statistics are referred to MAT 5700 and STA 5800. STA 5830 is useful for students interested in applied statistics.

In addition to the interdepartmental course listed below, specialized courses in statistics are offered by individual departments:

Code	Title	Credits
ECO 5100	Introductory Statistics and Econometrics	4
ECO 6100	Introduction to Econometrics	4
MAT 5700	Introduction to Probability Theory	4
PSY 2030	Statistical Methods in Psychology	4
STA 2210	Probability and Statistics	4
STA 6830	Design of Experiments	3

Actuarial Mathematics (B.A.)

The courses offered by the Department of Mathematics serve several purposes; they supply the mathematical preparation necessary for students specializing in the physical, life or social sciences, in business administration, in engineering, and in education; they provide a route by which students may achieve a level of competence to do research in any of several special mathematical areas; they allow students to prepare themselves for work as mathematicians and statisticians in industry and government; and they give an opportunity to all inquisitive students to learn something about modern mathematical ideas.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (http://bulletins.wayne.edu/undergraduate/general-information/admission/) to the University. Undergraduates declaring a mathematics major are strongly encouraged to meet with a departmental advisor before doing so. After a student's acceptance as a major, a student should consult a Departmental advisor at least once a semester to verify progress.

Program Requirements

Students must complete 120 credits in coursework including satisfaction of the University General Education Requirements (http://bulletins.wayne.edu/undergraduate/general-information/general-education/) and the College of Liberal Arts and Sciences Group Requirements (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/bachelors-degree-requirements/), as well as the departmental major requirements cited below. All coursework must be completed in accordance with the regulations of the University (http://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) and the College (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/academic-regulations/) governing undergraduate scholarship and degrees.

It is each student's responsibility to learn the requirements, policies, and procedures governing the program the student is following and to act accordingly. Students should consult the Department of Mathematics' undergraduate academic advisor on a regular basis. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Residency Requirement

A minimum of 15 credits of major requirements at or above MAT or STA 5030 must be taken at Wayne State University. This includes courses that are considered equivalent to the Mathematics Department's MAT or STA courses and that are approved by the Mathematics Department to meet a major requirement.

Minimum Grade Requirements

The following grade requirements must be satisfied in the major.

- C- or better in all required coursework.
- C or better average for all coursework.

Notes

1. STA courses previously designated by MAT (for example STA 2210 was previously labelled MAT 2210) are the same courses and meet the same requirements.

2. Although this policy is found in the College of Liberal Arts and Sciences (CLAS) requirements, it is worth noting that if a student is majoring in a CLAS major, they must obtain at least one minor that has 3 unique courses from the major. This means that at least 3 courses used to complete requirements in the minor must not be used to complete requirements in the major.

3. The required courses listed are the minimum that students should complete. Students are encouraged to take more courses in order to strengthen their background and enhance their prospects for employment and/or graduate school.

Course Requirements

Code	Title	Credits
Cognate Courses:		
Select one of the following Computer Science options:		3-4
CSC 1100	Problem Solving and Programming	
CSC 2000	Introduction to C++ Programming Language [1]	
CSC 2110	Computer Science I	
ECO 2010	Principles of Microeconomics [2]	4
ECO 2020	Principles of Macroeconomics [3]	4
FIN 3290	Business Finance [4]	3
Cognate Courses - Credit Subtotal:		14-15
Mathematics and Statistics Courses:		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
Select one of the following two options (MAT 2350 is preferred if available, and is 3 credits rather than 4)		3-4
MAT 2350	Elementary Differential Equations	
MAT 2150	Differential Equations and Matrix Algebra	
STA 5030	Statistical Computing and Data Analysis	3
MAT 5700	Introduction to Probability Theory	4
MAT 5740	The Theory of Interest	3
STA 5800	Introduction to Mathematical Statistics	4
Select two of the following options:		6-7
MAT 5540	Topological Data Analysis	
MAT 5710	Introduction to Stochastic Processes	
MAT 5750	Mathematics of Finance	
MAT 5770	Mathematical Models in Operations Research	
STA 5820	Introduction to Data Science	
STA 5830	Applied Time Series	
STA 6840	Applied Regression Analysis	
MAT 5890	Special Topics in Mathematics (The topic must be approved by the Department of Mathematics)	
ECO 5270	Games of Strategy	
Math and Statistics Courses - Credit Subtotal:		38-40
Major Courses - Credit Total:		**52-55**

1. CSC 2000 is the only option that does not have a computer science course prerequisite.
2. With ECO 2020, this course meets a VEE, if a B- or better is achieved in each course.
3. With ECO 2010, this course meets a VEE, if a B- or better is achieved in each course.
4. With ACC 3010 (recommended, but not required course) this course meets a VEE, if a B- or better is achieved in each course.

Actuarial Mathematics Career Information

Various Careers

Actuaries measure and manage risk. Students who complete the Actuarial Mathematics program are prepared for a variety of careers, and not just in the actuarial field. Students can expect to work in fields such as insurance, banking, investments, government, energy, e-commerce, marketing, employee benefits, product development, enterprise risk management, predictive analytics, consulting and more.

Actuarial Validation by Educational Experience (VEE) and Recommended Coursework

VEEs are subjects that can be learned through coursework, as well as other methods, that cover content that is no longer on the actuarial exams, but is essential for success as an actuary. In order to achieve higher levels in the actuary field, VEEs are required by the Society of Actuaries and the Casualty Actuarial Society. Wayne State offers many courses that meet VEE requirements, and most of those courses are part of the Actuarial Mathematics major. For instance, ECO 2010 and ECO 2020 meet the Economics VEE, while FIN 3290 and ACC 3010 meet the Accounting and Finance VEE. ACC 3010 (Accounting) is not required for the major, but highly recommended. In addition, statistics courses in the major can meet VEE requirements and the Mathematics Department is working to increase the number that do. Students who receive a minimum of a B- in these courses can receive credit for the associated VEE. See the Society of Actuaries (https://www.soa.org/) or the Casualty Actuarial Society (https://www.casact.org/) for more about VEEs and be sure to speak with your actuarial major advisor for more information.

Actuarial Exams

In addition to VEEs, there is a series of actuarial exams that allow actuaries to move up in the field and gain credentials. Students who aspire to become actuaries should pass at least the first two actuarial exams and complete the Accounting & Finance and Economics VEEs before getting their first job as an actuary. Although some graduates will find jobs in the actuarial field without these credentials, it is highly recommended that these requirements be met while completing the B.A. in Actuarial Mathematics in order to be best prepared for employment after graduation. It is also recommended that at least one exam is passed before getting an internship in the actuarial field. Exams can be found through the Society of Actuaries or the Casualty Actuarial Society. Although they each have their own set of exams, they are very similar, and prospective actuaries can choose either organization to complete their exams.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Mathematics Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Mathematical Economics (B.A.)

The purpose of the program is to provide rigorous training in mathematics and economics for students whose career goals require a high level of technical proficiency in these subjects. The program will be valuable for students who intend to pursue graduate work in economics, finance or applied mathematics, or pursue a career in economic analysis, finance, underwriting, actuarial sciences, banking, international trade, applied statistics, or operations research.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students considering a mathematical economics major should take ECO 2010 and ECO 2020 (Principles of Microeconomics and Macroeconomics) and MAT 2010 (Calculus 1) as soon as possible.

To satisfy the university bachelor's degree requirement, Mathematical Economics majors must have a cumulative grade point average of 2.0 in their major courses. Also, students must receive a grade of 'C-' or better in all mathematics, statistics and economics courses.

A major consists of at least forty-six credits total - at least twenty-two credits in mathematics courses and twenty-four credits in economics courses. At least fifteen credits (eight credits of economics and seven credits of math) must be earned at Wayne State University.

Code	Title	Credits
Economics Requirements		
ECO 2010	Principles of Microeconomics	4
ECO 2020	Principles of Macroeconomics	4
ECO 5000	Intermediate Microeconomics	4
ECO 5050	Intermediate Macroeconomics	4
ECO 6000	Price and Allocation Theory	4
Select one of the following: [1]		4
ECO 5020	Fundamentals of Economic Analysis I	
ECO 5030		
ECO 5100	Introductory Statistics and Econometrics	
ECO 5230	Environmental Economics	
ECO 5250	Economic Analysis of Law	
ECO 5260	Economic Analysis of Law II: Applications of Statistics and Econometrics	
ECO 5270	Games of Strategy	
ECO 5300	International Trade	
ECO 5500	Public Finance	
ECO 5560	Pharmaceutical Economics	
ECO 5700	Money and Banking	
ECO 6050	Macroeconomics	
ECO 6100	Introduction to Econometrics	
ECO 5993	Writing Intensive Course in Economics (This course is taken in conjunction with an approved 5000-level economics, mathematics or statistics elective course.) [3]	0
Mathematics Requirements		
MAT 2010	Calculus I	4

MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
MAT 5700	Introduction to Probability Theory	4
One MAT or STA course at or above 5030. Recommended courses are: [1, 2]		3-4
STA 5030	Statistical Computing and Data Analysis	
MAT 5100	Numerical Methods I	
MAT 5210	Advanced Calculus	
MAT 5220	Partial Differential Equations	
MAT 5230	Complex Variables and Applications	
MAT 5280	Methods of Differential Equations	
MAT 5710	Introduction to Stochastic Processes	
MAT 5750	Mathematics of Finance	
MAT 5770	Mathematical Models in Operations Research	
MAT 5870	Methods of Optimization	
STA 5800	Introduction to Mathematical Statistics	
Total Credits		**46-47**

1 This course could be done in conjunction with ECO 5993.

2 Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, MAT 6150, MAT 6200 and MAT 6210.

3 This is a paper completed in conjunction with an approved 5000-level economics, mathematics or statistics elective course. You must register for this course during the same semester that the 5000-level elective taken. Permission from the instructor is required.

Minimal Grade Requirements

Students must receive a grade of 'C- ' or better in all economics, mathematics and statistics courses. An overall grade point average of 2.0 ('C') is required for graduation.

Writing Proficiency/Writing Intensive Requirement

To enable the Department to evaluate their writing proficiency, mathematical economics majors must register for ECO 5993, the zero-credit WI course. This is a paper completed in conjunction with a 5000-level economics, mathematics or statistics elective course. They must register for this during the same semester that the 5000-level elective course is taken. All mathematical economics majors must satisfy this requirement, even if they are not subject to the University General Education Requirements.

Student's Responsibility

It is each student's responsibility to learn the requirements, policies, and procedures governing the program they are following and to act accordingly. Students should consult both Mathematical Economics program advisors regularly in order to verify that Mathematical Economics requirements are being met in a timely fashion. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Mathematics Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Mathematics (B.A.)

The courses offered by the Department of Mathematics serve several purposes; they supply the mathematical preparation necessary for students specializing in the physical, life or social sciences, in business administration, in engineering, and in education; they provide a route by which students may achieve a level of competence to do research in any of several special mathematical areas; they allow students to prepare themselves for work as mathematicians and statisticians in industry and government; and they give an opportunity to all inquisitive students to learn something about modern mathematical ideas.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Undergraduates declaring a mathematics major are strongly encouraged to meet with a departmental advisor before doing so. After a student's acceptance as a major, a student should consult a Departmental advisor at least once a semester to verify progress.

Program Requirements

Candidates must complete 120 credits in coursework including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

It is each student's responsibility to learn the requirements, policies, and procedures governing the program the student is following and to act accordingly. Students should consult the Department of Mathematics' undergraduate academic advisor on a regular basis. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Major Requirements

Residency: A minimum of 15 credits of major requirements at or above MAT or STA 5030 must be taken at Wayne State University. This includes courses that are considered equivalent to the Mathematics Department's MAT or STA courses and that are approved by the Mathematics Department to meet a major requirement.

Minimum Grade Requirements: The following grade requirements must be satisfied in the major.

- C- or better in all required coursework.
- C or better average for all coursework.

Notes:

1. STA courses previously designated by MAT (for example STA 2210 was previously labelled MAT 2210) are the same courses and meet the same requirements.
2. Although this policy is found in the College of Liberal Arts and Sciences (CLAS) requirements, it is worth noting that if a student is majoring in a CLAS major, they must obtain at least one minor that has 3 unique courses from the major. This means that at least 3 courses used to complete requirements in the minor must not be used to complete requirements in the major.

3. The required courses listed are the minimum that students should complete. Students are encouraged to take more courses in order to strengthen their background and enhance their prospects for employment and/or graduate school.

Course Requirements and Concentrations

In addition to the general bachelor's degree requirements, the candidate must complete one of the following concentrations: Prospective Graduate Study, General Topics or Computer Science, as described below.

Prospective Graduate Study Concentration

This concentration is for students interested in advanced mathematics, including those who intend to pursue graduate study in mathematics or statistics and those who want to be exceptionally well qualified for high-level employment in government or industry.

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
Select one of the following two options (MAT 2350 is preferred, if available, and it is 3 credits rather than 4):		3-4
MAT 2350	Elementary Differential Equations	
MAT 2150	Differential Equations and Matrix Algebra	
MAT 2250	Elementary Linear Algebra	3
MAT 5070	Elementary Analysis	4
MAT 5420	Algebra I	4
MAT 5600	Introduction to Analysis I	4
MAT 5700	Introduction to Probability Theory	4
Select one of the following two options:		3-4
MAT 5430	Algebra II	
MAT 5610	Introduction to Analysis II	
Select one of the following six options:		3-4
MAT 5230	Complex Variables and Applications	
MAT 5430	Algebra II	
MAT 5530	Elementary Differential Geometry and its Applications	
MAT 5540	Topological Data Analysis	
MAT 5610	Introduction to Analysis II	
STA 5800	Introduction to Mathematical Statistics	
Select one of the following four options:		3-4
An MAT or STA course numbered 5030 or above. [1]		
CSC 6500	Theory of Languages and Automata	
CSC 6620	Matrix Computation I	
CSC 6991	Topics in Computer Science (The topic must be approved by the Math Department Undergraduate Committee.)	
ECO 5270	Games of Strategy	
Total Credits		**43-47**

[1] Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, and MAT 6150. Only one (at most) of the courses may be selected from MAT 5890 or MAT 5990. These electives are subject to advisor approval on the Student's Plan of Work.

General Topics Concentration

This concentration is for students interested in a broad range of topics.

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
Select one of the following two options (MAT 2350 is preferred if available, and it is 3 credits rather than 4):		3-4
MAT 2350	Elementary Differential Equations	
MAT 2150	Differential Equations and Matrix Algebra	
MAT 2250	Elementary Linear Algebra	3
MAT 5070	Elementary Analysis	4
MAT 5700	Introduction to Probability Theory	4
MAT 5420	Algebra I	4
Two MAT or STA courses numbered 5030 or above. [1]		6-8
One additional MAT or STA course numbered 5030 or above, or one of the CSC courses listed below: [1]		3-4
CSC 6500	Theory of Languages and Automata	
CSC 6580	Design and Analysis of Algorithms	
CSC 6620	Matrix Computation I	
CSC 6991	Topics in Computer Science (The topic must be approved by the Math Department Undergraduate Committee.)	
ECO 5270	Games of Strategy	
Total Credits		**39-43**

[1] Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, and MAT 6150. Only one MAT 5890 and only one MAT 5990 may be selected.

Computer Science Concentration

Mathematics and computer science are so closely related that a great many students who major in mathematics pursue careers or graduate study in computer science. A mathematics degree, being more than just welcome in the field, is highly regarded. For students who would like to complete a double degree in mathematics and computer science or a major in mathematics with a minor in computer science, the Department offers a specially designed program. ***This concentration is available only to students who complete a second degree or a minor in computer science prior to graduation.*** Within this concentration, students can take certain courses that satisfy both mathematics and computer science major requirements simultaneously. See the Mathematics Department undergraduate advisor for additional information on how this course can fit into this major/minor or double degree combination. Students should also consult the Computer Science Department concerning the requirements for the second degree or minor.

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
Select one of the following (If pursuing a second degree in Computer Science, choose only from MAT 5700 or BE 2100):		3-4
MAT 5700	Introduction to Probability Theory	
STA 2210	Probability and Statistics	
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	
ECO 5100	Introductory Statistics and Econometrics	
PH 3200	Introduction to Biostatistics	
TIS 3400	Quantitative Methods II: Statistical Methods	

MAT 2860	Discrete Mathematics	3
MAT 5070	Elementary Analysis	4
MAT 5100	Numerical Methods I [2]	3
MAT 5420	Algebra I	4
One MAT or STA course numbered 5030 or above. [1]		3-4
One additional MAT or STA course numbered 5030, or above one of the following five options: [1]		3-4
CSC 5870	Computer Graphics	
CSC 6500	Theory of Languages and Automata	
CSC 6620	Matrix Computation I	
CSC 6991	Topics in Computer Science (Topic must be approved by the Math Department Undergraduate Committee.)	
ECO 5270	Games of Strategy	
Total Credits		**38-41**

1 Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, and MAT 6150. Only one (at most) of the courses may be selected from MAT 5890 or MAT 5990. These electives are subject to advisor approval on the Student's Plan of Work.

2 This course can also count as an elective for the minor or major in computer science.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Mathematics Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Mathematics (B.S.)

The courses offered by the Department of Mathematics serve several purposes; they supply the mathematical preparation necessary for students specializing in the physical, life or social sciences, in business administration, in engineering, and in education; they provide a route by which students may achieve a level of competence to do research in any of several special mathematical areas; they allow students to prepare themselves for work as mathematicians and statisticians in industry and government; and they give an opportunity to all inquisitive students to learn something about modern mathematical ideas.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Undergraduates declaring a mathematics major are strongly encouraged to meet with a departmental advisor before doing so. After a student's acceptance as a major, a student should consult a Departmental advisor at least once a semester to verify progress.

Program Requirements

Students must complete 120 credits in coursework including satisfaction of the University General Education Requirements (http://bulletins.wayne.edu/undergraduate/general-information/general-education/) and the College of Liberal Arts and Sciences Group Requirements (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/bachelors-degree-requirements/), as well as the departmental major requirements cited below. All coursework must be completed in accordance with the regulations of the University (http://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) and the College (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/academic-regulations/) governing undergraduate scholarship and degrees.

It is each student's responsibility to learn the requirements, policies, and procedures governing the program the student is following and to act accordingly. Students should consult the Department of Mathematics' undergraduate academic advisor on a regular basis. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Major Requirements

Residency: A minimum of 15 credits of major requirements at or above MAT or STA 5030 must be taken at Wayne State University. This includes courses that are considered equivalent to the Mathematics Department's MAT or STA courses and that are approved by the Mathematics Department to meet a major requirement.

Minimum Grade Requirements: The following grade requirements must be satisfied in the major.

- C- or better in all required coursework.
- C or better average for all coursework.

Notes:

1. STA courses previously designated by MAT (for example STA 2210 was previously labelled MAT 2210) are the same courses and meet the same requirements.
2. Although this policy is found in the College of Liberal Arts and Sciences (CLAS) requirements, it is worth noting that if a student is majoring in a CLAS major, they must obtain at least one minor that has 3 unique courses from the major. This means that at least 3 courses used to complete requirements in the minor must not be used to complete requirements in the major.
3. The required courses listed are the minimum that students should complete. Students are encouraged to take more courses in order to strengthen their background and enhance their prospects for employment and/or graduate school.

Course Requirements and Concentrations

The candidate must complete the following courses in addition to choosing one of the concentrations as described below.

B. S. Additional Requirements

Code	Title	Credits
MAT 5600	Introduction to Analysis I	4
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	5
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory	5
Select one of the following two options:		3
BE 1600	Introduction to Programming and Computation: Python	
CSC 2000	Introduction to C++ Programming Language	
Select one of the following six options:		4-5
BIO 1510	Basic Life Mechanisms	

CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory
NFS 2030 & NFS 2220	Nutrition and Health and Nutrition Laboratory
ESG 1010 & ESG 1011	Geology: The Science of the Earth and Geology: The Science of the Earth Laboratory
PSY 1010	Introductory Psychology
OR	
PSY 1020 & PSY 1030	Elements of Psychology and Introductory Psychology Laboratory

Prospective Graduate Study Concentration

This concentration is for students interested in advanced mathematics, including those who intend to pursue graduate study in mathematics or statistics and those who want to be exceptionally well qualified for high-level employment in government or industry.

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
Select one of the following two options (MAT 2350 is preferred if available, and it is 3 credits rather than 4):		3-4
MAT 2350	Elementary Differential Equations	
MAT 2150	Differential Equations and Matrix Algebra	
MAT 2250	Elementary Linear Algebra	3
MAT 5070	Elementary Analysis	4
MAT 5420	Algebra I	4
MAT 5600	Introduction to Analysis I	4
MAT 5700	Introduction to Probability Theory	4
Select one of the following two options:		3-4
MAT 5430	Algebra II	
MAT 5610	Introduction to Analysis II	
Select one of the following six options:		3-4
MAT 5230	Complex Variables and Applications	
MAT 5430	Algebra II	
MAT 5530	Elementary Differential Geometry and its Applications	
MAT 5540	Topological Data Analysis	
MAT 5610	Introduction to Analysis II	
STA 5800	Introduction to Mathematical Statistics	
Select one of the following four options:		3-4
An MAT or STA course numbered 5030 or above, OR one of the courses below. [1]		
CSC 6500	Theory of Languages and Automata	
CSC 6620	Matrix Computation I	
CSC 6991	Topics in Computer Science (The topic must be approved by the Mathematics Department Undergraduate Committee.)	
ECO 5270	Games of Strategy	
Total Credits		**43-47**

[1] Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, and MAT 6150. Only one (at most) of the courses may be selected from MAT 5890 or MAT 5990. These electives are subject to advisor approval on the Student's Plan of Work.

General Topics Concentration

This concentration is for students interested in a broad range of topics.

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
Select one of the following two options (MAT 2350 is preferred if available, and it is 3 credits rather than 4):		3-4
MAT 2350	Elementary Differential Equations	
MAT 2150	Differential Equations and Matrix Algebra	
MAT 2250	Elementary Linear Algebra	3
MAT 5070	Elementary Analysis	4
MAT 5420	Algebra I	4
MAT 5700	Introduction to Probability Theory	4
Two MAT or STA courses numbered 5030 or above. [1]		6-8
And select one of the following five options: [1]		3-4
An MAT or STA course numbered 5030 or above, OR one of the following courses		
CSC 6500	Theory of Languages and Automata	
CSC 6580	Design and Analysis of Algorithms	
CSC 6620	Matrix Computation I	
CSC 6991	Topics in Computer Science (The topic must be approved by the Mathematics Department Undergraduate Committee.)	
ECO 5270	Games of Strategy	
Total Credits		**39-43**

[1] Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, and MAT 6150. Only one (at most) of the courses may be selected from MAT 5890 or MAT 5990. These electives are subject to advisor approval on the Student's Plan of Work.

Computer Science Concentration

Mathematics and computer science are so closely related that a great many students who major in mathematics pursue careers or graduate study in computer science. A mathematics degree, being more than just welcome in the field, is highly regarded. For students who would like to complete a double degree in mathematics and computer science or a major in mathematics with a minor in computer science, the Department offers a specially designed program. Under this concentration, students can take certain courses that satisfy both mathematics and computer science requirements simultaneously. Students must discuss the details of this with their Mathematics and Computer Science advisors.

This concentration is available only to students who complete a second degree or a minor in computer science prior to graduation. Students should consult the Computer Science Department concerning the requirements for the second degree or minor.

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
Select one of the following (If pursuing a second degree in Computer Science, choose only from MAT 5700 or BE 2100):		3-4
MAT 5700	Introduction to Probability Theory	
STA 2210	Probability and Statistics	

BE 2100	Basic Engineering III: Probability and Statistics in Engineering	
ECO 5100	Introductory Statistics and Econometrics	
PH 3200	Introduction to Biostatistics	
TIS 3400	Quantitative Methods II: Statistical Methods	
MAT 2860	Discrete Mathematics	3
MAT 5070	Elementary Analysis	4
MAT 5100	Numerical Methods I [2]	3
MAT 5420	Algebra I	4
One MAT or STA course numbered 5030 or above. [1]		3-4
Select one of the following five options: [1]		3-4
An MAT or STA course numbered 5030 or above		
CSC 5870	Computer Graphics	
CSC 6500	Theory of Languages and Automata	
CSC 6620	Matrix Computation I	
CSC 6991	Topics in Computer Science (The topic must be approved by the Mathematics Department Undergraduate Committee.)	
ECO 5270	Games of Strategy	
Total Credits		**38-41**

1 Excluding MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, and MAT 6150. Only one (at most) of the courses may be selected from MAT 5890 or MAT 5990. These electives are subject to advisor approval on the Student's Plan of Work.

2 This course can also count as an elective for the minor or major in computer science.

Mathematics Departmental Honors Program

In order to graduate with honors in mathematics, students must satisfy the following criteria:

1. Completion of the requirements for a Bachelor of Science degree in Mathematics.
2. Have an overall grade point average of 3.3 or above at graduation.
3. At least 12 Mathematics honors credits at the level of MAT 2020 or above, including at least 4 credits of an approved 5000 level course. See the undergraduate mathematics advisor for approved courses. MAT 4990 is not included in these 12 credits (see below). The student must complete the course with at least a B and the honors option work with at least a B in order to obtain honors credit.
4. Completion of an HON 42XX - Honors College Seminar. See the Honors College website for information.
5. Satisfactory completion of MAT 4990 - Directed Study: Honors Program (3-6 credits). MAT 4990 involves the completion of an honors thesis in mathematics. The thesis must extend, supplement or compliment the 5000 level coursework the student has taken. It must be written under the guidance of a full-time faculty member.
6. Obtain a 3.3 average for all Mathematics classes upon completion.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Mathematics Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Statistics (B.S.)

The courses offered by the Department of Mathematics serve several purposes; they supply the mathematical preparation necessary for students specializing in the physical, life or social sciences, in business administration, in engineering, and in education; they provide a route by which students may achieve a level of competence to do research in any of several special mathematical areas; they allow students to prepare themselves for work as mathematicians and statisticians in industry and government; and they give an opportunity to all inquisitive students to learn something about modern mathematical ideas.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (http://bulletins.wayne.edu/undergraduate/general-information/admission/) to the University. Undergraduates declaring a mathematics major are strongly encouraged to meet with a departmental advisor before doing so. After a student's acceptance as a major, a student should consult a Departmental advisor at least once a semester to verify progress.

Program Requirements

Candidates must complete 120 credits in coursework including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All coursework must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

It is each student's responsibility to learn the requirements, policies, and procedures governing the program the student is following and to act accordingly. Students should consult the Department of Mathematics' undergraduate academic advisor on a regular basis. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Major Requirements

Residency: A minimum of 15 credits of major requirements at or above MAT or STA 5030 must be taken at Wayne State University. This includes courses that are considered equivalent to the Mathematics Department's MAT or STA courses and that are approved by the Mathematics Department to meet a major requirement.

Minimum Grade Requirements: The following grade requirements must be satisfied in the major.

- C- or better in all required coursework.
- C or better average for all coursework.

Notes:

1. STA courses previously designated by MAT (for example STA 2210 was previously labelled MAT 2210) are the same courses and meet the same requirements.
2. Although this policy is found in the College of Liberal Arts and Sciences (CLAS) requirements, it is worth noting that if a student is majoring in a CLAS major, they must obtain at least one minor that has 3 unique courses from the major. This means that at least 3 courses used to complete requirements in the minor must not be used to complete requirements in the major.

3. The required courses listed are the minimum that students should complete. Students are encouraged to take more courses in order to strengthen their background and enhance their prospects for employment and/or graduate school.

Course Requirements

Code	Title	Credits
Prerequisites		
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
Choose one of the following options (STA 2210 is preferred):		3-4
STA 2210	Probability and Statistics	
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	
ECO 5100	Introductory Statistics and Econometrics	
PH 3200	Introduction to Biostatistics	
TIS 3400	Quantitative Methods II: Statistical Methods	
Core Computing Course (select one of the following)		**3-4**
CSC 1100	Problem Solving and Programming	
CSC 2000	Introduction to C++ Programming Language	
Core Statistics Courses		**11**
MAT 5700	Introduction to Probability Theory	
STA 5800	Introduction to Mathematical Statistics	
STA 6840	Applied Regression Analysis	
Core Statistical Computing Course		**3**
STA 5030	Statistical Computing and Data Analysis	
Additional Statistics Course (select one of the following)		**3-4**
MAT 5540	Topological Data Analysis	
MAT 5710	Introduction to Stochastic Processes	
MAT 5770	Mathematical Models in Operations Research	
STA 5820	Introduction to Data Science	
STA 5830	Applied Time Series	
MAT 5890	Special Topics in Mathematics (Topic must be approved by the Math Department) [1]	
STA 6830	Design of Experiments	
Elective Courses (Select two of the following, one of which must be chosen from the first 7 options, ending with MAT 5870.) [1]		**6-8**
Any additional course listed in "Additional Statistical Courses". [1]		
MAT 2350	Elementary Differential Equations (MAT 2350 is recommended, if available.)	
or MAT 2150	Differential Equations and Matrix Algebra	
MAT 5070	Elementary Analysis [2]	
MAT 5100	Numerical Methods I	
MAT 5410	Applied Linear Algebra	
MAT 5600	Introduction to Analysis I	
MAT 5870	Methods of Optimization	
MAT 5740	The Theory of Interest	
ECO 6100	Introduction to Econometrics	
TIS 5570	Introduction to Business Analytics	
CSC 5825	Introduction to Machine Learning and Applications	
DSA 6000	Data Science and Analytics	
EER 8800	Variance and Covariance Analysis	
EER 8820	Multivariate Analysis	
EER 8860	Nonparametric, Permutation, Exact, and Robust Methods	
EER 8992	Research and Experimental Design	
IE 6210	Applied Engineering Statistics	
IE 6611	Fundamentals of Six Sigma	
PS 5630	Statistics and Data Analysis in Political Science I	
PSY 6500	Advanced Psychological Statistics	
SOC 6280	Social Statistics	
SW 9100	Social Statistics and Data Analysis	
Total Credits		**44-49**

1 MAT 5890 must be a statistics course and must be approved by the Department of Mathematics. In case of two or more different MAT 5890 courses, one will be counted as the "Additional Statistics Course" and the other as an "Elective Course."

2 Strongly recommended for students interested in graduate study.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Mathematics Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Mathematics Minor

Students must complete all coursework including satisfaction of the University General Education Requirements (http://bulletins.wayne.edu/undergraduate/general-information/general-education/) and the College of Liberal Arts and Sciences Group Requirements (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/bachelors-degree-requirements/), as well as the departmental minor requirements cited below. All coursework must be completed in accordance with the regulations of the University (http://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) and the College (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/academic-regulations/) governing undergraduate scholarship and degrees.

It is each student's responsibility to learn the requirements, policies, and procedures governing the program the student is following and to act accordingly. Students should consult the Department of Mathematics' undergraduate academic advisor on a regular basis. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Minor Requirements

Residency: A minimum of 7 credits of minor requirements at or above MAT or STA 5030 must be taken at Wayne State University. This includes courses that are considered equivalent to the Mathematics Department's MAT or STA courses and that are approved by the Mathematics Department to meet a major requirement.

Minimum Grade Requirements: The following grade requirements must be satisfied in the minor.

- C- or better in all required coursework.
- C or better average for all coursework.

Notes:

1. STA courses previously designated by MAT (for example STA 2210 was previously labelled MAT 2210) are the same courses and meet the same requirements.

2. Although this policy is found in the College of Liberal Arts and Sciences (CLAS) requirements, it is worth noting that if a student is majoring in a CLAS major, they must obtain at least one minor that has 3 unique courses from the major. This means that at least 3 courses used to complete requirements in the minor must not be used to complete requirements in the major.

3. The required courses listed are the minimum that students should complete. Students are encouraged to take more courses in order to strengthen their background and enhance their prospects for employment and/or graduate school.

Course Requirements

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2250	Elementary Linear Algebra	3
Two MAT or STA courses numbered 5030 or above. [1]		6-8
One additional MAT or STA course numbered 5030 or above, or one of the courses listed below: [1]		3-4
MAT 2150	Differential Equations and Matrix Algebra	
MAT 2350	Elementary Differential Equations	
MAT 2500	Fundamentals of Mathematics and Proof-Writing	
MAT 2860	Discrete Mathematics	
STA 2210	Probability and Statistics	
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	
ECO 5100	Introductory Statistics and Econometrics	
PH 3200	Introduction to Biostatistics	
TIS 3400	Quantitative Methods II: Statistical Methods	
Total Credits		**24-27**

[1] The courses MAT 5120, MAT 5180, MAT 5190, MAT 5992, MAT 6130, and MAT 6150 do not satisfy the mathematics minor requirement for courses numbered 5030 or above. Only one MAT 5890 or MAT 5990 may be used to meet the requirements.

Statistics Minor

Students must complete all coursework including satisfaction of the University General Education Requirements (http://bulletins.wayne.edu/undergraduate/general-information/general-education/) and the College of Liberal Arts and Sciences Group Requirements (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/bachelors-degree-requirements/), as well as the departmental minor requirements cited below. All coursework must be completed in accordance with the regulations of the University (http://bulletins.wayne.edu/undergraduate/general-information/academic-regulations/) and the College (http://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/academic-regulations/) governing undergraduate scholarship and degrees.

It is each student's responsibility to learn the requirements, policies, and procedures governing the program the student is following and to act accordingly. Students should consult the Department of Mathematics' undergraduate academic advisor on a regular basis. Although the advisor will provide assistance, the responsibility for fulfilling degree requirements remains with the student.

Minor Requirements

Residency: A minimum of 7 credits of minor requirements at or above MAT or STA 5030 must be taken at Wayne State University. This includes courses that are considered equivalent to the Mathematics Department's MAT or STA courses and that are approved by the Mathematics Department to meet a major requirement.

Minimum Grade Requirements: The following grade requirements must be satisfied in the minor.

- C- or better in all required coursework.
- C or better average for all coursework.

Notes:

1. STA courses previously designated by MAT (for example STA 2210 was previously labelled MAT 2210) are the same courses and meet the same requirements.

2. Although this policy is found in the College of Liberal Arts and Sciences (CLAS) requirements, it is worth noting that if a student is majoring in a CLAS major, they must obtain at least one minor that has 3 unique courses from the major. This means that at least 3 courses used to complete requirements in the minor must not be used to complete requirements in the major.

3. The required courses listed are the minimum that students should complete. Students are encouraged to take more courses in order to strengthen their background and enhance their prospects for employment and/or graduate school.

Course Requirements

Code	Title	Credits
Foundational mathematics		**11-12**
MAT 2010	Calculus I	
MAT 2020	Calculus II	
Select one of the following:		
MAT 2250	Elementary Linear Algebra	
MAT 2150	Differential Equations and Matrix Algebra	
Statistics courses		**10-12**
Select one of the following:		
STA 2210	Probability and Statistics	
BE 2100	Basic Engineering III: Probability and Statistics in Engineering	
ECO 5100	Introductory Statistics and Econometrics	
PH 3200	Introduction to Biostatistics	
TIS 3400	Quantitative Methods II: Statistical Methods	
Select at least two of the following:		
STA 5030	Statistical Computing and Data Analysis	
MAT 5540	Topological Data Analysis	
MAT 5700	Introduction to Probability Theory	
STA 5800	Introduction to Mathematical Statistics	
STA 5820	Introduction to Data Science	
STA 5830	Applied Time Series	

MAT 5890	Special Topics in Mathematics (Topic must be approved by the Department of Mathematics.)	
STA 6830	Design of Experiments	
STA 6840	Applied Regression Analysis	
TOTAL		21-24

Students should be aware that MAT 2150, MAT 5700,MAT 5890 and STA 5800, and STA 6840 require MAT 2030 as a prerequisite.

Neuroscience

Neuroscience is an interdisciplinary science dedicated to discovering how the brain produces thought, emotion, and behavior on the levels of systems, cells, and molecules. The neuroscience programs are offered jointly through the Departments of Biological Sciences and Psychology. More information is available on the CLAS website (https://clas.wayne.edu/neuroscience).

- Neuroscience (B.S.) (p. 313)
- Neuroscience Minor (p. 314)

Neuroscience (B.S.)

The goal of the Neuroscience major is to provide students with a strong background in fundamental basic sciences and exposure to the integrative nature of neuroscience to allow students to understand nervous system function from a variety of perspectives. Students will emerge with a strong foundation in basic science and applied neuroscience that will make them competitive for post-graduate studies or employment in industry, government, health, and education.

The degree program is offered jointly through the Departments of Biological Sciences and Psychology. During the freshman year, or as early as possible, students interested in neuroscience should consul one of these departments to obtain information from an undergraduate advisor.

The Neuroscience major will lead to a Bachelor of Science (B.S.) degree. Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Major requirements are divided into three categories: (A) Basic science courses, (B) Neuroscience core courses, and (C) Electives. Elective courses are organized into two sub-categories and students must select from each; this is to ensure breadth of exposure. Students must receive a grade of C-minus or better in all required major courses. A grade point average of 2.0 (C) is required for graduation. The major requires a minimum of three unique courses that do not count towards requirements of other declared majors.

Basic Science Courses

Students may double-count up to 11 - 12 credits with University General Education requirements.

Code	Title	Credits
Math		**4**
MAT 2010	Calculus I	
Statistics		**3-4**
PSY 2030	Statistical Methods in Psychology	
or STA 1020	Elementary Statistics	
or STA 2210	Probability and Statistics	
Biology		**8**
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	
BIO 2550	Fundamentals of Cell Biology for Neuroscience	
Chemistry		**14**

CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	
CHM 1240	Organic Chemistry I	
Biochemistry		**3**
BIO 3100	Cellular Biochemistry	
or CHM 5600	Survey of Biochemistry	
Physics		**10**
Select one of the following sequences:		
Option 1:		
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	
Option 2:		
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory	
Social/Behavioral Science		**4**
PSY 1010	Introductory Psychology	
Total Credits		**46-47**

Neuroscience Core Courses

Code	Title	Credits
BIO 3200	Human Physiology	3
PSY 3330	Systems Neuroscience	3
Total Credits		**6**

Elective Courses

Select 18 credits, with a minimum of 6 credits each from the Behavioral and Cognitive Neuroscience and Cellular and Molecular Neuroscience categories. Students may choose directed study courses to complete the 18 credit requirement.

Code	Title	Credits
Behavioral and Cognitive Neuroscience		
BIO 4220	Biological Dimensions of Evolutionary Psychology	3
KIN 3550	Motor Learning and Control	3
NEU 4200	Neurobiology of Addiction	3
NFS 5170	Nutrition, Physical Activity, and the Brain	3
PHI 5230	Philosophy of Science	4
PHI 5550	Philosophy of Mind	4
PSY 3040	Psychology of Perception: Fundamental Processes	3
PSY 3060	Psychology of Learning and Memory: Fundamental Processes	3
PSY 3080	Cognitive Psychology: Fundamental Processes	3
PSY 4140	Hormones and Behavior	3
NEU 4795	Special Topics in Behavioral and Cognitive Neuroscience	3
PSY 5040	Cognitive Neuroscience	3
PSY 5070	Neuropharmacology	3
PSY 5080	Cellular Basis of Animal Behavior	3
PSY 5330	Human Neuropsychology	3
PSY 5440	Developmental Neuropsychology	3
Cellular and Molecular Neuroscience		
BIO 3070	Genetics	4-5
BIO 4120	Comparative Physiology	4
BIO 4690	Molecular and Cellular Neurobiology	3
NEU 4895	Special Topics in Cellular and Molecular Neuroscience	3
BIO 5040	Biometry	4
BIO 5620	Developmental Biology	3
BIO 5660	Neural Signaling in Health and Disease	3
BIO 5890	Neuroplasticity	3
BIO 6055	Biology of the Eye	3
BIO 6180	Molecular and Cellular Biology of Lipids	3
BIO 6190	Advanced Special Topics	6
BIO 6690	Special Topics in Neurobiology	3
NEU 5470	Preclinical and Clinical Assessments of Neurologic Disease I	3
NEU 6470	Preclinical and Clinical Assessments of Neurologic Disease II	3
PHY 3750	Introduction to Computational Methods	1
PHY 6290	Survey of Biophysics	3
PHY 6750	Applied Computational Methods	2
ROC 6710	Physics in Medicine	3
Directed Study		
NEU 4050	Science Advocacy and Public Engagement	2
NEU 4990	Introduction to Research Practice	1
NEU 4991	Undergraduate Research in Neuroscience	1
NEU 4992	Undergraduate Research in Neuroscience	2
NEU 4993	Undergraduate Research in Neuroscience	3
NEU 4994	Undergraduate Research in Neuroscience	4
NEU 6990	Honors Introduction to Research Practice	1
NEU 6992	Honors Undergraduate Research in Neuroscience	2
NEU 6993	Honors Undergraduate Research in Neuroscience	3
NEU 6994	Honors Undergraduate Research in Neuroscience	4
NEU 6998	Honors Thesis in Neuroscience	3

Neuroscience Honors (B.S. Program)

To be recommended for an honors degree from this program, a student must maintain a cumulative g.p.a. of at least 3.30 and complete a minimum of 14 honors course credits including:

Code	Title	Credits
One 42XX level Honors Seminar		3
NEU 6990	Honors Introduction to Research Practice	1
Complete at least two credits of Honors research with one of the following		2
NEU 6992	Honors Undergraduate Research in Neuroscience	
NEU 6993	Honors Undergraduate Research in Neuroscience	
NEU 6994	Honors Undergraduate Research in Neuroscience	
Complete an Honors thesis		3
NEU 6998	Honors Thesis in Neuroscience	
Remaining credits to be earned in honors sections or honors options within the Neuroscience major coursework.		5
Total Credits		**14**

Neuroscience Minor

Neuroscience is the interdisciplinary scientific study of the nervous system. It encompasses and combines a broad array of disciplines

including biology, biochemistry, computer science, physiology, psychology, philosophy, and more. This diversity reflects the complexity of the nervous system and the challenges in understanding how nervous systems function on multiple levels underlying behavior: molecular, cellular, network, and systems. The overarching goal of the Neuroscience minor is to allow students who may be focusing their studies in a traditional discipline with certain levels of analysis to broaden their perspective and knowledge to areas outside of their primary field of study.

The minor requires the completion of a minimum of 18 credits.

Code	Title	Credits
Core Courses		
BIO 3200	Human Physiology	3
PSY 3120	Brain and Behavior	3
or PSY 3330	Systems Neuroscience	
Elective courses		
A minimum of three additional courses taken outside of the student's major from the approved list of courses below.		
Cellular and Molecular Courses		
BIO 3070	Genetics	4-5
BIO 4120	Comparative Physiology	4
BIO 4690	Molecular and Cellular Neurobiology	3
BIO 5620	Developmental Biology	3
BIO 5660	Neural Signaling in Health and Disease	3
BIO 5890	Neuroplasticity	3
BIO 6055	Biology of the Eye	3
BIO 6180	Molecular and Cellular Biology of Lipids	3
BIO 6690	Special Topics in Neurobiology	3
NEU 4895	Special Topics in Cellular and Molecular Neuroscience	3
NEU 5470	Preclinical and Clinical Assessments of Neurologic Disease I	3
NEU 6470	Preclinical and Clinical Assessments of Neurologic Disease II	3
PHY 6290	Survey of Biophysics	3
Behavioral and Cognitive Courses		
BIO 4220	Biological Dimensions of Evolutionary Psychology	3
KIN 3550	Motor Learning and Control	3
NFS 5170	Nutrition, Physical Activity, and the Brain	3
NEU 4200	Neurobiology of Addiction	3
NEU 4795	Special Topics in Behavioral and Cognitive Neuroscience	3
PSY 2080	Introduction to Drugs, Behavior, and Society	3
PSY 3040	Psychology of Perception: Fundamental Processes	3
PSY 3060	Psychology of Learning and Memory: Fundamental Processes	3
PSY 3080	Cognitive Psychology: Fundamental Processes	3
PSY 4140	Hormones and Behavior	3
PSY 5040	Cognitive Neuroscience	3
PSY 5070	Neuropharmacology	3
PSY/BIO 5080	Cellular Basis of Animal Behavior	3
PSY 5330	Human Neuropsychology	3
PSY 5440	Developmental Neuropsychology	3
Philosophy Courses		
PHI 2550	Introduction to Philosophy of Science	3
PHI 2650	Minds and Machines	3
PHI 5230	Philosophy of Science	4
PHI 5550	Philosophy of Mind	4

Nutrition and Food Science

Office: 3009 Science Hall; 313-577-2500
Chairperson: Diane Cress
Undergraduate Advisor: Deanna L. Cavanaugh
https://clas.wayne.edu/nfs

The courses offered by this department are designed for students in three distinct groups:

1. those majoring in nutrition and food science who are interested in entering either the nutrition, the food science and health care professions;
2. those interested in entering the dietetics field; and
3. those majoring in nutrition and food science with the intention of entering non-technical positions in a variety of food businesses.

- Nutrition and Food Science (B.A.) (p. 316)
- Nutrition and Food Science (B.S.) (p. 317)
- Nutrition and Food Science Minor (p. 318)

Nutrition and Food Science (B.A.)

This curriculum allows students to major in nutrition and food science while following a broader program in liberal arts, science, and business. The degree requires a less rigorous background in chemistry and other natural science courses than is required for the B.S. degree in this discipline. Employment opportunities include sales, customer relations, university or school food services, industrial and commercial food service systems, hospitals, nursing homes or extended care food service operations.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students contemplating a major program in Nutrition and Food Science should consult with the undergraduate Departmental advisor as soon as possible, and no later than the beginning of the sophomore year. Transfer students should consult with the undergraduate departmental advisor during the semester prior to their transfer.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Course requirements for this bachelor's degree consist of courses offered by Wayne State University and courses available from local community colleges on a dual enrollment basis with the University. Requirements are as follows:

Code	Title	Credits
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
BIO 2870	Anatomy and Physiology	5
CHM 1060	General, Organic and Biochemistry	5
ANT 2400	Food and Culture	3
PH 2100	Introduction to Public Health	3
STA 1020	Elementary Statistics	3
NFS 2030	Nutrition and Health	3
NFS 2130 & NFS 2140	Introductory Food Science and Introductory Food Science Laboratory	4
NFS 3230 & NFS 2220	Human Nutrition and Nutrition Laboratory	4
NFS 3240	Lifecycle Nutrition	3
NFS 4132	Culinary Nutrition	3
NFS 4150	Advanced Food Science	3
NFS 4160	Food Laws and Regulations	3
NFS 5150	Food Safety Assurance	4
NFS 5220	Community Nutrition	2
NFS 5820	Capstone: Science Communication in Nutrition and Food Science	3
NFS Elective		1-4
NFS Elective		1-4
Total Credits		**62-68**

Community College Courses

Candidates for the degree may complete courses in the following areas: culinary arts, community health or related field, food management, and food production. Credits from these courses can be applied to the degree requirements, and an MTA to accept full credit from a completed associates degree is in progress. Further, credits earned from concurrent enrollment with a local community college can be applied to the degree requirements and may qualify for minor designation.

Nutrition and Food Science Honors Program

Admission: A minimum grade point average (g.p.a.) of 3.3 is required for enrollment in the Department of Nutrition and Food Science Honors program. Prospective Honors students should consult with an advisor in the Department during the freshman year. Transfer students or others with a Nutrition and Food Science g.p.a. of 3.5 may be accepted into the program without having taken the NFS 3230 Honors section.

Honors Requirements

1. Enroll in the Honors section of NFS 3230.
2. Complete at least one HON 42XX seminar.
3. Complete at least three credits in an independent research project (NFS 5990).
4. Complete at least fifteen credits in honors-designated course work, including the above. The additional course work may be obtained in this department by taking an Honors option of upper-level NFS courses, or in any other department of the College.

Students must have an overall grade point average of 3.3 and maintain an overall grade point average of at least 3.0 in the major to be awarded the Honors Degree.

'AGRADE' Program (Accelerated Graduate Enrollment)

Qualified seniors in Nutrition and Food Science having not less than a 3.5 g.p.a. may enroll simultaneously in the undergraduate and graduate program and apply a maximum of sixteen credits towards both the bachelor's and master's degrees in nutrition and food science. Students

may apply for the program as soon as they complete ninety credits towards the undergraduate degree. Graduate courses taken as part of the 'AGRADE' Program are assessed undergraduate rate tuition. Contact the Department for further information.

Nutrition and Food Science (B.S.)

This program is designed for science-oriented students who are interested in the various food and nutrition or other healthcare related professions. Students are prepared for these professions by the integration of chemistry and the biological sciences with courses in food science and nutrition. Employment opportunities may be found in various phases of food processing, research and development, public health, and community education, as well as in positions in state and federal regulatory agencies dealing with food products. The program provides good preparation for medical, dental or allied health school application. Students should consult an advisor for program planning.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students contemplating a major program in Nutrition and Food Science should consult with the undergraduate Departmental advisor as soon as possible, and no later than the beginning of the sophomore year. Transfer students should consult with the undergraduate departmental advisor during the semester prior to their transfer.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students must complete at least 72 core science courses of which at least 25 must be in nutrition and food science. Core Courses are as follows:

Track A (Pre-Med/Pre-Dental)

Code	Title	Credits
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 3250 & BIO 3251	Molecular Mechanisms of Microbiology and Molecular Mechanisms of Microbiology Lab	5
BIO 3200	Human Physiology	3
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
CHM 2220 & CHM 2230	Organic Chemistry II and Organic Chemistry II Laboratory	5
MAT 1800	Elementary Functions	4
STA 1020	Elementary Statistics	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	5
NFS 2130 & NFS 2140	Introductory Food Science and Introductory Food Science Laboratory	4
NFS 3230 & NFS 2220	Human Nutrition and Nutrition Laboratory	4
NFS 4230	Macronutrient Metabolism	3
NFS 4231	Human Nutrition: Micronutrients	3
NFS 5130	Food Chemistry	3
NFS 5250	Nutrition and Disease	4
NFS 5140	Laboratory Techniques in Nutrition and Food Science	3
NFS Elective		1-4
Total Credits		**74-77**

TRACK B: Pre-Dietetics/Pre-Physician Assistant

Code	Title	Credits
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
BIO 2870	Anatomy and Physiology	5
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
SOC 1010 or ANT 1100	Understanding Human Society Introduction to Anthropology	3
STA 1020	Elementary Statistics	3
PSY 1020	Elements of Psychology	3
MGT 2530	Management of Organizational Behavior	3
NFS 2130 & NFS 2140	Introductory Food Science and Introductory Food Science Laboratory	4
NFS 3230 & NFS 2220	Human Nutrition and Nutrition Laboratory	4
NFS 4230	Macronutrient Metabolism	3
NFS 4231	Human Nutrition: Micronutrients	3
NFS 5130	Food Chemistry	3
NFS 4150	Advanced Food Science	3
NFS 5250	Nutrition and Disease	4
NFS Elective		3-4
NFS Elective		4
Total Credits		**72-73**

Nutrition and Food Science Honors Program

Admission: A minimum grade point average (g.p.a.) of 3.3 is required for enrollment in the Department of Nutrition and Food Science Honors program. Prospective Honors students should consult with an advisor in the Department during the freshman year. Transfer students or others with a Nutrition and Food Science g.p.a. of 3.5 may be accepted into the program without having taken the NFS 3230 Honors section.

Honors Requirements

1. Enroll in the Honors section of NFS 3230.
2. Complete at least one HON 42XX seminar.
3. Complete at least three credits in an independent research project (NFS 5990).
4. Complete at least fifteen credits in honors-designated course work, including the above. The additional course work may be obtained in this department by taking an Honors option of upper-level NFS courses, or in any other department of the College.

Students must have an overall grade point average of 3.3 and maintain an overall grade point average of at least 3.0 in the major to be awarded the Honors Degree.

'AGRADE' Program (Accelerated Graduate Enrollment)

Qualified seniors in Nutrition and Food Science having not less than a 3.5 g.p.a. may enroll simultaneously in the undergraduate and graduate program and apply a maximum of sixteen credits towards both the bachelor's and master's degrees in nutrition and food science. Students may apply for the program as soon as they complete ninety credits towards the undergraduate degree. Graduate courses taken as part of the 'AGRADE' Program are assessed undergraduate rate tuition. Contact the Department for further information.

Nutrition and Food Science Minor

Completion of the minor in Nutrition and Food Science requires a minimum of eighteen credits in Nutrition and Food Science courses as follows:

Code	Title	Credits
NFS 2030	Nutrition and Health	3
NFS 2130	Introductory Food Science	3
NFS 2140	Introductory Food Science Laboratory	1
NFS 2220	Nutrition Laboratory	1
NFS 3230	Human Nutrition	3-4
Additional seven credits in upper division NFS courses.		7
NFS 3270	Eating Disorders	
NFS 3300	Science, History, and Culture of Italian Cuisine	
NFS 4160	Food Laws and Regulations	
NFS 5170	Nutrition, Physical Activity, and the Brain	
NFS 5220	Community Nutrition	
NFS 5231	Nutrition and Physical Performance	
NFS 5240	Nutritional Epidemiology	
NFS 5350	Organization and Management of Food Service Systems	
NFS 6850	Controversial Issues	
Total Credits		**18-19**

Peace and Conflict Studies

Office: 2320 Faculty/Administration Building; 313-577-3453
Director: Pontus Leander
https://clas.wayne.edu/cpcs

The Peace and Conflict Studies (PCS) program integrates a variety of practical courses and interdisciplinary research to allow students to combine their own majors with training, study, and experience in peace studies and the emerging field of conflict resolution, at the inter-personal, national and international levels. The curriculum deals with the most fundamental of human concerns: how to manage or resolve conflict constructively. Students are introduced to the causes of human conflict and violence, as well as approaches to conflict management ranging from diplomacy, law and negotiation, to mediation and arbitration. Questions are raised concerning the issues of globalization, social justice, non-violence, ethnicity, race, and culture.

- Peace and Conflict Studies (Co-Major) (p. 318)

Peace and Conflict Studies (Co-Major)

An admissions moratorium is currently in effect for this program.

The Peace and Conflict Studies (PCS) Co-Major Program integrates a variety of practical courses and interdisciplinary research to allow students to combine their own majors with training, study, and experience in peace studies and the emerging field of conflict resolution, at the inter-personal, national and international levels. The curriculum deals with the most fundamental of human concerns: how to manage or resolve conflict constructively. Students are introduced to the causes of human conflict and violence, as well as approaches to conflict management ranging from diplomacy, law and negotiation, to mediation and arbitration. Questions are raised concerning the issues of globalization, social justice, non-violence, ethnicity, race, and culture.

The PCS curriculum provides a framework useful for careers in legal, educational, governmental, business, labor, social service, scientific and health professions, as well as in graduate and professional education. Students are offered opportunity for hands-on experience, and are encouraged to build adaptive skills useful for the future. Courses in this curriculum may also count toward the completion of University General Education Requirements (p. 24), as well as College and Major Requirements.

Students are encouraged to participate in the development of their curriculum; in addition to selecting from a wide variety of suggested PCS electives, co-majors are able to choose other elective courses with prior consent of the Director. Students are also encouraged to participate in the Peace and Justice Student Learning Community, which organizes speakers and other special educational programs and events on various subjects, and to explore credit for internships and study abroad.

The program is designed around a set of core courses, which introduce the student to the field, including various approaches to peace studies and the application of conflict management methods, and finally which assess the student's overall progress in a senior research seminar project. Five courses in conflict-related elective courses are required, but students must have a minimum of three courses that are counting towards the PCS co-major elective requirements and are not fulfilling any other major, minor, or co-major requirements.

Core Course Requirements

Code	Title	Credits
PCS 2000	Introduction to Peace and Conflict Studies	3
PCS 6000	Senior Seminar in Peace and Conflict Studies	3
Select two of the following (additional courses can count as electives):		6-8
AFS 2210	Black Social and Political Thought	
ANT 3100	World Cultures	
ECO 5300	International Trade	
HIS 5130/7130	American Foreign Relations Since 1933	
PCS 2010/ PS 2830/ HIS 2520	Topics in Peace and Conflict Studies [1]	
PCS/PHY 2020/ HIS 2510/ PS 2440	Science, Technology, and War	
PCS 2050/ PS 2550/ SOC 2050/ HIS 2530	The Study of Non-Violence	
PCS 3100	Human Trafficking and Modern Slavery	
PCS 5999	Special Readings/Research	
PHI 2330	Introduction to Social and Political Philosophy	
PS 2510	Introduction to Political Philosophy: What is Politics?	
PS 2810	World Politics	
PS 5740	Ethnicity: The Immigrant Experience	
PSY 2600	Psychology of Social Behavior	
SOC 2300	Social Inequality	
Select one of the following: [1]		3-4
PCS 5000	Dispute Resolution	
PCS 5010	Community or International Internship	
PCS 5100	Advanced Special Topics	
Five courses in conflicted-related elective courses [2]		15-20
Total Credits		**30-38**

1. May be taken only once for core requirement, and repeated for electives.
2. Students must have a minimum of three courses that are counting towards the PCS co-major elective requirements and are not fulfilling any other major, minor, or co-major requirements. Permissible elective courses are listed in the WSU course bulletin, or can be approved in consultation with the program director.

Philosophy

Office: 5057 Woodward, 12th floor; 313-577-2474
Chairperson: Josh Wilburn
Website: https://clas.wayne.edu/philosophy
Contact: philosophy@wayne.edu

Courses in this department are designed with four aims:

1. They contribute to the liberal education of any student, whatever their predominant interest, by emphasis on clear and cogent thought, by consideration of the interrelations of fact and value, by training in logic and the methodology of inquiry, and by a study and analysis of major philosophical outlooks.
2. They supply a minor and cognate courses to students majoring in other Departments who wish to study their major subject in its wider philosophical implications.
3. They give Departmental majors a wide and intensive training in philosophy. The major appeals to those who wish to take graduate work in philosophy and to those who wish a broad background from which to study and understand the emergence and conflict of ideas in relation to contemporary problems.
4. They supply a relevant major and minor for students who plan a career in such fields as the law or the ministry.

- Philosophy (B.A.) (p. 319)
- Health Care Ethics Minor (p. 321)
- Humanities Minor (p. 321)
- Law (B.A.) (p. 322)
- Law Minor (p. 323)
- Medical Humanities Minor (p. 324)
- Philosophy Minor (p. 324)
- Pre-Law Minor (p. 325)
- Religious Studies Minor (p. 325)

Philosophy (B.A.)

Philosophy contributes to the liberal education of any student, whatever their predominant interests, by its emphasis on clear and cogent thought, by consideration of the interrelations of fact and value, by training in logic and the methodology of inquiry, and by a study and analysis of major philosophical outlooks.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students who are planning to major in philosophy or who simply wish advice or consultation concerning course offerings and programs should see the Director of Undergraduate Studies in Philosophy.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students planning to major in Philosophy should consult the department's undergraduate advisor as early as possible. Students may satisfy the major in either of two ways: with a traditional (p. 320) concentration or with a concentration in law, ethics and justice (p. 320).

CORE COURSE (3-4 credits). All students (of either concentration) must take one of the following logic courses:

Code	Title	Credits
Select one of the following:		3-4
PHI 3850	Symbolic Logic	

PHI 3860	Honors Symbolic Logic
PHI 5050	Advanced Symbolic Logic

Traditional Concentration

This option is primarily intended for those students whose interests in Philosophy are broad and general, and for those who are considering doing graduate-level work in Philosophy. A candidate pursuing this concentration must complete a minimum of ten courses in Philosophy, including the Logic Core Course (see above) as well as the following courses and selections from course groups (found in Philosophy Courses (p.)):

Code	Title	Credits
1. Two courses in the History of Philosophy.		
Select at least one History of Philosophy course from the following:		
PHI 2100	Ancient Greek Philosophy	
PHI 2110	Philosophy of the Scientific Revolution and Enlightenment	
PHI 2140	Ancient Greek Medicine and Psychology	
PHI 5410	Plato	
PHI 5420	Aristotle	
PHI 5460	Kant	
PHI 5510	Special Topics in the History of Philosophy	
Select a second History of Philosophy course from the above, or from the following:		
PHI 2150	Chinese Philosophy	
PHI 2170	Islamic and Near Eastern Philosophy	
PHI 3450	Existentialism	
PHI 5520	Topics in Black and Africana Philosophy	
2. Select one course in the Value Theory Group		
PHI 2320	Introduction to Ethics	
PHI 2330	Introduction to Social and Political Philosophy	
PHI 2360	Feminist Philosophy	
PHI 2390	Philosophy of Human Rights	
PHI 3270	Foundations of Law	
PHI 3650	The Philosophy of Work	
PHI 3700	Philosophy of Art	
PHI 5240	Social and Political Philosophy	
PHI 5250	Justice and Rights in Health Care	
PHI 5260	Philosophy of Sex and Gender	
PHI 5270	Philosophy of Law	
PHI 5280	History of Ethics	
PHI 5290	Free Will and Moral Responsibility	
PHI 5300	Foundations of Ethics	
PHI 5330	Ethics, Law, and Health	
PHI 5310	Law, Justice, and Intersectionality	
3. Select one course in the Philosophical Problems Group		
PHI 2400	Introduction to the Philosophy of Religion	
PHI 2550	Introduction to Philosophy of Science	
PHI 2650	Minds and Machines	
PHI 3500	Theory of Knowledge	
PHI 3550	Metaphysics	
PHI 5210	Philosophy of Race and Racism	
PHI 5230	Philosophy of Science	
PHI 5500	Topics in Metaphysics	
PHI 5530	Topics in Epistemology	
PHI 5550	Philosophy of Mind	
PHI 5570	Philosophy of Language	
PHI 5620	Topics in Philosophy of Sci-Fi, Fantasy, & AI	
4. Select four 5000-level courses, which must total at least 14 credits		

NOTE: Courses taken at the 5000-level which are used to satisfy any of requirements 1-3 may also be counted toward requirement 4, though the ten-course minimum for the major must still be met.

Law, Ethics and Justice Concentration

This option is intended for students who have a special interest in ethical issues, social justice, philosophy of law, or pre-law. A candidate pursuing this concentration must complete a minimum of ten courses in Philosophy, including the Core Courses (see above) as well as the following courses and selections from course groups:

Code	Title	Credits
1. One course in the History of Philosophy group		
PHI 2100	Ancient Greek Philosophy	
PHI 2110	Philosophy of the Scientific Revolution and Enlightenment	
PHI 2140	Ancient Greek Medicine and Psychology	
PHI 2150	Chinese Philosophy	
PHI 2170	Islamic and Near Eastern Philosophy	
PHI 3450	Existentialism	
PHI 5410	Plato	
PHI 5420	Aristotle	
PHI 5460	Kant	
PHI 5510	Special Topics in the History of Philosophy	
PHI 5520	Topics in Black and Africana Philosophy	
2. Select one course from the Philosophical Problems Group		
PHI 2400	Introduction to the Philosophy of Religion	
PHI 2550	Introduction to Philosophy of Science	
PHI 2650	Minds and Machines	
PHI 3500	Theory of Knowledge	
PHI 3550	Metaphysics	
PHI 5210	Philosophy of Race and Racism	
PHI 5230	Philosophy of Science	
PHI 5500	Topics in Metaphysics	
PHI 5530	Topics in Epistemology	
PHI 5550	Philosophy of Mind	
PHI 5570	Philosophy of Language	
PHI 5620	Topics in Philosophy of Sci-Fi, Fantasy, & AI	
3. PHI 2320 - (PL) Introduction to Ethics		
4. One course in Philosophy of Law, Politics, or Human Rights		
PHI 2330	Introduction to Social and Political Philosophy	
PHI 2390	Philosophy of Human Rights	
PHI 3270	Foundations of Law	
PHI 5240	Social and Political Philosophy	
PHI 5270	Philosophy of Law	
PHI 5330	Ethics, Law, and Health	
PHI 5310	Law, Justice, and Intersectionality	
Or other approved course in social and political philosophy, philosophy of law, ore human rights. [1]		
5. One course in Applied Ethics		
PHI 1100	Contemporary Moral Issues	
PHI 1110	Ethical Issues in Health Care	

PHI 1120	Professional Ethics
PHI 1130	Environmental Ethics
PHI 1150	AI and Data Ethics
PHI 1500	Race, Sex, and Religion
PHI 2360	Feminist Philosophy
PHI 5250	Justice and Rights in Health Care
PHI 5260	Philosophy of Sex and Gender
6. One advanced course in Ethics [2]	
PHI 5280	History of Ethics
PHI 5290	Free Will and Moral Responsibility
PHI 5300	Foundations of Ethics
7. Two total 5000-level courses in the Theory of Value, from the following: 5240, 5250, 5260, 5270, 5280, 5290, 5300, 5310, and 5330 (choice for requirement 6 and any other 5000-level choices from above requirements count here too)	
8. Four total 5000-level courses (choices for requirements 6 and 7, and any other 5000-level choices from above requirements count here too)	

NOTE: Courses taken at the 5000-level which are used to satisfy any of requirements 1, 2, 4, 5, and 6 may also be counted toward requirement 8, though the ten-course minimum must still be met.

Philosophy Honors

Admission to the honors program in philosophy is determined on the basis of the student's overall record. The student will normally be required to have

1. a minimum grade point average of 3.3,
2. credit in at least three philosophy courses, and
3. a 'B' or better average in philosophy courses.

To remain in the philosophy honors program, the student must maintain a 'B' or better average in philosophy courses.

Honors Requirements: To receive an Honors Degree, the candidate must complete the course requirements for the regular major. In addition the candidate must complete a total of at least fifteen credits of Honors-designated coursework, including:

1. PHI 4890 during the candidate's senior year;
2. one 42XX honors seminar offered through the Honors College;
3. at least six additional credits of Honors-designated coursework in Philosophy (other than PHI 4890); and
4. additional credits of Honors-designated coursework as needed to reach the fifteen-credit minimum.

At graduation, the overall grade point average must be at least 3.3. If at any point the student fails to maintain Honors standards, his or her credits will automatically be counted towards the regular degree major. Students interested in becoming candidates for the Honors Degree in philosophy should consult the Department's undergraduate advisor as soon as possible.

'AGRADE' Program (Accelerated Graduate Enrollment)

The Philosophy Department actively participates in the 'AGRADE' Program, which enables qualified upper-level undergraduate students in the College of Liberal Arts and Sciences to enroll simultaneously in the undergraduate and graduate programs of the College, and to apply a maximum of sixteen credits toward both an undergraduate and graduate degree program. For more details about the AGRADE Program, students should contact the undergraduate advisor in their major/department.

More information about AGRADE is available through CLAS (https://clas.wayne.edu/programs/accelerated-graduate-enrollment#grad-status).

Health Care Ethics Minor

This option is primarily intended for students interested in ethics and moral issues related to medicine, health care, and science, or for students intending to pursue a career in a health care field. A candidate pursuing this minor must complete a minimum of five courses selected from the philosophy course listings (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/philosophy/#coursestext), including:

Code	Title	Credits
1. One course in critical thinking or symbolic logic:		
PHI 1050	Critical Thinking	
PHI 1070	Games, Risk, and Logic	
PHI 3850	Symbolic Logic	
PHI 3860	Honors Symbolic Logic	
PHI 5050	Advanced Symbolic Logic	
2. Introductory Ethics Requirement		
PHI 2320	Introduction to Ethics	
3. Health Care Ethics Requirement		
PHI 1110	Ethical Issues in Health Care	
4. One additional Core Course		
PHI 1200	Life and Death	
PHI 2330	Introduction to Social and Political Philosophy	
PHI 2390	Philosophy of Human Rights	
PHI 3270	Foundations of Law	
PHI 3700	Philosophy of Art	
PHI 5210	Philosophy of Race and Racism	
PHI 5240	Social and Political Philosophy	
PHI 5260	Philosophy of Sex and Gender	
PHI 5250	Justice and Rights in Health Care	
PHI 5270	Philosophy of Law	
PHI 5280	History of Ethics	
PHI 5290	Free Will and Moral Responsibility	
PHI 5300	Foundations of Ethics	
PHI 5330	Ethics, Law, and Health	
5. At least one Philosophy course at the 5000-level *		

* A 5000-level course taken to satisfy requirement 1 or 4 may also be used to satisfy requirement 5, though the five course minimum must still be met. Students wishing to do this must consult the instructor.

Humanities Minor

A candidate pursuing a Humanities Minor must complete a minimum of six courses and 18 total credits in the departments of Philosophy, English, and Classical and Modern Languages, Literatures, and Cultures (CMLLC), including the following:

Code	Title	Credits
Two PHI courses (at least one of which must be at the 2000 level or above)		6
Two ENG courses (at least one of which must be at the 5000 level or above)		6

Two courses from CMLLC at the 2000 level or above *		6
Total Credits		**18**

Note: No more than two courses for the Humanities Minor may be double-counted toward a Major in Philosophy, English, or a CMLLC program.

Law (B.A.)

The Bachelor of Arts (B.A.) in Law degree provides a distinctive, interdisciplinary program for those with an interest in law. Students will emerge with a strong foundation in law, critical thinking and writing, ethics, political and legal theory, and legal and justice systems that will make them competitive for innovative and emerging employment opportunities in a variety of fields and industries or for pursuing graduate studies, potentially including law school. Moreover, this program will build on the distinctive training associated with law school combined with the expertise of Wayne State's liberal arts programs to promote informed, well-rounded, and civic-minded undergraduates who will be well-prepared to be the leaders of the future.

Admissions Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below.

All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. A maximum of three courses for the major may be at the 1000-level.

Code	Title	Credits
Required LEX Courses		
Students must have junior status to enroll in LEX courses.		
LEX 5000	Law in Social Context	3
LEX 5010	Law and Harm	3
LEX 5020	Legal Procedure	3
LEX 5030	Law and Transactions	3
Core Skills: Writing, Critical Thinking, and Ethical Reasoning		
Select two of the following courses:		6-8
CRJ 3710	Legal Writing for Criminal Justice	
ENG 3050	Technical Communication I: Reports	
ENG 3085	Introduction to Rhetorical Theory	
PHI 1050	Critical Thinking	
PHI 1070	Games, Risk, and Logic	
PHI 1090	Critical Thinking: AI & Information Literacy	
PHI 1100	Contemporary Moral Issues	
PHI 1110	Ethical Issues in Health Care	
PHI 1120	Professional Ethics	
PHI 1130	Environmental Ethics	
PHI 1150	AI and Data Ethics	
PHI 1500	Race, Sex, and Religion	
PHI 2320	Introduction to Ethics	
PHI 5330	Ethics, Law, and Health	
PS 2420	Ethics and Politics of Public Policy	
PS 2460	Policy and Rationality: Dilemmas of Choice	
Political and Legal Theory		
Select two of the following courses:		6-8
CRJ/PS 3120	Politics of the Criminal Justice Process	
PHI 2330	Introduction to Social and Political Philosophy	
PHI 2390	Philosophy of Human Rights	
PHI 3270	Foundations of Law	
PHI 5240	Social and Political Philosophy	
PHI 5250	Justice and Rights in Health Care	
PHI 5270	Philosophy of Law	
PHI 5310	Law, Justice, and Intersectionality	
PHI 5340	Special Topics in Philosophy of Law	
PS 3520	Theories of Justice	
PS 3530	Classical Political Philosophy: What is Justice?	
PS 4510	Classical Political Philosophy: What is War?	
PS 5850	Human Rights	
Legal and Justice System		
Select one of the following courses:		3-4
CRJ 3700	The Judicial Process	
CRJ 4740	Constitutional Criminal Procedure	
PS 3040	The Legislative Process	
PS 3100	American Legal Systems and Processes	
PS 4710	Democracy	
PS 5110	Constitutional Law	
PS 5120	Constitutional Rights and Liberties	
PS 5820	International Law	
Electives		
Select three elective courses from the list in the section below, at least one must be an LEX course.		9-11
Total Credits		**36-43**

Elective Courses

NOTE: Students must complete any prerequisites listed for a course (please reference this bulletin). Many of these electives are included in the current curriculum for the Minor in Law. This list of electives also includes courses listed under the Political and Legal Theory and Legal and Justice System sections of the major requirements.

Code	Title	Credits
Law School		
LEX 5100	Law and Regulation	3
LEX 5110	Access to Justice	3
The Law School may approve additional elective LEX courses to be added from time to time to this list through its normal course approval processes.		
College of Liberal Arts and Sciences		
AFS 2210	Black Social and Political Thought	4
AFS/SOC 5580	Law and the African American Experience	4
CRJ 1010	Introduction to Criminal Justice	3
CRJ 2550	Race, Crime and Justice	3
CRJ 2650	Gender and Crime	3
CRJ 2750	Diversity Issues in Criminal Justice	3
CRJ 3050	Mental Health and Crime	3
CRJ/PS 3120	Politics of the Criminal Justice Process	3
CRJ 3400	Juvenile Delinquency and Justice	3
CRJ 3700	The Judicial Process	3
CRJ 3710	Legal Writing for Criminal Justice	3

CRJ 4705	Wrongful Conviction and Justice System Error	3
CRJ 4740	Constitutional Criminal Procedure	3
CRJ 5995	Special Topics in Criminal Justice (Must be approved by program director.)	3
ECO 5250	Economic Analysis of Law	4
ENG 3050	Technical Communication I: Reports	3
ENG 3085	Introduction to Rhetorical Theory	3
ESG 5700	Environmental Law and Policy	3
PH 3800	Law and Public Health	3
PHI 1050	Critical Thinking	3
PHI 1070	Games, Risk, and Logic	3
PHI 1090	Critical Thinking: AI & Information Literacy	3
PHI 1100	Contemporary Moral Issues	3
PHI 1110	Ethical Issues in Health Care	3
PHI 1120	Professional Ethics	3
PHI 1130	Environmental Ethics	3
PHI 1150	AI and Data Ethics	3
PHI 1500	Race, Sex, and Religion	3
PHI 2320	Introduction to Ethics	3
PHI 2330	Introduction to Social and Political Philosophy	3
PHI 2390	Philosophy of Human Rights	3
PHI 3270	Foundations of Law	3
PHI 5240	Social and Political Philosophy	4
PHI 5250	Justice and Rights in Health Care	4
PHI 5270	Philosophy of Law	4
PHI 5310	Law, Justice, and Intersectionality	4
PHI 5330	Ethics, Law, and Health	4
PHI 5340	Special Topics in Philosophy of Law	3-4
PS 1010	American Government	4
PS 2410	Introduction to Public Policy	4
PS 2420	Ethics and Politics of Public Policy	4
PS 2460	Policy and Rationality: Dilemmas of Choice	4
PS 2510	Introduction to Political Philosophy: What is Politics?	4
PS 2710	Introduction to Comparative Politics	4
PS 3030	Political Interest Groups	4
PS 3040	The Legislative Process	4
PS 3050	Politics of the American Presidency	4
PS 3060	State Government and Politics	4
PS 3070	Michigan Politics	4
PS 3080	Gender and Politics	4
PS 3100	American Legal Systems and Processes	4
PS 3520	Theories of Justice	4
PS 3530	Classical Political Philosophy: What is Justice?	4
PS 3550	American Political Philosophy: What is Freedom?	4
PS 4510	Classical Political Philosophy: What is War?	4
PS 4710	Democracy	4
PS 5110	Constitutional Law	4
PS 5120	Constitutional Rights and Liberties	4
PS 5820	International Law	4
PS 5850	Human Rights	4
PS 5999	Special Topics in Political Science (Must be approved by program director.)	1-4
PS 6870	United States Foreign Relations Law	4
College of Fine, Performing and Communication Arts		
COM 4110	Studies of Legal Argument	3
COM 4150	Communication and Conflict	3
COM 5710	Media Law and Ethics	3
Mike Ilitch School of Business		
ACC 5170	Introduction to Taxation: Individuals	3
ACC 5270	Introduction to Taxation: Business Entities	3
BLW 2510	Business Law I	3
BLW 5190	Business Law II	3
MGT 5700	Human Resource Management	3
MGT 5740	Employee Relations	3
TIS 4575	IT Security	3
James and Patricia Anderson College of Engineering		
BME 5310	Device and Drug Approval and the FDA	3
CE 5830	Business of Engineering	3
CMT 3030	Construction Safety Management	3
CMT 3040	Building Codes	3
CMT 5080	Construction Management Law	3
CSC 5270	Computer Systems Security	3
CSC 5272	Principles of Cyber Security	3
CSC 5290	Cyber Security Practice	3
School of Social Work		
Social Work elective courses are limited to BSW students only.		
SW 4710	Social Welfare in the United States: Current Programs	3
SW 5720	Social Services for Older Adults	3
SW 5755	Introduction to Child Welfare	3
SW 6100	Child Welfare and Social Systems: Context for Case Management Practice	3
SW 6500	Social Work and the Law	2
SW 6535	Youth, Delinquency, and Juvenile Justice	3
SW 6585	Introduction to International Social Work	3

Law Minor

Through a partnership between the College of Liberal Arts and Sciences and the Law School, undergraduate students can earn a minor in law. This includes special undergraduate courses taught by Law School faculty. Students should visit the CLAS website (https://clas.wayne.edu/programs/law-minor) for more information.

The minor in law requires a minimum of 19-20 credits.

Code	Title	Credits
LEX 5000	Law in Social Context	3
LEX 5010	Law and Harm	3
LEX 5020	Legal Procedure	3
Select one of the following Political Science courses:		4
PS 3100	American Legal Systems and Processes	
PS 3520	Theories of Justice	
Select one of the following Philosophy courses:		3
PHI 2330	Introduction to Social and Political Philosophy	
PHI 2390	Philosophy of Human Rights	
PHI 3270	Foundations of Law	
Select one elective course from Appendix A (below):		3-4
Total Credits		**19-20**

Code	Title	Credits
Appendix A		
AFS 2210	Black Social and Political Thought	4
AFS/SOC 5580	Law and the African American Experience	4
CRJ 2550	Race, Crime and Justice	3
CRJ 2650	Gender and Crime	3
CRJ 2750	Diversity Issues in Criminal Justice	3
CRJ 3050	Mental Health and Crime	3
CRJ 3120	Politics of the Criminal Justice Process	3
CRJ 3400	Juvenile Delinquency and Justice	3
CRJ 4705	Wrongful Conviction and Justice System Error	3
CRJ 4740	Constitutional Criminal Procedure	3
ECO 5250	Economic Analysis of Law	4
LEX 5100	Law and Regulation	3
LEX 5110	Access to Justice	3
PH 3800	Law and Public Health	3
PHI 1120	Professional Ethics	3
PHI 2320	Introduction to Ethics	3
PHI 2330	Introduction to Social and Political Philosophy	3
PS 2410	Introduction to Public Policy	4
PS 2420	Ethics and Politics of Public Policy	4
PS 2510	Introduction to Political Philosophy: What is Politics?	4
PS 2710	Introduction to Comparative Politics	4
PS 3030	Political Interest Groups	4
PS 3040	The Legislative Process	4
PS 3050	Politics of the American Presidency	4
PS 3060	State Government and Politics	4
PS 3070	Michigan Politics	4
PS 3080	Gender and Politics	4
PS 3520	Theories of Justice	4
PS 3550	American Political Philosophy: What is Freedom?	4
PS 5110	Constitutional Law	4
PS 5120	Constitutional Rights and Liberties	4
PS 5820	International Law	4
PS 5850	Human Rights	4

PS 5999 (Special Topics in Political Science) may count as an elective in some cases, depending on the topic taught. The use of PS 5999 must be pre-approved by the Law minor advisor.

Medical Humanities Minor

A candidate pursuing a Medical Humanities Minor must complete a minimum of eighteen (18) total credits.

Note: No more than two courses for the Medical Humanities Minor may be double-counted toward a Major in Philosophy, English, or a CMLLC program.

Code	Title	Credits
Required Core Courses		**6**
PHI 1110	Ethical Issues in Health Care	
ANT/GLS/PH 3410	Global Health	
Humanistic Approaches to Science and Medicine Courses		**6**
ARB 5700	Arabic for Healthcare Professions	
SPA 3050	Spanish for the Health Care Profession	
CLA 1230	Word Origins: English Words from Greek and Latin	
ENG 2420	Environmental Writing: Writing about Texts	
ENG 3050	Technical Communication I: Reports	
ENG 3060	Technical Communication II: Presentations	
ENG 3200	Grant Writing	
ENG 3250	Professional Editing	
ENG 5830	Writing in the Workplace	
PHI 1200	Life and Death	
PHI 2110	Philosophy of the Scientific Revolution and Enlightenment	
PHI 2140	Ancient Greek Medicine and Psychology	
PHI 2550	Introduction to Philosophy of Science	
PHI 2650	Minds and Machines	
POL 3060	Medical Polish I	
POL 3061	Medical Polish II	
PHI 5250	Justice and Rights in Health Care	
Ethics and Cultural Diversity Course		**3**
AFS 2210	Black Social and Political Thought	
AFS 2390	Introduction to African-American Literature: Writing about Texts	
AFS 2600	Race and Racism in America	
ENG 3470	Survey of African-American Literature	
ENG 5030	Topics in Women's Studies	
ENG 5035	Topics in Gender and Sexuality Studies	
ENG 5480	Topics in African American Literature	
ENG 5595	Topics in Global Literatures	
GLS 2900	Intercultural Competence for a Global World	
GSW 2500	Humanities Perspectives on Gender, Sexuality, and Women	
PHI 1100	Contemporary Moral Issues	
PHI 1500	Race, Sex, and Religion	
PHI 2320	Introduction to Ethics	
PHI 2360	Feminist Philosophy	
PHI 2390	Philosophy of Human Rights	
PHI 5260	Philosophy of Sex and Gender	
PHI 5230	Philosophy of Science	
Elective course (maximum 3 credits)		**3**
Any course listed above		
Any course in PHI at the 2000 level or above		
Any course in ENG at the 3000 level or above		
Any course in CMLLC at the 2020 level or above		
ANT 3400	Introduction to Medical Anthropology	
ANT 5140	Biology and Culture	
ANT 5180	Forensic Anthropology	
HIS 5407	The Scientific Revolution	
NFS 2030	Nutrition and Health	
PH 2100	Introduction to Public Health	
SOC 2210	Sociology of Health and Medicine	
SOC 4205	Seminar in Medical Sociology	
Total Credits		**18**

Philosophy Minor

This option is primarily intended for those students whose interests in philosophy are broad and general. A candidate pursuing this minor must complete a minimum of five courses selected from the philosophy course listings (p.), including:

Code	Title	Credits
1. One course in critical thinking or symbolic logic:		
PHI 1050	Critical Thinking	
PHI 1070	Games, Risk, and Logic	
PHI 3850	Symbolic Logic	
PHI 3860	Honors Symbolic Logic	
PHI 5050	Advanced Symbolic Logic	
2. Two courses at the 2000- or 3000-level		
3. One course at the 5000-level		
4. One additional course of the candidate's choice at any level *		

* PHI 5050 taken in compliance with requirement 1 may be used to satisfy requirement 4, though the five course minimum must still be met. Students wishing to do this must consult the instructor.

Pre-Law Minor

This option is primarily intended for students intending on going to Law School, or for students especially interested in issues related to philosophy of law. A candidate pursuing this minor must complete a minimum of five courses selected from the philosophy course listings (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/philosophy/#coursestext), including:

Code	Title	Credits
1. One course in critical thinking or symbolic logic:		
PHI 1050	Critical Thinking	
PHI 1070	Games, Risk, and Logic	
PHI 3850	Symbolic Logic	
PHI 3860	Honors Symbolic Logic	
PHI 5050	Advanced Symbolic Logic	
2. Two of the following courses:		
PHI 2320	Introduction to Ethics	
PHI 2330	Introduction to Social and Political Philosophy	
PHI 2390	Philosophy of Human Rights	
PHI 3270	Foundations of Law	
PHI 5240	Social and Political Philosophy	
PHI 5270	Philosophy of Law	
PHI 5330	Ethics, Law, and Health	
3. One of the following courses:		
PHI 1100	Contemporary Moral Issues	
PHI 1110	Ethical Issues in Health Care	
PHI 1120	Professional Ethics	
PHI 1130	Environmental Ethics	
PHI 1500	Race, Sex, and Religion	
PHI 2360	Feminist Philosophy	
PHI 5210	Philosophy of Race and Racism	
PHI 5260	Philosophy of Sex and Gender	
4. At least one course at the 5000-level *		

Footnotes

* 5000-level courses taken to satisfy any of requirements 1, 2, or 3 may be used to satisfy requirement 4, though the five course minimum must still be met. Students wishing to do this must consult the instructor.

Religious Studies Minor

Religious Studies aims at an academic investigation of the world's religions, of religious history, and of the place of religion in world cultures and societies from the ancient to the present. It draws on faculty resources from a wide range of traditional academic disciplines: anthropology, history, philosophy, classics, Near Eastern studies, Asian studies, literature, art history, political science, and sociology. Religious Studies respects the beliefs and backgrounds of the students who pursue courses in this area, but it also approaches its objects of study in a thoroughly scholarly manner, maintaining both intellectual openness and critical rigor.

The Minor in Religious Studies is designed to give undergraduates majoring in other disciplines familiarity both with religious traditions themselves and with the wide range of academic approaches to the study of religion in fields such as Anthropology, History, Philosophy, and Sociology.

The minor requires a minimum of eighteen credits with the following required courses and electives.

Code	Title	Credits
Required Courses		
PHI/NE 1900	Comparative Religion	3
or ANT 3560	World's Religions	
PHI 2400	Introduction to the Philosophy of Religion	3
SOC 2209	Sociology of Religion	3
Electives		
Three additional courses with substantial content concerning religious traditions to be approved by the Director of Religious Studies. Such courses include but are not necessarily limited to these.		
ANT 5370	Magic, Religion and Science	3
CLA 3530	The World of Early Christianity	3
CLA 3590	Byzantine Civilization	3
NE 2000	Introduction to Islamic Civilization of the Near East	3
NE 2010	The Bible and Ancient Mythology	3
ITA 3500	Dante in Translation: The Divine Comedy	3
NE 5300	Quran: History and Interpretation	3
PCS 2010/ PS 2830	Topics in Peace and Conflict Studies (When taught as "Conflict and Religion")	1-4
PHI 2150	Chinese Philosophy	3
PHI 2170	Islamic and Near Eastern Philosophy	3
PHI 5800	Special Topics in Philosophy	2-4

Physics and Astronomy

Office: 135 Physics Research Building; 313-577-2721
Chairperson: Ed Cackett
Undergraduate Academic Advisor: Dawn Niedermiller
https://clas.wayne.edu/physics

Physics is the science that describes the behavior of the physical world. It is the most basic of all sciences and as such is responsible for the interpretation of fundamental physical processes which support many other scientific disciplines. The study of physics involves many of the significant ideas that have shaped Western civilization, and the excitement of ongoing scientific challenges. Currently, physicists conduct research into the basic laws of nature and also make use of these ideas to design and develop new technologies. Thus, training in physics offers a variety of opportunities. Careers are possible in research laboratories, in academic teaching capacities, in hospitals, the military, power plants, museums, patent law firms, computer companies, and in a host of other areas.

Faculty members in this department are devoted to teaching and research and hold national and international reputations in their areas of specialization, which include: high energy physics, nuclear physics, atomic physics, the physics of condensed matter, material science, mathematical physics, applied physics, and quantum field theory. They organize and participate in conferences, publish extensively, and receive numerous outside grants, contracts and fellowships. In addition, they engage in many collaborations with scientists in both foreign and American universities and national laboratories.

Physics Colloquium: The department colloquium is normally held Thursday afternoons. Advanced undergraduates are invited to attend.

Courses for Non-Science Majors: The department offers several courses designed primarily for non-science majors for which only minimal high school mathematics preparation is needed. The courses are:

Code	Title	Credits
AST 2010	Descriptive Astronomy	4
PHY 1020	Conceptual Physics: The Basic Science	3
PHY 3100	The Sounds of Music	4

- Astronomy (B.A.) (p. 326)
- Astronomy (B.S.) (p. 326)
- Astronomy Minor (p. 330)
- Biomedical Physics (B.S.) (p. 327)
- Biomedical Physics Minor (p. 331)
- Physics (B.A.) (p. 328)
- Physics (B.S.) (p. 329)
- Physics Minor (p. 331)

Astronomy (B.A.)

This program is intended to provide students with foundational knowledge in astronomy and space science. Students will graduate with strong scientific preparation and communication skills and will have a wide range of career options including entry-level jobs as well as graduate education in law, business, education, social and physical sciences. In short, these students will have all the traditional options of liberal arts majors with the added advantage of a unique science background.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Students must receive a grade of C- or better in all physics and/or astronomy courses and prerequisite courses. A cumulative grade point average of 2.0 or higher for all course work is required for graduation.

Additionally, student must complete:

Code	Title	Credits
AST 1010	Discovering the Universe	1
AST 2010	Descriptive Astronomy	4
AST 2011	Descriptive Astronomy Laboratory	1
AST 2030	Life in the Universe	3
PHY 2170	University Physics I for Scientists and Engineers [1]	4
PHY 2171	University Physics I Experimental Laboratory	1
PHY 2180	University Physics II for Scientists and Engineers [1]	4
PHY 2181	University Physics II Experimental Laboratory	1
PHY 3300	Introductory Modern Physics	3
PHY 3310	Introductory Modern Physics Laboratory	2
PHY 3750	Introduction to Computational Methods	1
AST 4100	Astronomical Techniques	3
AST 4200	Astronomical Laboratory	2
AST 4300	Planetary Astronomy and Space Science	3
AST 5010	Astrophysics and Stellar Astronomy	3
AST 5100	Galaxies and the Universe	3
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
PHY 6750	Applied Computational Methods	2-3
or PHY 6860	Computational Physics	
Total Credits		**49-50**

[1] A student may present credits in PHY 2130, PHY 2140 or equivalent, in lieu of PHY 2170 and PHY 2180, with the consent of the Departmental Undergraduate advisor.

Electives to complete credits required for the degree may include any courses from the College of Liberal Arts and Sciences.

Physics AGRADE Program

Seniors in Physics and Astronomy, with a minimum grade point average of 3.5, may enroll simultaneously in the undergraduate and graduate programs. These students can apply up to fifteen credits towards both the bachelors and masters degrees in physics. Contact Undergraduate Academic Advisor for further information.

Astronomy (B.S.)

The Bachelor of Science (BS) degree in Astronomy provides a rigorous physical sciences program for those with an interest in astronomy. The strong math, physics and astronomy background of this program will prepare students wanting to pursue graduate school. Moreover, the problem solving, data analysis, scientific communication, physical

reasoning, and computational skills developed during the program provides preparation for careers in a wide range of STEM-related professional fields.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Note: In some cases the requirements of a specific program will increase the number of credits above 120.

Students must receive a grade of C- or better in all physics and/or astronomy courses, and a minimum grade of C- is required in all prerequisite courses. A cumulative grade point average of 2.0 or higher for all course work is required for graduation.

Students should consult with the Undergraduate Academic Advisor in the Department of Physics and Astronomy for more detailed information concerning the various degrees and options outlined below.

Code	Title	Credits
AST 1010	Discovering the Universe	1
AST 2010 & AST 2011	Descriptive Astronomy and Descriptive Astronomy Laboratory	5
AST 2030	Life in the Universe	3
AST 4100	Astronomical Techniques	3
AST 4200	Astronomical Laboratory	2
AST 4300	Planetary Astronomy and Space Science	3
AST 5010	Astrophysics and Stellar Astronomy	3
AST 5100	Galaxies and the Universe	3
AST 6080	Survey of Astrophysics	3
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	5
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory	5
PHY 3300 & PHY 3310	Introductory Modern Physics and Introductory Modern Physics Laboratory	5
PHY 3750	Introduction to Computational Methods	1
PHY 6750	Applied Computational Methods	2-3
or PHY 6860	Computational Physics	
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2150	Differential Equations and Matrix Algebra	4
Two electives in Physics		6
Total Credits		**66-67**

Physics AGRADE Program

Seniors in Physics and Astronomy, with a minimum grade point average of 3.5, may enroll simultaneously in the undergraduate and graduate programs. These students can apply up to fifteen credits towards both the bachelors and masters degrees in physics. Contact Undergraduate Academic Advisor for further information.

Biomedical Physics (B.S.)

Biomedical Physics deals with applications of physics to questions of biology and medicine. It is an interdisciplinary program, combining courses from physics, biology and medicine designed to train students to use quantitative, physical science inspired approaches to problems of the life sciences. Graduates of this program will be prepared for careers or graduate studies in biophysics, medicine, biomedical engineering, medical physics or any other field requiring physical and technological approaches to medical or biological questions.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Students planning to major in biomedical physics should consult with the academic advisor in the Physics and Astronomy Department not later than the beginning of their sophomore year.

Program Requirements

Candidates must complete at least 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. All students will be required to maintain an overall grade point average of 'C' (2.0) for all degree work, as well as a grade point average of at least 2.5 in all major and cognate requirements.

Major Requirements

All B.S. candidates in Biomedical Physics must take:

Code	Title	Credits
PHY 1001	Perspectives in Physics, Biomedical Physics, and Astronomy	1
PHY 2130	Physics for the Life Sciences I	4
or PHY 2170	University Physics I for Scientists and Engineers	
PHY 2131	Physics for the Life Sciences Experimental Laboratory	1
or PHY 2171	University Physics I Experimental Laboratory	
PHY 2140	Physics for the Life Sciences II	4
or PHY 2180	University Physics II for Scientists and Engineers	
PHY 2141	Physics for the Life Sciences Laboratory	1
or PHY 2181	University Physics II Experimental Laboratory	
PHY 3300	Introductory Modern Physics	3
PHY 3750	Introduction to Computational Methods	1
PHY 4700	Introduction to Biomedical Physics	4
PHY 5750	Biological Physics	4
PHY 6290	Survey of Biophysics	3
PHY 6750	Applied Computational Methods	2
PHY 6780	Research Methods in Biomedical Physics	3
ROC 6710	Physics in Medicine	3
Total Credits		**34**

Cognate Requirements

B.S. candidates in Biomedical Physics must also take:

Code	Title	Credits
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
Two general chemistry courses with labs		10
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
Total Credits		**22**

Some of these courses can be waived with the approval of the Biomedical Physics Advisor if proof of proficiency is provided or a higher level course is substituted.

Concentrations

All BMP majors are required to choose a concentration. The BMP program offers three concentrations: Biophysics, Medical Physics, and Premedical.

Biophysics Concentration

In addition to the requirements listed above, students taking the biophysics concentration will be required to take:

Code	Title	Credits
PHY 3500	Introduction to Thermal and Fluid Physics	3
PHY 5340 & PHY 5341	Optics and Optics Laboratory	5
PHY 5620 & PHY 5621	Electronics and Electrical Measurements and Electronics and Electrical Measurements Laboratory	5
Total Credits		**13**

Medical Physics Concentration

In addition to the requirements listed above, students taking the medical physics concentration will be required to take:

Code	Title	Credits
Select one of the following:		5
PHY 5340 & PHY 5341	Optics and Optics Laboratory	
PHY 5620 & PHY 5621	Electronics and Electrical Measurements and Electronics and Electrical Measurements Laboratory	
PHY 6600	Electromagnetic Fields I	4
MAT 2150	Differential Equations and Matrix Algebra	4
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
Total Credits		**17**

Students taking the medical physics concentration are *strongly encouraged* to take PHY 2170/PHY 2171 and PHY 2180/PHY 2181 instead of PHY 2130/PHY 2131 and PHY 2140/PHY 2141. For consideration by medical physics professional programs, students taking the Medical Physics concentration are also *strongly encouraged* to take BIO 2600.

Premedical Concentration

In addition to the requirements listed above, students taking the premedical concentration will be required to take:

Code	Title	Credits
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
Select one of the following:		5
PHY 5340 & PHY 5341	Optics and Optics Laboratory	
PHY 5620 & PHY 5621	Electronics and Electrical Measurements and Electronics and Electrical Measurements Laboratory	
Total Credits		**14**

Students taking the premed option are also *strongly encouraged* to take the following courses to satisfy the premedical requirements:

Code	Title	Credits
CHM 2220 & CHM 2230	Organic Chemistry II and Organic Chemistry II Laboratory	5
BIO 2600	Introduction to Cell Biology	4
BIO 3200	Human Physiology	3
Biochemistry:		3
BIO 3100	Cellular Biochemistry	
or CHM 5600	Survey of Biochemistry	

Physics and Biomedical Physics Honors Program

Undergraduate majors, in both Physics and Biomedical Physics, with a minimum grade point average of 3.3 can enroll in the Honors program of the Department of Physics and Astronomy. Prospective students should consult the departmental Undergraduate Academic Advisor as soon as they declare their major to learn about specific requirements.

Physics AGRADE Program

Seniors in Physics and Astronomy, with a minimum grade point average of 3.5, may enroll simultaneously in the undergraduate and graduate programs. These students can apply up to fifteen credits towards both the bachelors and masters degrees in physics. Contact Undergraduate Academic Advisor for further information.

Biomedical Physics-BME AGRADE Program

Outstanding seniors in Biomedical Physics, who have completed at least 90 credits and have an overall GPA of at least 3.5, and major biomedical physics classes GPA at least 3.6, can apply to enter the cross-college AGRADE program between the Biomedical Physics undergraduate program (College of Liberals Arts and Sciences) and Biomedical Engineering (BME) Master's programs (James and Patricia Anderson College of Engineering). The AGRADE program allows students to apply up to 15 credits of selected graduate courses, taken as an undergraduate, towards a Master's degree in Biomedical Engineering. The Physics courses that can be counted towards MS-BME degree include PHY 5340/PHY 5341 or PHY 5620/PHY 5621, PHY 5750, and PHY 6780. This enables students to complete an undergraduate degree in Biomedical Physics and a graduate degree in Biomedical Engineering in just 5 years of full-time study. For more details, please contact the undergraduate Physics advisor in the Department of Physics and Astronomy, or the graduate advisor in the Department of Biomedical Engineering.

Physics (B.A.)

This program is intended to meet the needs of several kinds of students:

1. students wishing to major in physics who have transferred to Wayne State University after one or two years at a community college, but whose background in physics and mathematics does not complement the content, level, or scheduling of remaining course requirements well enough to permit completion of the Bachelor of Science degree curriculum in a reasonable time;
2. students who wish to pursue a general course of education in the sciences with physics as an area of concentration. Those who undertake such a program are sometimes interested in the study of physics as an integrated part of a broad educational background;
3. students who decide relatively late in their college careers (for example, during the sophomore year) that they wish to major in physics.

It should be emphasized that completion of the Bachelor of Arts program instead of the Bachelor of Science program does not preclude later graduate work in physics. In most cases, it will mean that the student will spend part or all of his/her first year in graduate school making up deficiencies in his or her physics and mathematics background. Generally speaking, such deficiencies may be determined by consulting the Suggested Course Sequence of the Bachelor of Science degree in physics.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Students must receive a grade of C- or better in all physics and/or astronomy courses. A cumulative grade point average of 2.0 or higher for all course work is required for graduation.

For the B.A. in physics, students must complete:

Code	Title	Credits
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory *	5
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory *	5
PHY 3300 & PHY 3310	Introductory Modern Physics and Introductory Modern Physics Laboratory	5
PHY 3500	Introduction to Thermal and Fluid Physics	3
PHY 3750	Introduction to Computational Methods	1
PHY 5620 & PHY 5621	Electronics and Electrical Measurements and Electronics and Electrical Measurements Laboratory	5
PHY 6750	Applied Computational Methods	2
PHY 6850	Advanced Physics Laboratory	3
Two electives in physics, astronomy or mathematics		6-8
MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
Total Credits		**48-50**

* A student may present credits in PHY 2130, PHY 2140, or equivalent, in lieu of PHY 2170 and PHY 2180, with the consent of the Departmental Undergraduate advisor.

Physics and Biomedical Physics Honors Program

Undergraduate majors, in both Physics and Biomedical Physics, with a minimum grade point average of 3.3 can enroll in the Honors program of the Department of Physics and Astronomy. Prospective students should consult the departmental Undergraduate Academic Advisor as soon as they declare their major to learn about specific requirements.

Physics AGRADE Program

Seniors in Physics and Astronomy, with a minimum grade point average of 3.5, may enroll simultaneously in the undergraduate and graduate programs. These students can apply up to fifteen credits towards both the bachelors and masters degrees in physics. Contact Undergraduate Academic Advisor for further information.

Physics (B.S.)

The Bachelor of Science program offers several options. Each option is designed to meet the needs of a particular group of students although each is flexible enough to avoid limiting the student to a particular future program. Students take a logically-developed sequence of physics courses on a broad range of topics. The introductory sequence uses calculus, and later courses investigate single areas in greater depth, using more advanced mathematics. In advanced laboratory courses the physics student uses sophisticated equipment and sometimes has an opportunity to join a research team.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Students must receive a grade of C- or better in all physics and/or astronomy courses, and a minimum grade of C- is required in prerequisite courses. A cumulative grade point average of 2.0 or higher for all course work is required for graduation.

Basic Requirements for All Options

Code	Title	Credits
PHY 2170 & PHY 2171	University Physics I for Scientists and Engineers and University Physics I Experimental Laboratory	5
PHY 2180 & PHY 2181	University Physics II for Scientists and Engineers and University Physics II Experimental Laboratory	5
PHY 3300 & PHY 3310	Introductory Modern Physics and Introductory Modern Physics Laboratory	5
PHY 3500	Introduction to Thermal and Fluid Physics	3
PHY 3750	Introduction to Computational Methods	1
PHY 5200	Classical Mechanics I	4

MAT 2010	Calculus I	4
MAT 2020	Calculus II	4
MAT 2030	Calculus III	4
MAT 2150	Differential Equations and Matrix Algebra	4
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
Total Credits		**44**

Advanced Physics Option

This option is primarily for students who intend to go on to graduate study in physics. It also satisfies the requirements of industrial and governmental employers who demand a traditional education in physics.

Additional requirements beyond the Basic Requirements listed above:

Code	Title	Credits
PHY 6400	Quantum Physics I	4
PHY 6500	Thermodynamics and Statistical Physics	3
PHY 6600	Electromagnetic Fields I	4
PHY 6850	Advanced Physics Laboratory	3
PHY 6860	Computational Physics	3
Select one of the following:		5
PHY 5340 & PHY 5341	Optics and Optics Laboratory	
PHY 5620 & PHY 5621	Electronics and Electrical Measurements and Electronics and Electrical Measurements Laboratory	
Select two of the following:		6
PHY 6260	Survey of Elementary Particle Physics	
PHY 6270	Survey of Nuclear Physics	
PHY 6290	Survey of Biophysics	
Total Credits		**28**

Engineering and Applied Physics Option

The B.S. degree in the Engineering and Applied Physics option is intended to provide the interdisciplinary training that is required for a variety of applied fields, while still providing an understanding of the physical foundations of those fields. Programs are designed to combine fundamental physics courses with engineering and other science courses, in order to prepare students for careers in industry (particularly engineering fields) as well as graduate programs in these areas. There is sufficient flexibility in this program that a set of courses can be designed to match a student's interest in such areas as semiconductor physics, material physics, computational physics, biophysics, optics and laser physics, and other areas. Students interested in enriching their education with on-the-job experience may apply for internships with cooperating research laboratories by contacting the departmental undergraduate advisor.

Additional requirements beyond the Basic Requirements listed above:

Code	Title	Credits
PHY 6600	Electromagnetic Fields I	4
PHY 5340 & PHY 5341	Optics and Optics Laboratory	5
PHY 5620 & PHY 5621	Electronics and Electrical Measurements and Electronics and Electrical Measurements Laboratory	5
PHY 6850	Advanced Physics Laboratory	3
Select one of the following:		2-3
PHY 6750	Applied Computational Methods	
PHY 6860	Computational Physics	
Select one of the following:		3-4
PHY 6400	Quantum Physics I	
PHY 6500	Thermodynamics and Statistical Physics	
Select one of the following:		3
PHY 6260	Survey of Elementary Particle Physics	
PHY 6270	Survey of Nuclear Physics	
PHY 6290	Survey of Biophysics	
Total Credits		**25-27**

Physics and Biomedical Physics Honors Program

Undergraduate majors, in both Physics and Biomedical Physics, with a minimum grade point average of 3.3 can enroll in the Honors program of the Department of Physics and Astronomy. Prospective students should consult the departmental Undergraduate Academic Advisor as soon as they declare their major to learn about specific requirements.

Physics AGRADE Program

Seniors in Physics and Astronomy, with a minimum grade point average of 3.5, may enroll simultaneously in the undergraduate and graduate programs. These students can apply up to fifteen credits towards both the bachelors and masters degrees in physics. Contact Undergraduate Academic Advisor for further information.

Interdisciplinary Physics-ECE AGRADE Program

Outstanding seniors in Physics (both Engineering and Applied Physics option and Advanced Physics option), who have completed at least 90 credits and have an overall GPA of at least 3.5, and major physics classes GPA at least 3.6, can apply to enter the cross-college AGRADE program between the Physics undergraduate program (College of Liberals Arts and Sciences) and Electrical Engineering (EE) Master's programs (James and Patricia Anderson College of Engineering). The AGRADE program allows students to apply up to 12 credits of selected graduate courses, taken as an undergraduate, towards a Master's degree in Electrical Engineering. The Physics courses that can be counted towards MS-EE degree include PHY 5340/PHY 5341, PHY 5620/PHY 5621, and PHY 5100. This enables students to complete an undergraduate degree in Physics and a graduate degree in Electrical Engineering in just 5 years of full-time study. For more details, please contact the undergraduate Physics advisor in the Department of Physics and Astronomy, or the graduate advisor in the Department of Electrical and Computer Engineering.

Astronomy Minor

The Department of Physics and Astronomy offers a minor in astronomy to qualified students. The requirement
for a minor consists of the following:

Code	Title	Credits
PHY 2170	University Physics I for Scientists and Engineers [1]	4
or PHY 2130	Physics for the Life Sciences I	
PHY 2171	University Physics I Experimental Laboratory [1]	1
or PHY 2131	Physics for the Life Sciences Experimental Laboratory	
PHY 2180	University Physics II for Scientists and Engineers [1]	4
or PHY 2140	Physics for the Life Sciences II	
PHY 2181	University Physics II Experimental Laboratory [1]	1
or PHY 2141	Physics for the Life Sciences Laboratory	

PHY 3300	Introductory Modern Physics [3]	3
PHY 3310	Introductory Modern Physics Laboratory	2
Select three courses from the following:		9
AST 4100	Astronomical Techniques [2]	
AST 4300	Planetary Astronomy and Space Science	
AST 5010	Astrophysics and Stellar Astronomy	
AST 5100	Galaxies and the Universe	
Total Credits		**24**

1 If students take PHY 2130 and PHY 2140 then they must earn a cumulative 3.0 g.p.a. in those courses to be able to take PHY 3300.

2 If students choose to take AST 4100 as one of the elective upper-level astronomy classes, then, AST 4200 is a co-requisite.

3 MAT 2010 and MAT 2020 are prerequisites for this course.

Many science and/or engineering majors already take the required calculus and basic physics sequence as part of their studies, however, non-science majors are unlikely to be able to complete the minor in under 24 credits. Students should consult the departmental Undergraduate Academic Advisor for approval of the minor prior to undertaking the program.

Biomedical Physics Minor

The Department of Physics and Astronomy offers a minor in Biomedical Physics (BMP). The requirements for a BMP minor consist of:

Code	Title	Credits
PHY 2130	Physics for the Life Sciences I	4
or PHY 2170	University Physics I for Scientists and Engineers	
PHY 2131	Physics for the Life Sciences Experimental Laboratory	1
or PHY 2171	University Physics I Experimental Laboratory	
PHY 2140	Physics for the Life Sciences II	4
or PHY 2180	University Physics II for Scientists and Engineers	
PHY 2141	Physics for the Life Sciences Laboratory	1
or PHY 2181	University Physics II Experimental Laboratory	
PHY 4700	Introduction to Biomedical Physics	4
Select a minimum of 10 credits from the following:		10
PHY 3750	Introduction to Computational Methods	
PHY 6750	Applied Computational Methods	
PHY 3500	Introduction to Thermal and Fluid Physics	
PHY 5340 & PHY 5341	Optics and Optics Laboratory	
or PHY 5620 & PHY 5621	Electronics and Electrical Measurements and Electronics and Electrical Measurements Laboratory	
PHY 5750	Biological Physics	
PHY 6290	Survey of Biophysics	
PHY 6780	Research Methods in Biomedical Physics	
Or other course with prior departmental approval		
Total Credits		**24**

The students should consult the departmental Undergraduate Academic Advisor for approval of the minor prior to undertaking the program.

Physics Minor

The Department of Physics and Astronomy offers a minor in physics to qualified students from other Departments. The requirement for a minor consists of:

Code	Title	Credits
Select one of the following groups:		10
Group 1		
PHY 2170	University Physics I for Scientists and Engineers	
PHY 2171	University Physics I Experimental Laboratory	
PHY 2180	University Physics II for Scientists and Engineers	
PHY 2181	University Physics II Experimental Laboratory	
Group 2		
PHY 2130	Physics for the Life Sciences I	
PHY 2131	Physics for the Life Sciences Experimental Laboratory	
PHY 2140	Physics for the Life Sciences II	
PHY 2141	Physics for the Life Sciences Laboratory	
PHY 3300 & PHY 3310	Introductory Modern Physics and Introductory Modern Physics Laboratory	5
Select at least three other physics courses at the 3000 level or above		9-12
Total Credits		**24-27**

Students should consult the departmental Undergraduate Academic Advisor for approval of the minor prior to undertaking the program.

Political Science

Office: 2040 Faculty/Administration Building; 313-577-2630
Chairperson: Sharon F. Lean
https://clas.wayne.edu/politicalscience

The study of political science is focused on understanding the nature and problems of government and the role of politics in contemporary society. This is accomplished through systematic exploration of the structure and processes of government at different levels and across nations, through study of individual and collective political behavior, and through analyses of policy problems and the processes through which public policies are formulated and administered. Political science contributes to the goals of general education by promoting civic literacy and cultivating an awareness of the opportunities and obligations of citizenship at local, state, and national levels.

The field of political science is of special importance to students whose career goals include:

1. Professions likely to involve participation in public affairs, including law, engineering, criminal justice, public health, social welfare and education.
2. Administrative or executive positions in government at the local, state or federal levels.
3. Teaching of political and social science at the secondary, junior college and university levels.
4. Positions in the diplomatic service and in foreign and overseas programs of the U.S. Government and of other organizations doing business abroad.
5. Leadership, research, and staff roles in citizen organizations, political parties, campaign organizations, economic and social interest groups, municipal research bureaus, and nonprofit organizations.
6. Positions associated with mass communications, such as radio, television and newspapers, where basic understanding of public affairs and governmental policies and organization is required for accurate reporting and analysis.
7. Positions in private enterprise where knowledge of governmental processes is essential, such as in industrial relations, legislative liaison and public relations.

- Peace and Conflict Studies Minor (p. 332)
- Political Science (B.A.) (p. 333)
- Public Affairs (B.P.A.) (p. 336)
- Political Science Minor (p. 337)

Peace and Conflict Studies Minor

To receive a Minor in Peace and Conflict Studies (PCS), a student must complete:

Code	Title	Credits
PCS 2000	Introduction to Peace and Conflict Studies	3
PSY 2600	Psychology of Social Behavior	4
Select one core course from the following:		3-4
AFS 2210	Black Social and Political Thought	
ANT 3100	World Cultures	
HIS 5130	American Foreign Relations Since 1933	
PCS 2010/ PS 2830/ HIS 2520	Topics in Peace and Conflict Studies	
PCS/PHY 2020/ HIS 2510/ PS 2440	Science, Technology, and War	
PCS 3100	Human Trafficking and Modern Slavery	
PS 2510	Introduction to Political Philosophy: What is Politics?	
PS 2810	World Politics	
PS 5740	Ethnicity: The Immigrant Experience	
Select one core course from the following:		3-4
PCS 5000	Dispute Resolution	
PCS 5010	Community or International Internship	
PCS 5100	Advanced Special Topics	
Two conflict-related elective courses. Permissible elective courses include additional core courses, electives listed below, or can be approved in consultation with the undergraduate advisor.		6-8
Total Credits		**19-23**

Among their elective requirements, students must have a minimum of one course that is counting towards the PCS minor requirements and not fulfilling any other major, minor, or co-major requirement. Electives may be selected from the approved elective course list, or from other curricula, with approval of the Peace and Conflict Studies Director.

Peace and Conflict-Related Elective Courses

The University offers a large number of conflict- and peace-related courses in its various Schools and Colleges that are suitable electives for this program. The student is encouraged to select courses that introduce them to a variety of cultural practices regarding the management of conflict. The following are appropriate for the co-major or minor; because new courses are created by faculty on a rolling basis, students are encouraged to consult with the director or the undergraduate advisor about any courses not on the following list which may be included in their major.

Race, Gender, and Religion

Code	Title	Credits
AFS/SOC 2600	Race and Racism in America	3
AFS 3420/ PS 3820	Pan Africanism and the Diaspora	4
ANT 3530	Native Americans	3
ANT 5240	Cross Cultural Study of Gender	3
COM 4240	African Americans in Television	4
CRJ/GSW 2750	Diversity Issues in Criminal Justice	3
HIS 2605/ GSW 2600	History of Women, Gender and Sexuality in the Modern World	3
HIS/AFS 3150	African American History II: 1865-1968	3-4
HIS 5200	Women, Gender, and Sexuality in US History	3
HIS 5480	Nazi Germany	3-4
NE 6500	Religion and Society	3
PS/AFS 5030	African American Politics	4
PSY 3250	Psychology of Gender	3
PSY/AFS 5700	The Psychology of African Americans	4

Peace and Conflict Theory

Code	Title	Credits
ANT 5140	Biology and Culture	3
COM 3400	Theories of Communication	3

CRJ 3800	Criminological Theories	3
GER/FRE/ITA/SPA 2700	Anguish and Commitment: European Existentialist Literature	3-4
PHI 2320	Introduction to Ethics	3
PHI 3270	Foundations of Law	3
PS 3530	Classical Political Philosophy: What is Justice?	4
PS 4835	Civil War and Conflict Processes	3
PSY 3040	Psychology of Perception: Fundamental Processes	3
PSY/LIN 3080	Cognitive Psychology: Fundamental Processes	3
PSY 3200	Motivation, Feeling and Emotion	3
PSY 3310	Introduction to Psychopathology	4

Human Rights and Social Justice

Code	Title	Credits
AFS/SOC 2600	Race and Racism in America	3
AFS/SOC 5580	Law and the African American Experience	4
COM 2160	Campaigns and Social Movements	3
CRJ 3200	Police and Society	3
ECO 5490/HIS 5290	American Labor History	4
LAS/HIS 2430	History of Latino/as in the United States	3
PHI 3270	Foundations of Law	3
PS 2420	Ethics and Politics of Public Policy	4
PS 3520	Theories of Justice	4
PS 5120	Constitutional Rights and Liberties	4
PS 5850	Human Rights	4
SW 3110	Diversity, Oppression and Social Justice	3

International Issues in Peace and Conflict Studies

Code	Title	Credits
AFS 3610	Africa: Politics, Culture and Society	4
ANT 3100	World Cultures	3
ANT 3540	Cultures and Societies of Latin America	3
ANT/NE 3550	Arab Society in Transition	3
ECO 5300	International Trade	4
ECO 5310	International Finance	4
GPH/HIS/PS 2700/ENG 2670	Introduction to Canadian Studies	3
HIS 1400	The World Since 1945	4
HIS 1610	African Civilizations Since 1800	3-4
HIS/LAS 1910	Latin America from Independence to the Present	3
HIS 3320	Twentieth Century Middle East	3
HIS 5530	History of World War I and II: A Social and Political History of Two World Wars	4
JPN 4550	Japanese Culture and Society I	4
JPN 4560	Japanese Culture and Society II	4
NE 2040/HIS 1810	The Modern Middle East	3
NE 5000/HIS 5960	Globalization, Social History and Gender in the Arabian Gulf	3
PS 2710	Introduction to Comparative Politics	4
PS 3710	Politics of Western Europe	4
PS 3715	Politics of Russia and Eastern Europe	4
PS 3735	Politics of Latin America	4
PS 3770	Politics of East Asia	4
PS 3795	Latin America in World Affairs	4
PS 3830	War	4
PS 3835	Middle East Conflict	4
PS 3991	Directed Study: WSU-Salford Exchange	3-9
PS 4725	Globalization and Politics	4
PS 4810	Foreign Policies of Major Powers	4
PS 5820	International Law	4
SLA/ARM/GER/POL/RUS 3410	New Soil, Old Roots: The Immigrant Experience	3
SLA 3710	Russian and East European Film	3-4

Peace and Conflict Studies in the United States

Code	Title	Credits
AFS/GSW 5110	Black Women in America	3
ECO 5480	Economics of Work	3
HIS 5200	Women, Gender, and Sexuality in US History	3
HIS 5290/ECO 5490	American Labor History	4
PS/AFS 5030	African American Politics	4
US/GPH/HIS 2000/SOC 2500	Introduction to Urban Studies	4
UP 5650	Metropolitan Detroit	3

Peace Studies in Human Development

Code	Title	Credits
ANT/LIN 3310	Language and Culture	3
ANT 5140	Biology and Culture	3
ANT/LIN 5320	Language and Societies	3
CRJ 3350/SOC 3840	Corrections	3
CRJ 4230	Child Abuse and Neglect	3
PS 5560	Biopolitics	4
PSY 2400	Developmental Psychology	4
PSY 3310	Introduction to Psychopathology	4
PSY 3350	Psychology of Personality	3
SOC 2203	Social Psychology	3
SW/ELE/PSY 6010	Equitable Partnerships with Families and Communities	3

Dispute Resolution

Selecting a course from this group assumes completion of PCS 5000.

Code	Title	Credits
COM 2200	Interpersonal Communication	3
COM 3250	Organizational Communication	3
COM 6350	Communication, Culture, and Conflict	3
CRJ 3110	Domestic Violence and Criminal Justice	3
ELR 4500	Applied Labor Studies	3
PS 3030	Political Interest Groups	4
PS 3040	The Legislative Process	4
PSY 2100	Psychology and the Workplace	3
SW 1010	Introduction to Social Work and Social Welfare	3

Political Science (B.A.)

Political science majors are offered the opportunity to develop programs of study that complement their particular interests and career goals. The major may be used to structure a broad general program or a highly

concentrated and specialized one. The following requirements pertain to all B.A. majors.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. To enter the Bachelor of Arts degree program in political science, students must declare their major in accordance with the rules of the College.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students wishing to apply transfer credits toward the major should consult the political science undergraduate advisor regarding departmental policies and restrictions on the use of these credits. Students must complete a minimum of 16 credit hours of Political Science course work at Wayne State University.

Major Requirements

A political science major must satisfactorily complete at least thirty-two credits of course work in the Department beyond PS 1010 or 1030. This course work must include:

Code	Title	Credits
PS 1010	American Government	4
or PS 1000	How to Change Your World (An Introduction to Political Science)	
or PS 1030	The American Governmental System	
PS 1050	Understanding Political Science Statistics	4
Select two of the following:		8
PS 2410	Introduction to Public Policy	
PS 2510	Introduction to Political Philosophy: What is Politics?	
PS 2710	Introduction to Comparative Politics	
PS 2810	World Politics	
Select at least four courses at the 3000 level or higher, of which at least one must be at the 4000 level or higher [1]		12-16
A Writing Intensive (WI) course in political science that is taken after having previously completed at least two Political Science courses at the 3000 level or higher [2]		0

[1] PS 5993 does not count toward fulfillment of this requirement.

[2] with co-registration in PS 5993. Any political science course at the 3000-level or higher, except PS 5630 and PS 6640, may, with the permission of the instructor, be used to fulfill this requirement.

To satisfy the Writing Intensive requirement, the student must demonstrate proficiency in writing on disciplinary subject matter in a form and style that conform to disciplinary standards. To use a course for this purpose, the student must obtain approval from the instructor and follow the guidelines established by the instructor to demonstrate the required proficiency. The student must also co-register in PS 5993, a zero-credit course for which the student will receive a grade of Satisfactory (S) upon certification by the instructor that the writing requirement has been fulfilled. Note that completion of the WI course has the following prerequisites: a) completion of the Intermediate Composition (IC or ICN) requirement and b) the completion of at least two Political Science courses at the 3000 level or higher.

Recommended Course: It is recommended that majors include PS 3600, Methods of Political Inquiry, in their programs of study.

Political Science Fields of Study

In developing their specific programs of study, students should consult with the political science undergraduate advisor. They may pursue a general program or choose to concentrate in a particular field or subfield. It is not mandatory that a student have an area of concentration; the listings are only suggestive.

Concentrations may be designated as follows: American Government and Politics, Public Law/Legal Studies, Public Policy and Administration, Quantitative Political Analysis, Comparative Politics, World Politics, and Political Philosophy and Ethics. Students must complete a minimum of five related courses to earn a concentration.

American Government and Politics

Public opinion, electoral politics, and participation in the political process; the role of political parties and interest groups and of the mass media; the workings of Congress, the Presidency, and other governmental institutions. Courses relevant to this area of concentration include (but are not limited to):

Code	Title	Credits
PS 3010	Public Opinion and Political Behavior	4
PS 3020	Political Parties and Elections	4
PS 3025	Political Campaigns in America	4
PS 3030	Political Interest Groups	4
PS 3040	The Legislative Process	4
PS 3050	Politics of the American Presidency	4
PS 3060	State Government and Politics	4
PS 3070	Michigan Politics	4
PS 3080	Gender and Politics	4
PS 3430	Bureaucracy and Public Policy	4
PS 5030	African American Politics	4
PS 5040	Religion and Politics	4
PS 6010	Political Psychology	3
PS 6020	Intergovernmental Relations and American Federalism	3

Public Law/Legal Studies

Judicial interpretation of the Constitution; civil liberties and constitutional rights; the law as a profession; law enforcement and the operations of the judicial system; international dimensions of law. Courses relevant to this area of concentration include (but are not limited to):

Code	Title	Credits
PS 3100	American Legal Systems and Processes	4
PS 3120	Politics of the Criminal Justice Process	3
PS 3520	Theories of Justice	4
PS 5110	Constitutional Law	4
PS 5120	Constitutional Rights and Liberties	4
PS 5820	International Law	4
PS 5850	Human Rights	4
PS 6870	United States Foreign Relations Law	4

Public Policy and Administration

How policy is formulated, decided, implemented, and evaluated at all levels of government; moral and political standards for making policy; the nature and functions of public agencies; techniques of public management; public bureaucracy in its social setting. Courses relevant to this area of concentration include (but are not limited to):

Code	Title	Credits
PS 2000	Introduction to Urban Studies	4
PS 2240	Introduction to Urban Politics and Policy	4
PS 2310	Introduction to Public Administration	4
PS 2410	Introduction to Public Policy	4
PS 2420	Ethics and Politics of Public Policy	4
PS 2460	Policy and Rationality: Dilemmas of Choice	4
PS 3250	Detroit Politics: Continuity and Change in City and Suburbs	4
PS 3430	Bureaucracy and Public Policy	4
PS 3450	Environmental Policy and Politics	4
PS 4460	Techniques of Policy Analysis	4
PS 5850	Human Rights	4
PS 6020	Intergovernmental Relations and American Federalism	3
PS 6700	Financial Management for Nonprofit Organizations	3

Political Philosophy and Ethics

The justification and application of ethical standards to politics; history and analysis of authority and rebellion, individualism and community, justice and equality; modern ideologies such as communism, socialism, liberalism, and conservatism. Courses relevant to this area of concentration include (but are not limited to):

Code	Title	Credits
PS 2420	Ethics and Politics of Public Policy	4
PS 2510	Introduction to Political Philosophy: What is Politics?	4
PS 3520	Theories of Justice	4
PS 3530	Classical Political Philosophy: What is Justice?	4
PS 3550	American Political Philosophy: What is Freedom?	4
PS 4510	Classical Political Philosophy: What is War?	4
PS 5560	Biopolitics	4
PS 5850	Human Rights	4

Quantitative Political Analysis

Methods of analysis used to assess alternatives and evaluate the impact of government policy; methods of empirical political research including data collection, statistical description and inference, and the use of computers to organize and interpret data. Courses relevant to this area of concentration include (but are not limited to):

Code	Title	Credits
PS 1050	Understanding Political Science Statistics	4
PS 2460	Policy and Rationality: Dilemmas of Choice	4
PS 3600	Methods of Political Inquiry	4
PS 4460	Techniques of Policy Analysis	4
PS 5630	Statistics and Data Analysis in Political Science I	4
PS 6640	Statistics and Data Analysis in Political Science II	3

Comparative Politics

The study of government and politics of western, non-western, and third world countries in their historical, cultural, and economic settings; problems of comparison across cultural and national boundaries. Courses relevant to this area of concentration include (but are not limited to):

Code	Title	Credits
PS 2700	Introduction to Canadian Studies	3
PS 2710	Introduction to Comparative Politics	4
PS 3710	Politics of Western Europe	4
PS 3715	Politics of Russia and Eastern Europe	4
PS 3735	Politics of Latin America	4
PS 3770	Politics of East Asia	4
PS 3795	Latin America in World Affairs	4
PS 4710	Democracy	4
PS 4725	Globalization and Politics	4
PS 5760	History and Development of Islamic Political Thought	3

World Politics

Conflict and cooperation among nations; causes of war and the pursuit of peace; international law; international organizations and multi-national corporations; North-South relations and issues of development, imperialism, and dependency; East-West relations and the changing world order; American foreign policy and issues of disarmament, intervention, and economic competition. Courses relevant to this area of concentration include (but are not limited to):

Code	Title	Credits
PS 2810	World Politics	4
PS 2820	Introduction to Peace and Conflict Studies	3
PS 3795	Latin America in World Affairs	4
PS 3811	Theory of World Politics	4
PS 3820	Pan Africanism and the Diaspora	4
PS 3830	War	4
PS 3835	Middle East Conflict	4
PS 4810	Foreign Policies of Major Powers	4
PS 5740	Ethnicity: The Immigrant Experience	4
PS 5820	International Law	4
PS 5850	Human Rights	4
PS 6850	International Organizations	3
PS 6860	American Foreign Policy	3
PS 6870	United States Foreign Relations Law	4

Internships

Internships in government, political campaigns, political advocacy groups, civic organizations, or public agencies provide valuable work-educational experience that enables students to relate knowledge acquired in the classroom to the world-at-large. They also provide practical training that enhances future job prospects. Academic credit may be earned for an internship through enrollment in PS 2992, Political Science Internship, a course that helps to assure the educational relevance of the internship by requiring interns to prepare papers and reports based on their experiences. Interested students should consult the department's undergraduate advisor.

Study Abroad Exchange Program with the University of Salford

Students may study for one or two semesters at the University of Salford in Salford, England, and earn Wayne State credits through an exchange agreement between the two universities. Applications may be

obtained from the Office of Study Abroad and Global Programs (http://www.studyabroad.wayne.edu). Interested majors or prospective majors should also consult with the Department's undergraduate advisor.

Political Science Honors Programs

Bachelor of Arts and Bachelor of Public Affairs majors with strong academic records are encouraged to pursue departmental honors. To be eligible to enter the honors program, a major must have a cumulative grade point average of 3.3. To graduate with honors, students must:

1. Maintain a 3.3 grade point average.
2. Under the direction of one or more members of the department, complete a senior honors paper (PS 4995).
3. Complete all requirements for the Bachelor of Arts or Bachelor of Public Affairs degree.
4. Complete one 4200-level Honors seminar offered through the Honors College, see Honors Courses (HON).
5. Accumulate an additional eight credits in honors-designated course work beyond PS 4995, and the Honors Program seminar. These honors credits can be obtained from any department, including Political Science. For information about honors-designated coursework available each semester.

Students interested in participating in the program should contact the department's undergraduate advisor to determine their eligibility.

'AGRADE' Program (Accelerated Graduate Enrollment)

Accelerated Graduate Enrollment: Bachelor of Arts and Bachelor of Public Affairs majors with superior academic records (top twentieth percentile overall, with at least a 3.6 g.p.a. in the major) are eligible in their senior year (a minimum of 90 credit hours earned) to participate in accelerated graduate enrollment ('AGRADE') programs leading to either a Master of Arts degree with a major in political science or a Master of Public Administration degree. The 'AGRADE' programs enable students to pursue graduate and undergraduate degrees simultaneously and to apply twelve to fifteen credits of approved course work to both degrees. To participate, students must apply and be accepted into the 'AGRADE' program by the Departmental Graduate Committee and secure the approval of the Graduate Officer of the College of Liberal Arts and Sciences in accordance with rules and procedures established by the College. Students should contact the Department's undergraduate advisor for further details.

Public Affairs (B.P.A.)

The Bachelor of Public Affairs (B.P.A.) degree provides students with professional skills needed for working in the city, county, state and national government jobs, for other public and non-profit agencies, and in positions in private enterprises, especially those that deal with governmental relations. Past graduates of the program have managed political campaigns and worked for local, state and federal government agencies, for non-profits and gone on to law school, and graduate school, especially in public administration. Additional professional skills stressed in the B.P.A. include data management, economics, and other quantitative tools. These are very helpful for students when they seek jobs after graduation or for those students planning to apply to graduate school. Internships provide students with an opportunity to apply what they have learned in public service settings.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University. To declare the B.P.A. as a major, a student must follow the procedures set forth by the College of Liberal Arts and Sciences for declaring a major.

Program Requirements

Candidates for the B.P.A. degree must:

1. Complete a total of 120 credits in course work.
2. Satisfy all of the Liberal Arts Group Requirements (p. 242)
3. Satisfy the University General Education Requirements (p. 24).
4. Satisfy the major requirements listed below.

All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students wishing to apply transfer credits toward the B.P.A. major should consult the political science undergraduate advisor regarding departmental policies and restrictions on the use of these credits. Students must complete a minimum of 16 credit hours of Public Affairs' major requirements at Wayne State University.

Major Requirements

A Bachelor of Public Affairs major must complete a minimum of nine courses, including seven prescribed core courses and two elective courses. Co-registration in PS 5993 is also required. Any political science required or elective course at the 3000-level or higher, except PS 5630 and PS 6640, may, with the permission of the instructor, be used to fulfill this requirement. Students must demonstrate proficiency in writing on public affairs subject matter in a form and style consistent with B.P.A. standards.

Election of a corequisite to PS 5993 must have approval from the instructor and students must follow the instructor's guidelines to demonstrate required proficiency. Upon certification by the instructor that the writing requirement has been fulfilled, a grade of Satisfactory ('S') will be awarded for PS 5993, a 'zero' credit course. Note that completion of the WI course has the following prerequisites: a) completion of the Intermediate Composition (IC or ICN) requirement and b) the completion of at least two Political Science courses at the 3000 level or higher.

Core Curriculum

Candidates for the B.P.A. degree must satisfy the following core course requirements:

Code	Title	Credits
Introduction (1 of 3)		**3-4**
PS 1010	American Government	
or PS 1000	How to Change Your World (An Introduction to Political Science)	
or PS 1030	The American Governmental System	
Essentials (2 of 2)		**8**
PS 2410 & PS 4460	Introduction to Public Policy and Techniques of Policy Analysis	
Fundamentals (2 of 8)		**8**
PS 2240	Introduction to Urban Politics and Policy	
or PS 2310	Introduction to Public Administration	
or PS 2420	Ethics and Politics of Public Policy	
or PS 3060	State Government and Politics	
or PS 3070	Michigan Politics	
or PS 3320	Empowering Change through Nonprofit Engagement	
or PS 3450	Environmental Policy and Politics	
or PS 4810	Foreign Policies of Major Powers	

Methods (2 of 3)		**8**
PS 1050	Understanding Political Science Statistics	
or PS 3600	Methods of Political Inquiry	
or PS 5630	Statistics and Data Analysis in Political Science I	
Select at least 2 electives from courses listed below		8
Writing Intensive (1 of 1)		
PS 5993	Writing Intensive Course in Political Science	0
Total Credits		**35-36**

Elective Options

In addition to completion of required core work, students must select a minimum of two additional courses within the B.P.A. elective curriculum, which is comprised of the courses set forth below or an additional Policy elective listed above. At least one course must be above the 2000 level. Electives may also be satisfied by courses in the Fundamentals category once the requirement of two Fundamentals has been satisfied.

Code	Title	Credits
Electives (2 of 14)		8
PS 2992	Political Science Internship	
or PS 2510	Introduction to Political Philosophy: What is Politics?	
or PS 2710	Introduction to Comparative Politics	
or PS 2810	World Politics	
or PS 3010	Public Opinion and Political Behavior	
or PS 3020	Political Parties and Elections	
or PS 3040	The Legislative Process	
or PS 3050	Politics of the American Presidency	
or PS 3080	Gender and Politics	
or PS 3100	American Legal Systems and Processes	
or PS 3250	Detroit Politics: Continuity and Change in City and Suburbs	
or PS 5030	African American Politics	
or PS 5040	Religion and Politics	
or PS 6860	American Foreign Policy	

Internships

Internships in government, political campaigns, political advocacy groups, civic organizations, or public agencies provide valuable work-educational experience that enables students to relate knowledge acquired in the classroom to the world-at-large. They also provide practical training that enhances future job prospects. Academic credit may be earned for an internship through enrollment in PS 2992, Political Science Internship, a course that helps to assure the educational relevance of the internship by requiring interns to prepare papers and reports based on their experiences. Interested students should consult the department's undergraduate advisor.

Study Abroad Exchange Program with the University of Salford

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Political Science Honors Programs

Bachelor of Arts and Bachelor of Public Affairs majors with strong academic records are encouraged to pursue departmental honors. To be eligible to enter the honors program, a major must have a cumulative grade point average of 3.3. To graduate with honors, students must:

1. Maintain a 3.3 grade point average.
2. Under the direction of one or more members of the department, complete a senior honors paper (PS 4995).
3. Complete all requirements for the Bachelor of Arts or Bachelor of Public Affairs degree.
4. Complete one 4200-level Honors seminar offered through the Honors College, see Honors Courses (HON).
5. Accumulate an additional eight credits in honors-designated course work beyond PS 4995, and the Honors Program seminar. These honors credits can be obtained from any department, including Political Science. For information about honors-designated coursework available each semester.

Students interested in participating in the program should contact the department's undergraduate advisor to determine their eligibility.

'AGRADE' Program (Accelerated Graduate Enrollment)

Accelerated Graduate Enrollment: Bachelor of Arts and Bachelor of Public Affairs majors with superior academic records (top twentieth percentile overall, with at least a 3.6 g.p.a. in the major) are eligible in their senior year (a minimum of 90 credit hours earned) to participate in accelerated graduate enrollment ('AGRADE') programs leading to either a Master of Arts degree with a major in political science or a Master of Public Administration degree. The 'AGRADE' programs enable students to pursue graduate and undergraduate degrees simultaneously and to apply twelve to fifteen credits of approved course work to both degrees. To participate, students must apply and be accepted into the 'AGRADE' program by the Departmental Graduate Committee and secure the approval of the Graduate Officer of the College of Liberal Arts and Sciences in accordance with rules and procedures established by the College. Students should contact the Department's undergraduate advisor for further details.

Political Science Minor

Students majoring in other subjects may obtain a minor in political science by completing a minimum of twenty credits in Political Science course work. Information on combinations of courses that emphasize particular subfields of political science is presented in the listing of bachelor of arts concentrations (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/political-science/political-science-ba/#requirementstext). For information on courses of relevance to such majors as economics, journalism, history, sociology, psychology, philosophy, criminal justice, or urban planning, students should consult the department's undergraduate advisor. A suitable sequence for pre-law students can be provided by the undergraduate advisor. Students must complete a minimum of three Political Science courses at Wayne University to earn a minor.

Psychology

Office: 7th floor, 5057 Woodward; 313-577-2800
Chairperson: Scott Bowen
Associate Chairperson: Emily Grekin
Undergraduate Academic Service Officer: Shelly Seguin
https://clas.wayne.edu/psychology

Undergraduate training offered by the Department of Psychology serves several related purposes. For the science major and the liberal arts major, the study of psychology provides an opportunity to learn the scientific approach to the study of behavior which will include material helpful in increasing self-understanding and insight into the behavior of others. For students preparing for medicine, law, education, nursing, business, and other professions, psychology provides important basic knowledge useful in these vocations. For those planning to pursue graduate study in psychology, the undergraduate program establishes a sound foundation.

Psychology Mass Advising Meeting

Attendance at one of the meetings is mandatory for all psychology majors. Students are expected to attend prior to their first advising appointment.

Prospective and current WSU students who are considering majoring or minoring in psychology should attend to learn about the major and opportunities within the field. It is also helpful for individuals who are considering pursuing psychology as a second career and/or graduate studies. Meetings will cover psychology major requirements, information about graduate school, research experience, volunteer experience, the GRE, career resources, tips for success and much more. Attendance at one of the meetings is mandatory for all psychology majors. Students are encouraged to attend as soon as possible and should feel free to bring parents and/or interested friends. View the current schedule (https://clas.wayne.edu/psychology/students/advising/information-meeting).

- Health Psychology Minor (p. 340)
- Psychology (B.A.) (p. 338)
- Psychology (B.S.) (p. 339)
- Psychology Minor (p. 340)

Psychology (B.A.)

Undergraduate training offered by the Department of Psychology serves several related purposes. For the science major and the liberal arts major, the study of psychology provides an opportunity to learn the scientific approach to the study of behavior which will include material helpful in increasing self-understanding and insight into the behavior of others. For students preparing for medicine, law, education, nursing, business, and other professions, psychology provides important basic knowledge useful in these vocations. For those planning to pursue graduate study in psychology, the undergraduate program establishes a sound foundation. Psychology-related employment for graduates with a bachelor's degree has increased in recent years. Such employment, of course, depends on the personal characteristics of the individual, on the special qualifications and training of the individual, and particularly on job opportunity.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Psychology Mass Advising / Information Meeting

Attendance at one of the meetings is mandatory for all psychology majors. Students are expected to attend prior to their first advising appointment.

Prospective and current WSU students who are considering majoring or minoring in psychology should attend to learn about the major and opportunities within the field. It is also helpful for individuals who are considering pursuing psychology as a second career and/or graduate studies. Meetings will cover psychology major requirements, information about graduate school, research experience, volunteer experience, career development, tips for success and much more. Attendance at one of the meetings is mandatory for all psychology majors. Students are encouraged to attend as soon as possible and should feel free to bring parents and/or interested friends. View the current schedule (https://clas.wayne.edu/psychology/students/advising/information-meeting).

Program Requirements

Candidates must complete minimum of 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

- Attendance to at least one Psychology Information Meeting.
    - Students are encouraged to attend in their first semester or as soon as possible to get the most out of the meeting content. Meetings will cover psychology program requirements, career development, graduate school admissions and applications, research experience, volunteer experience, resources, and tips for success. Students will complete a knowledge check at the end of the meeting to demonstrate proficiency. Visit the Psychology Advising page (https://clas.wayne.edu/psychology/students/advising/information-meeting) for available days and times.
- Students must complete a minimum of thirty-five credits of psychology courses. At least twenty credits of the required psychology courses must be earned at Wayne State University.
- A grade point average of 2.00 or higher for all Wayne State University psychology course work.

Core Psychology Courses

Code	Title	Credits
PSY 1010	Introductory Psychology (Preferred for Majors) [1]	4
or PSY 1020 & PSY 1030	Elements of Psychology and Introductory Psychology Laboratory	
PSY 2020	Research Methods In Psychology [2]	4
PSY 2030	Statistical Methods in Psychology [3]	4
PSY 3993	Laboratory in Experimental Psychology [4]	2
Total Credits		**14**

[1] PSY 1010 consists of a 4 credit lecture and required 0 credit linked lab. Grade of C or higher is required for psychology majors.

[2] PSY 2020 Prerequisites: PSY 1010 (or PSY 1020 & PSY 1030) with a grade of C or higher. Recommended completion of Basic Composition (ENG 1020) with a grade of C or higher prior to taking PSY 2020.

[3] PSY 2030 Prerequisites: PSY 1010 or PSY 1020 & PSY 1030 with a grade of C or higher and TIS 2300 or MAT 1000 or higher or STA 1020 or STA 2210 with a grade of C or higher or Math Placement into level or 3 or 4.

[4] PSY 3993 Prerequisites: PSY 1010 (or PSY 1020 & PSY 1030), PSY 2020, PSY 2030, and Intermediate Composition (ENG 2390, 3010, 3020, or 3050) with a grade of C or better.

Foundation & Elective Psychology Courses

Code	Title	Credits
Three Foundation Courses		
Choose 3 foundation courses from the following:		9-12
PSY 2100	Psychology and the Workplace	
PSY 2400	Developmental Psychology	
PSY 2600	Psychology of Social Behavior	
PSY 3040	Psychology of Perception: Fundamental Processes	
PSY 3060	Psychology of Learning and Memory: Fundamental Processes	
PSY 3080	Cognitive Psychology: Fundamental Processes	
PSY 3120	Brain and Behavior	
PSY 3310	Introduction to Psychopathology	
Four Psychology Electives		
Choose 4 PSY courses (PSY 2000-6000 level) [1]		12-16
Total Credits		**21-28**

[1] Students who opt for directed study or special projects courses may require additional psychology courses to reach the 12-credit minimum

Preparation for Psychology Graduate Programs

While individual psychology graduate programs have unique admission requirements, students who intend to pursue graduate programs are advised to select courses that are consistent with their intended area of study. Students interested in doctoral level programs are strongly encouraged to obtain undergraduate research experience. Students are also encouraged to meet with their psychology academic advisors early on to develop a plan for their individual academic and career goals.

Psychology Honors Program

Students with an overall grade point average of 3.3 and a Psychology grade point average of 3.5 are eligible for admission to the Department's Honors Program. Satisfactory completion of the Honors Program will lead to a degree 'With Psychology Honors' on the diploma. Students interested in the program should obtain detailed information from the Psychology Department Undergraduate Advising Office.

Honors Sections provide smaller classes, somewhat more advanced readings, and opportunities for independent work by students. Students must complete a minimum of eighteen credits in honors coursework, including: PSY 5020 (Honors Research in Psychology), PSY 4991 (three-credit Honors Directed Study), PSY 4998 (Senior Thesis), and one additional PSY course designated as honors through an honors section or honors option contract. Students must also complete an Honors Seminar from the HON 42xx series.

Psychology (B.S.)

Undergraduate training offered by the Department of Psychology serves several related purposes. For the science major and the liberal arts major, the study of psychology provides an opportunity to learn the scientific approach to the study of behavior which will include material helpful in increasing self-understanding and insight into the behavior of others. For students preparing for medicine, law, education, nursing, business, and other professions, psychology provides important basic knowledge useful in these vocations. For those planning to pursue graduate study in psychology, the undergraduate program establishes a sound foundation. Psychology-related employment for graduates with a bachelor's degree has increased in recent years. Such employment, of course, has depended on the personal characteristics of the individual, on the special qualifications and training of the individual, and particularly on job opportunity.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Psychology Mass Advising / Information Meeting

Attendance at one of the meetings is mandatory for all psychology majors. Students are expected to attend prior to their first advising appointment.

Prospective and current WSU students who are considering majoring or minoring in psychology should attend to learn about the major and opportunities within the field. It is also helpful for individuals who are considering pursuing psychology as a second career and/or graduate studies. Meetings will cover psychology major requirements, information about graduate school, research experience, volunteer experience, career development, tips for success and much more. Attendance at one of the meetings is mandatory for all psychology majors. Students are encouraged to attend as soon as possible and should feel free to bring parents and/or interested friends. View the current schedule (https://clas.wayne.edu/psychology/students/advising/information-meeting).

Program Requirements

Candidates must complete minimum of 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Bachelor of Science Requirements

The bachelor of science in psychology requires a minimum of 27 credits in the physical and life sciences and/or math courses. Students interested in pre-med or health science programs are encouraged to complete the B.S. degree as many of the prerequisite science courses overlap with the B.S. requirements. See a psychology academic advisor (https://clas.wayne.edu/psychology/students/advising) for a list of applicable courses.

Major Requirements

- Attendance to at least one Psychology Essentials Meeting.
  - Students are encouraged to attend in their first semester or as soon as possible to get the most out of the meeting content. Meetings will cover psychology program requirements, career development, graduate school admissions and applications, research experience, volunteer experience, resources, and tips for success. Visit the Psychology Advising page (https://clas.wayne.edu/psychology/students/advising/information-meeting) for available days and times.

- Students must complete a minimum of thirty-five credits of psychology courses. At least twenty credits of the required psychology courses must be earned at Wayne State University.
- A grade point average of 2.00 or higher for all Wayne State University psychology course work.

Core Psychology Courses

Code	Title	Credits
PSY 1010	Introductory Psychology [1]	4
or PSY 1020 & PSY 1030	Elements of Psychology and Introductory Psychology Laboratory	
PSY 2020	Research Methods In Psychology [2]	4
PSY 2030	Statistical Methods in Psychology [3]	4
PSY 3993	Laboratory in Experimental Psychology [4]	2
Total Credits		**14**

1 PSY 1010 consists of a 4-credit lecture and required 0-credit linked lab. A grade of C or higher is required for PSY 1010 or PSY 1020 & PSY 1030 for psychology majors.

2 PSY 2020 Prerequisites: PSY 1010 (or PSY 1020 & PSY 1030) with a grade of C or higher. Recommended completion of Basic Composition (ENG 1020) with a grade of C or higher prior to taking PSY 2020.

3 Prerequisites: PSY 1010 or PSY 1020 & PSY 1030 with a grade of C or higher and TIS 2300 or MAT 1000 or higher or STA 1020 or STA 2210 with a grade of C or higher or Math Placement into level or 3 or 4.

4 Prerequisites: PSY 1010 (or PSY 1020 & PSY 1030), PSY 2020, PSY 2030, and Intermediate Composition (ENG 2390, 3010, 3020, or 3050) all with a grade of C or better.

Foundation & Elective Psychology Courses

Code	Title	Credits
Three Foundation Courses		
Choose 3 foundation courses from the following:		9-12
PSY 2100	Psychology and the Workplace	
PSY 2400	Developmental Psychology	
PSY 2600	Psychology of Social Behavior	
PSY 3040	Psychology of Perception: Fundamental Processes	
PSY 3060	Psychology of Learning and Memory: Fundamental Processes	
PSY 3080	Cognitive Psychology: Fundamental Processes	
PSY 3120	Brain and Behavior	
PSY 3310	Introduction to Psychopathology	
Four Psychology Electives		
Choose 4 additional psychology courses (PSY 2000-6000 level)		12-16

Preparation for Psychology Graduate Work

While individual psychology graduate programs have unique admission requirements, students who intend to pursue graduate programs are advised to select courses that are consistent with their intended area of study. Students interested in doctoral level programs are strongly encouraged to obtain undergraduate research experience. Students are also encouraged to meet with their psychology academic advisors early on to develop a plan for their individual academic and career goals.

Psychology Honors Program

Students with an overall grade point average of 3.3 and a Psychology grade point average of 3.5 are eligible for admission to the Department's Honors Program. Satisfactory completion of the Honors Program will lead to a degree 'With Psychology Honors' on the diploma. Students interested in the program should obtain detailed information from the Psychology Department Undergraduate Advising Office.

Honors Sections provide smaller classes, somewhat more advanced readings, and opportunities for independent work by students. Students must complete a minimum of eighteen credits in honors coursework, including: PSY 5020 (Honors Research in Psychology), PSY 4991 (three-credit Honors Directed Study), PSY 4998 (Senior Thesis), and one additional PSY course designated as honors through an honors section or honors option contract. Students must also complete an Honors Seminar from the HON 42xx series.

Health Psychology Minor

For a minor in health psychology, a student must complete a minimum of nineteen credits in psychology.

Code	Title	Credits
PSY 1010	Introductory Psychology (or PSY 1020 and PSY 1030) [1]	4
PSY 2020	Research Methods In Psychology	4
PSY 2410	Health Psychology	4
PSY 3120	Brain and Behavior	3
PSY 3310	Introduction to Psychopathology	4

1 A minimum grade of C is required for PSY 1010 or PSY 1020 and PSY 1030.

- This minor is **not** available to Psychology majors.
- At least two PSY courses must be taken at Wayne State.
- PSY 4994 (offered for S and U grades only) may not be counted in the twenty required credits.
- Students must have a cumulative minimum 2.0 GPA in PSY coursework to graduate.

Psychology Minor

Minor Requirements:

- For a minor in psychology, a student must complete a minimum of seventeen credits in psychology.
- At least two PSY courses must be taken at Wayne State.
- PSY 4993 or PSY 4994 (offered for S and U grades only) may not be counted in the seventeen required credits.
- Students must have a cumulative minimum 2.0 GPA in PSY coursework to graduate.

Course Requirements:

- PSY 1010 (minimum grade C) *or* PSY 1020 + PSY 1030 (minimum grade C)
- PSY 2020
- Three more PSY courses to reach seventeen credit minimum
- At least one course must be at 3000-level or higher
- At least one course must not also be applied to a student's major.

Public Health

Department Chair: Patricia Wren
Undergraduate Academic Advisors: A'Narris Monger (A-H; AGRADE), Margaret MacKeverican (I-Z; AGRADE)

Public health is the science of protecting and improving the health of people and their communities. This work is achieved by promoting healthy lifestyles, detecting patterns of risk and poor outcomes in populations, and engaging in research and interventions to eliminate health disparities and increase the duration and quality of life. Public health professionals are also involved in promoting health care equity, improving health care quality, and increasing access and accessibility.

The Department of Public Health offers evidence-based professional training across the traditional public health disciplines. Undergraduate students are well-prepared to apply to graduate programs in public health, medicine, pharmacy, social work, physician assistant studies, law, and a host of other professional fields. Our alumni are trained for meaningful public health careers in government agencies, hospitals and health care organizations, community-based organizations, foundations and philanthropies, policymaking and research councils, and corporations. Students will learn to ask questions, challenge assumptions, and utilize data to preserve, protect, and promote the health and well-being of vulnerable populations locally, nationally, and globally. In particular, students will learn how to be a catalyst for change in Detroit and beyond and facilitate health equity for years to come. Core courses in the public health major and minor allow students to gain knowledge, develop professional skills, and master core competencies in the following areas:

- Social determinants of health
- Health disparities and health equity
- Environmental health
- Epidemiology
- Biostatistics
- Research methods and applied methodological approaches
- Public health intervention and practice

Students wishing to pursue the major or minor in Public Health should meet with an Undergraduate Academic Advisor in Public Health (https://clas.wayne.edu/public-health/advising).

- Health of Populations Minor (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/public-health/health-populations-minor/)
- Public Health (B.S.) (p. 341)
- Public Health Minor (p. 342)

Public Health (B.S.)

The Department of Public Health offers students skill-based professional training across the traditional public health disciplines. Our alumni are trained for meaningful public health careers in government agencies, hospitals and health care organizations, community-based and non-profit organizations, foundations and philanthropies, policymaking and research councils, and corporations. Our students have also gone on to complete graduate training in public health, medicine, pharmacy, social work, physician assistant studies, law, and a wide range of other professional fields. Students learn to ask questions, challenge assumptions, and utilize data to preserve, protect, and promote the health and of populations locally, nationally, and globally.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (https://bulletins.wayne.edu/undergraduate/general-information/admission/) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. Students must receive a grade of C- or better in all Public Health core courses and in all approved electives. A grade point average of 2.0 in both Public Health and general required courses are required for graduation.

Major Requirements

The B.S. in Public Health is offered with three concentration options: 1) Advocacy and Practice concentration; (2) Research and Evaluation concentration; and (3) Interprofessional concentration. Students must complete a minimum of 39 credits distributed as follows *(Core and Elective courses must be completed with a C- or better):*

Code	Title	Credits
Core Courses		
PH 2100	Introduction to Public Health	3
PH 3000	Public Health Administration	3
PH 3100	Social and Behavioral Aspects of Public Health	3
PH 3200	Introduction to Biostatistics	3
PH 3300	Epidemiology	3
PH 3500	Environmental Health	3
PH 4400	Quantitative Methods in Public Health	3
or PH 4500	Qualitative Methods in Community Public Health	
Culminating Course		
PH 5100	Capstone Course in Public Health	3
or PH 5150	Public Health Practicum	
Concentrations		
Choose one of the following concentrations.		15
Advocacy and Practice		
PH 3450	Advocating for Change in Public Health	
PH 3700	Funding Public Health	
Choose three Public Health Elective courses.		
Research and Evaluation [1]		
PH 4650	Health Data Visualization	
PH 4400	Quantitative Methods in Public Health	
or PH 4500	Qualitative Methods in Community Public Health	
Choose three Public Health Elective courses.		
Interprofessional		
PH 3800	Law and Public Health	
PH 4250	Interprofessional Education and Public Health	
Choose three Public Health Elective courses.		
Total Credits		**39**

[1] Students who choose the Research and Evaluation concentration must select the methods course ***not*** taken in the core. This means both methods courses are required within this concentration.

Code	Title	Credits
Elective Courses		
Any 3 Public Health (PH) courses not in the core or required in selected concentration.		
For specific options, please view the Bulletin: https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/public-health/ (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/public-health/coursestext/)		
FPH courses permitted as part of AGRADE.		

Public Health Honors

To be recommended for an honors degree from this program, a student must maintain a cumulative and major GPA of at least 3.30 and complete a minimum of twelve honors course credits, including:

Code	Title	Credits
One of the following required professional PH Methods courses (in an Honors section):		
PH 4400	Quantitative Methods in Public Health	3
or PH 4500	Qualitative Methods in Community Public Health	
One required PH Culminating Course (in an Honors section):		
PH 5100	Capstone Course in Public Health	3
or PH 5150	Public Health Practicum	
One Course in Public Health (PH) with an Honors Option [1]		3-4
One 42XX level Honors Seminar [2]		3

1 Consult an advisor or the University Schedule of Classes (http://classschedule.wayne.edu/) for available Honors Sections.

2 A list of seminars is available in the list of Honors (HON) (p. 591) courses.

Public Health AGRADE Program

AGRADE provides qualifying Public Health students in the College of Liberal Arts and Sciences with an opportunity to pursue an accelerated pathway to the Master of Public Health (MPH) program in the School of Medicine. The MPH prepares students for a professional career at the intersection of public, clinical and/or other allied health sciences.

Application

Undergraduate students enrolled in the Public Health major or minor are eligible to apply. Students can apply to AGRADE during the semester they plan to complete 90 credits, usually during the second semester of their junior year. Students should have senior standing during their first semester as an AGRADE student. They must also have successfully completed the following four undergraduate courses:

Code	Title	Credits
PH 2100	Introduction to Public Health	3
PH 3100	Social and Behavioral Aspects of Public Health	3
PH 3200	Introduction to Biostatistics	3
PH 3300	Epidemiology	3

Applicants must have a 3.6 GPA or better in coursework for their Public Health major or minor, and a cumulative GPA of 3.3 or better.

Applications will be reviewed each semester. The GRE may be waived based on satisfactory performance in the AGRADE courses (at least a B grade in each AGRADE class). Acceptance to the BSPH-MPH AGRADE program is competitive. The MPH program admissions committee reviews all AGRADE applicant applications and makes decisions about admission to this accelerated track.

Requirements

Upon admission, students may elect 3-15 credits in approved graduate M.P.H. courses. These graduate level courses will complete public health major or minor elective requirements or bachelor's degree elective requirements, as well as fulfill the beginning of study toward the master's degree.

Code	Title	Credits
FPH 7011	Foundations of Public Health	3
FPH 7012	Social Justice in Public Health	3
FPH 7015	Biostatistics I	3
FPH 7100	Health Care Organization and Administration	3
FPH 7240	Epidemiology	3

The bachelor's degree will be awarded following the completion of the undergraduate degree requirements. Graduate course work taken in this program must be completed within eight years (from the time that the first graduate course is taken that is counted toward degree requirements) or within six years from the awarding of the bachelor's degree, whichever comes first.

For more information, contact the Public Health undergraduate academic advisors (https://clas.wayne.edu/public-health/advising) and consult the AGRADE FAQs (https://clas.wayne.edu/public-health/programs/agrade).

Public Health Minor

Minor Requirements consist of 18 credits distributed as follows ***(Core and Elective courses must be completed with a C- or better):***

Code	Title	Credits
Core		
PH 2100	Introduction to Public Health	3
PH 3100	Social and Behavioral Aspects of Public Health	3
PH 3200	Introduction to Biostatistics [1]	3
PH 3300	Epidemiology [1]	3
PH 3500	Environmental Health	3
Electives		
Select at least one additional course from the list of electives for the Bachelor of Science in Public Health		3
Total Credits		**18**

1 Before enrolling in PH 3200 or PH 3300, students must complete STA 1020 or MAT 1800 or MAT 2010 or the equivalent with a C-/P or better (or place into MAT 2010).

Students in the Public Health minor must complete all required courses and elective courses with a C- or P grade or better.

Sociology

Office: 2228 Faculty/Administration Building; 313-577-2930
Chairperson: David Merolla
https://clas.wayne.edu/sociology/

The Bachelor of Arts in Sociology is structured to provide students with a broad understanding society and social issues and allow students to develop sociological thinking. Required courses in sociology provide rigorous training in sociological theory, research methods, and quantitative analysis. Internship experiences can be arranged under the guidance of the internship coordinator.

The sociological curriculum also provides training in transferable skills such as critical thinking, quantitative literacy, and along with transferable skills in critical thinking, quantitative literacy, and intercultural awareness that are valuable component of preparation for a variety of careers.

The Bachelor of Arts in Sociology is an ideal major for anyone who:

1. desires scientific knowledge of social relationships as a part of their general education
2. is interested in social justice issues
3. plans to enter a profession such law, medicine or medical administration, social services, non-profit organization, politics, or journalism and new media
4. anticipates a career in social and statistical research or evaluation and planning
5. desires to teach social studies and sociology
6. plans for a career in international studies or service in foreign affairs
7. aspires to graduate professional training in sociology, social work, public health, urban planning, or other related fields

- Sociology (B.A.) (p. 343)
- Sociology Minor (p. 344)

Sociology (B.A.)

Sociology is a social science discipline that enables us to understand how society is organized and how the organization of society affects human lives and behaviors. Sociologists examine the ways in which social categories (such as class, race, gender, age, nationality, or sexuality), and various social institutions (such as kinship, the economy, and political systems) affect human attitudes, actions, and opportunities. By locating the causes of social and individual problems in social organization, sociologists look beyond the individual to understand and find solutions for social problems such as poverty, health disparities, and racial inequality. Sociology offers a unique perspective on social life and is a key part of a liberal arts education.

In the Department of Sociology at Wayne State, we offer a wide array of courses including courses in the study of health and illness, race and gender inequality, and global transnational and comparative sociology. Students majoring in sociology develop broad substantive knowledge in social policy and social issues, along with transferable skills in critical thinking, quantitative literacy, and intercultural awareness that are valuable part of preparation for a variety of careers.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (https://bulletins.wayne.edu/undergraduate/general-information/admission/) to the University.

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees. It is expected that Group Requirements will be fulfilled during the freshman and sophomore years. Language Group Requirements should normally be fulfilled before election of the major.

Major Requirements

Students majoring in sociology are required to elect a minimum of thirty-three credits in the field of sociology, including seven required courses:

Code	Title	Credits
SOC 1010	Understanding Human Society	3
SOC 2200	Sociology as a Vocation I	2
SOC 3200	Methods of Social Research	3
SOC 3220	Introduction to Social Statistics	3
SOC 3050	Basic Sociological Theory	3
SOC 4010	Sociology as a Vocation II	1
SOC 4996	Sociology Capstone	3
Electives (at least 6 credits at the 4000/5000 level)		15
Total Credits		**33**

For SOC 4996, students are required to complete SOC 1010, SOC 2200, SOC 3200, and one sociology course at the 3000/4000 level with passing grades prior to enrollment. SOC 4996 also must also be completed with a grade of D- or better. In addition to required courses, all sociology majors are required to take at least fifteen credits in sociology elective courses. Students must maintain a 2.0 GPA within the major.

Sociology Honors Program

The honors designation is available to sociology students who fulfill all requirements for the major and who maintain a cumulative grade point average of at least 3.3 and at least 3.3 in sociology courses. Students must also complete an Honors thesis as part of SOC 4996 or SOC 4999. The Sociology Honors Program is at least twelve credits and leads to a degree designation "with Honors in Sociology."

Requirements for the Honors Degree are:

1. satisfaction of all requirements for a major in sociology;
2. completion of Honors section of SOC 3200, SOC 3220, or SOC 3050 with grade of C or better (3 credit min);
3. completion of Honors Section of SOC 4996 or SOC 4999 with a grade of C or better (3 credits);
4. complete of Honors Option of one SOC 4000 or SOC 5000 level course with a grade of C or better (3 credits min.)
5. at least one 4200-level Honors seminar (HON 4200-HON4280) with a C or better offered through the Honors Program of the College of Liberal Arts and Sciences.

AGRADE Program (Accelerated Graduate Enrollment)

The Department of Sociology permits high achieving students to participate in the College's AGRADE Program. AGRADE procedures enable qualified students to enroll simultaneously in the undergraduate and graduate programs of the College and apply a maximum of sixteen credits towards both a bachelor's degree and a master's degree in the major field. Students must have a minimum cumulative GPA of 3.3 and final approval from their major department. They must also have completed 90 credits of their undergraduate degree in order to join AGRADE.

For more details about the AGRADE Program, contact the Undergraduate advisor in Sociology (313-577-2930), or the Graduate Office of the College of Liberal Arts and Sciences (313-577-2690).

Sociology Minor

The minor in sociology requires 20 credits of coursework in sociology, including:

Code	Title	Credits
SOC 2200	Sociology as a Vocation I	2
At least one of the following courses:		3
SOC 1010	Understanding Human Society	
SOC 1020	Social Problems	
At least 15 additional SOC credits, including:		15
At least one course at the 2000 level		
At least one of the following:		
SOC 3050	Basic Sociological Theory	
SOC 3200	Methods of Social Research	
SOC 3220	Introduction to Social Statistics	
At least one course at the 4000 or 5000 level		
Total Credits		**20**

Urban Studies and Planning

Office: 3198 Faculty Administration Building; 313-577-2701; Fax: 313-577-0022
Chairperson: Rayman Mohamed
https://clas.wayne.edu/usp

The field of urban studies explores contemporary cities and urban trends and addressed some of today's most pressing problems. Globally, complex systems of urban settlement house the overwhelming majority of the population and dominate their residents' social, economic, cultural, and intellectual lives. In the U.S., in particular, exploring the development and transformation of metropolitan regions is essential to understanding some of the most significant dynamics affecting the nation. Especially pertinent are the powerful forces of suburbanization, political fragmentation, and residential segregation along lines of race and class that reshaped our society in the latter half of the 20th century. These forces structure the resources, activities, and opportunities that unite and divide Americans. Wayne State's Detroit location offers a powerful vantage point from which students may gain valuable insight these complex dynamics.

The profession of urban planning takes major responsibility for the development of comprehensive plans and programs for local communities as well as larger regional units. These plans visualize future conditions of social, economic, physical and environmental change, and provide an estimate of the community's long-range needs for various facilities and services. Professional urban planners perform a variety of tasks such as developing plans for housing, transportation, rehabilitation of blighted metropolitan areas, and improving the appearance and efficiency of communities. The program seeks to prepare individuals for working with local and state public agencies, nonprofit organizations and for consultants and others in the private sector.

- Urban Studies and Planning (B.A.) (p. 344)
- Urban Studies Minor (p. 346)
- Urban Sustainability Minor (p. 346)

Urban Studies and Planning (B.A.)

The field of urban studies explores contemporary cities and urban trends and addressed some of today's most pressing problems. Globally, complex systems of urban settlement house the overwhelming majority of the population and dominate their residents' social, economic, cultural, and intellectual lives. In the U.S., in particular, exploring the development and transformation of metropolitan regions is essential to understanding some of the most significant dynamics affecting the nation. Especially pertinent are the powerful forces of suburbanization, political fragmentation, and residential segregation along lines of race and class that reshaped our society in the latter half of the 20th century. These forces structure the resources, activities, and opportunities that unite and divide Americans. Wayne State's Detroit location offers a powerful vantage point from which students may gain valuable insight these complex dynamics.

Admission Requirements

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Program Requirements

Candidates must complete 120 credits in course work including satisfaction of the University General Education Requirements (p. 24) and the College of Liberal Arts and Sciences Group Requirements (p. 242), as well as the Departmental major requirements cited below. All course work

must be completed in accordance with the regulations of the University (p. 40) and the College (p. 241) governing undergraduate scholarship and degrees.

Major Requirements

Students majoring in Urban Studies and Planning are required to complete a minimum of thirty-four credits. This consists of the completion of three or four credits (one course) in Fundamentals of Urbanism, 16 credits (five courses) in Fundamentals of Urban Planning, 12 credits (4 courses) in Planning Practice, and one 3-credit Urban Studies and Planning Elective from the approved list or from additional courses not included in the list but approved by the undergraduate director within the Department of Urban Studies and Planning.

Code	Title	Credits
Fundamentals of Urbanism		
Select one of the following:		
US 2000	Introduction to Urban Studies	4
US 2200	Global Urbanism	3
GPH 3130	Introductory Urban Geography	4
Fundamentals of Urban Planning		
The following courses are required:		3-4
UP 3530	Urban and Regional Planning	3
UP 4420	Methods for Urban Studies	3
US 4510	Cities and Regions	3
US 4620	Urban Studies Senior Capstone Research	3
GPH 3600	Introduction to Geographic Information Systems	4
Planning Practice		
Select four of the following courses:		6
GPH 4600	Advanced Geographic Information Systems	
US 3550	Public Health and the City	
UP 3730	Introduction to Land Use and Transportation	
UP 3830	Community and Economic Development	
UP 4460	Sustainable Cities	
Electives		
Select a minimum of three credits from the course list below. Any required course not already taken may also serve as an elective.		3

Elective Courses

Code	Title	Credits
AFS 2010	African American Culture	4
AFS 2210	Black Social and Political Thought	4
AFS 2350	Black Detroit	3
AFS 2600	Race and Racism in America	3
AFS 3160	Black Urban History	4
AFS 3180	Black Social Movements	4
ANT 2200	Lost Cities and Ancient Civilizations	3
ANT 2020	Global Detroit	3
ANT 2400	Food and Culture	3
ANT 3020	Introduction to Archaeology	3
ANT 3100	World Cultures	3
ANT 3111	Digital Storytelling and Ethnic Detroit	3
ANT 3410	Global Health	3
ANT 5060	Urban Anthropology	3
CRJ 3050	Mental Health and Crime	3
CRJ 3120	Politics of the Criminal Justice Process	3
CRJ 3200	Police and Society	3
CRJ 3350	Corrections	3
ELR 2500	Introduction to Labor Studies	4
GLS 2700	Introduction to Global Stories	3
GLS 2800	Introduction to Global Issues and Institutions	3
GLS 2900	Intercultural Competence for a Global World	3
GPH 4600	Advanced Geographic Information Systems	4
PCS 2000	Introduction to Peace and Conflict Studies	3
PCS 2050	The Study of Non-Violence	3
PH 2100	Introduction to Public Health	3
PH 3100	Social and Behavioral Aspects of Public Health	3
PH 3300	Epidemiology	3
PH 3500	Environmental Health	3
PS 2240	Introduction to Urban Politics and Policy	4
PS 2410	Introduction to Public Policy	4
PS 2420	Ethics and Politics of Public Policy	4
PS 3250/ HIS 3240	Detroit Politics: Continuity and Change in City and Suburbs	4
PS 4460	Techniques of Policy Analysis	4
UP 3530	Urban and Regional Planning	3
SOC 2201	Race Relations in Metro Detroit	3
SOC 2203	Social Psychology	3
SOC 2207	Sociology of Development	3
SOC 2300	Social Inequality	3
SOC 2510	People on the Move	3
SOC 2210	Sociology of Health and Medicine	3
UP 3140	Urban Visualization	3
US 4000	Internship	1-4
UP 4460	Sustainable Cities	3
UP 5650	Metropolitan Detroit	3
UP 5820	Urban and Regional Economics	4
UP 6320	Quantitative Techniques I	4
US 2350	Black Detroit	3
US 3650	History of Detroit	3
US 3900	Topics in Urban Studies and Geography	3

Urban Studies Honors Program

Students with a grade point average of 3.3 or higher may be admitted to the Honors Program in Urban Studies. Department requirements (15 credits minimum):

- Maintain a 3.3 grade point average.
- Complete one HON 42xx-level Honors seminar (3 cr)
- US 4620 honors section: Thesis. (3 cr.): A senior thesis under the direction of a full time faculty advisor in their major
- Accumulate at least 9 credits in honors-designated course work, honors section, or honors option, within the major of Urban Studies coursework.

The Accelerated Graduate Enrollment (AGRADE) program allows students to enroll simultaneously in the Master of Urban Planning and the undergraduate major in Urban Studies, or an aligned field. Students can apply a maximum of 16 credits towards both their undergraduate degree and the Master of Urban Planning. The 16 credits are paid at the undergraduate tuition rate. Because the Master of Urban Planning is a professional degree, the program accepts AGRADE students from all undergraduate majors, though students from Urban Studies or closely aligned fields are more likely to benefit from having all 16 credits double counted.

Students must apply to the AGRADE program during the semester in which they earn 90 credits toward their undergraduate degree (typically during junior year). Applicants must have a minimum cumulative GPA of 3.3 and final approval from their major department. Early planning is essential. Courses in the Master of Urban Planning that typically count toward AGRADE include:

Code	Title	Credits
UP 5010	Resources and Communication in Planning	3
UP 5110	Urban Planning Process	3
UP 6120	Planning Studies and Methods	4
UP 6320	Quantitative Techniques I	4
UP 6510	Urban and Regional Systems	3
UP 6700	Geographic Information Systems	4

For more information on AGRADE, contact the Graduate Director for the Master of Urban Planning program.

Urban Studies Minor

The requirements for a minor in Urban Studies include at least three courses from the core requirements for the Urban Studies Major (https://bulletins.wayne.edu/undergraduate/college-liberal-arts-sciences/urban-studies-planning/urban-studies-ba/#requirementstext), including:

Code	Title	Credits
US 2000	Introduction to Urban Studies	4
GPH 3130	Introductory Urban Geography *	4
US 4510	Cities and Regions *	3

* This course cannot be listed or cross-listed as part of a student's declared major program.

The remainder of a student's 18 credits must be completed by selecting courses from the list of Urban Studies Electives, or from additional courses not included in the list but approved by the Undergraduate Director of the Department of Urban Studies and Planning.

Urban Sustainability Minor

The Minor in Urban Sustainability will provide students with an opportunity to further their understanding of the myriad issues in fostering environmental preservation, equity, and economic development (the 3-Es of sustainability) in urban areas, while providing them with a foundation for advancing their academic and professional interests in the many directions related to sustainability. The minor requires the completion of 18 credits.

Required Courses

Code	Title	Credits
US/GPH/HIS/PS 2000/SOC 2500	Introduction to Urban Studies	4
GPH 3130	Introductory Urban Geography	4
UP 4460	Sustainable Cities	3

Elective Courses

Code	Title	Credits
Select two electives from the following:		7
AFS 2350	Black Detroit	
AFS 2600	Race and Racism in America	
AFS 3160	Black Urban History	
AFS 3180	Black Social Movements	
ANT 2020	Global Detroit	
ANT 2400	Food and Culture	
ANT 3111	Digital Storytelling and Ethnic Detroit	
ANT 3100	World Cultures	
ANT 3410	Global Health	
BIO 1500	Basic Life Diversity	
BIO 3500	Ecology and the Environment	
BIO 4130	General Ecology	
BIO 5440	Terrestrial Ecology	
BIO 5540	Landscape Ecology	
CHM 1000	Chemistry and Your World	
CHM 1020	Survey of General Chemistry	
CHM 1030	Survey of Organic/Biochemistry	
CHM 1040	Chemistry Skills and Reasoning	
CHM 1060	General, Organic and Biochemistry	
CHM 1100	General Chemistry I	
CHM 1130	General Chemistry I Laboratory	
CHM 1240	Organic Chemistry I	
CHM 1250	Organic Chemistry I Laboratory	
ESG 1010	Geology: The Science of the Earth	
ESG 1011	Geology: The Science of the Earth Laboratory	
ESG 1020	Interpreting the Earth	
ESG 1050	Oceanography	
ESG 1500	Introduction to Environmental Science	
ESG 1370	Meteorology: The Study of Weather	
ESG 2130	Mineralogy	
ESG 3000	Introduction to Environmental Analysis Using Geographic Information Systems (GIS)	
ESG 3100	Air and Water in Environmental Systems	
ESG 3160	Petrology	
ESG 3300	Structural Geology	
ESG 3400	Principles of Sedimentology and Stratigraphy	
GLS 2800	Introduction to Global Issues and Institutions	
GPH 3600	Introduction to Geographic Information Systems	
PS 2410	Introduction to Public Policy	
PS 2420	Ethics and Politics of Public Policy	
PS 3250	Detroit Politics: Continuity and Change in City and Suburbs	
PS 3450	Environmental Policy and Politics	
PS 4460	Techniques of Policy Analysis	
PH 2100	Introduction to Public Health	
PH 3500	Environmental Health	
PH 3300	Epidemiology	
US 4000	Internship	
PH 3100	Social and Behavioral Aspects of Public Health	
PH 3550	Public Health and the City	
SOC 2203	Social Psychology	
SOC 2207	Sociology of Development	
SOC 2300	Social Inequality	
SOC 2510	People on the Move	
US 2200	Global Urbanism	
US 2350	Black Detroit	
US 3530	Urban and Regional Planning	
US 3550	Public Health and the City	

US 3650	History of Detroit
US 3900	Topics in Urban Studies and Geography
US 4510	Cities and Regions

School of Medicine

Dean: Wael Sakr

The Wayne State University School of Medicine has been operating and granting degrees as a college of medicine since 1868. Originally called the Detroit Medical College, it was founded by Detroit native Theodore A. McGraw, M.D.

In 1879, a second medical college, the Michigan College of Medicine, opened in Detroit. The two colleges soon united to become the Detroit College of Medicine. In 1919, the Detroit College of Medicine and Surgery, as it was then known, became an official part of the Detroit Board of Education and thus an important unit in the rapidly developing Colleges of the City of Detroit. In 1933, the name of the Colleges of the City of Detroit changed to Wayne University in honor of the American Revolutionary War hero, Gen. Anthony Wayne. Wayne University became a state institution in 1956.

The School of Medicine entered its second century with a period of substantial growth and the creation of a new campus in midtown Detroit. With the opening of the Gordon H. Scott Hall of Basic Medical Sciences in 1971, the size of the entering class was increased to 256 students. With a recent increase to 290 medical students in entering classes, the Wayne State University School of Medicine is the largest single-campus medical school in the country, and the fourth largest overall.

Mission of the School

The primary mission of the Wayne State University School of Medicine is to educate a diverse student body in an urban setting and within a culture of inclusion, through high quality education, clinical excellence, pioneering research, local investment in our community and innovative technology, to prepare physician and biomedical scientific leaders to achieve health and wellness for our society.

The School of Medicine offers educational programs leading to the following degrees:

- Doctor of Medicine
- Doctor of Philosophy
- Master of Science

Graduate education in clinical fields, continuing medical education and post-doctoral training programs are offered. Two hundred and ninety students are admitted annually to the M.D. program and approximately 380 students are enrolled in doctoral or Master's degree study in more than twenty program and concentration areas, predominantly in the basic medical sciences. More than 2,000 learners are post-graduate trainees as medical residents, post-doctoral fellows or fellows in twenty-nine clinical research programs. The combined M.D./Ph.D. program admits highly qualified candidates each fall to participate in a rigorous seven- to eight-year program of study supported by scholarships from the University. Continuing education programs, seminars and colloquiums serve the faculty and students, as well as professionals throughout the community, as a resource for ongoing developments in the health sciences. In addition to degree programs, the School of Medicine offers courses in many basic medical science disciplines appropriate for students in other colleges and schools within the University. Non-degree enrollment in basic science courses at the graduate level is permitted on a limited basis for qualified students.

Research focusing on human health is the foundation of activities in the School of Medicine. Fundamental and applied research in biomedical sciences, clinical specialties and health care systems is directed by faculty. Research programs are supported by more than ninety million dollars annually through research grants, contracts and gifts. Members of the faculty serve on scientific boards, panels, study groups and in professional leadership roles in health care regionally, nationally and internationally. The research facilities of the School of Medicine are modern, well-equipped and growing with the pace of technological advances.

Clinical services provided by the faculty, post-graduates and students are rendered predominantly through the Detroit Medical Center and Henry Ford Health System institutions. Through affiliations between the Detroit Medical Center and Wayne State University and the Henry Ford Health System and Wayne State University, DMC and Henry Ford serve as the primary teaching hospitals for the School of Medicine. The School is also closely affiliated with the John D. Dingell Veterans Administration Medical Center for education, research and clinical programs. The School of Medicine perceives a responsibility to the population of the Detroit metropolitan region as a whole, both as an educational institution and as a supplier of physicians who are highly-skilled providers of medical care.

Facilities: Wayne State University Medical School

Gordon H. Scott Hall provides facilities for pre-clinical and basic science education, basic science departments and research laboratories for basic and clinical programs. The dean's offices and the dean's administrators' offices are located here.

The Helen Vera Prentis Lande Medical Research Building houses research laboratories for clinical and basic science faculty.

The Vera P. Shiffman Medical Library houses a full medical reference library, as well as computer instruction facilities.

The Louis M. Elliman Clinical Research Building provides research laboratories, experimental surgical suites and specialized research facilities for the Departments of Internal Medicine, Surgery, Pediatrics and Neurology.

The C.S. Mott Center for Human Growth and Development provides research space for programs in human reproduction, growth and development.

The Hudson-Webber Cancer Research Center is the translational research flagship facility for Wayne State University cancer research in partnership with the Barbara Ann Karmanos Cancer Institute.

The Richard J.Mazurek, M.D., Medical Education Commons plays a key role in enriching medical education by providing access to spaces and services that enhance campus life, including a convenient location for students, faculty, health professionals and guests; state-of-the-art classrooms and laboratories; and educational opportunities such as a modern patient simulation technology, the Kado Clinical Skills Center.

In addition to training at the Detroit Medical Center (DMC), medical students may train at eighteen other medical facilities, as well as hundreds of local physician offices.

The Wayne State University Physician Group (WSAPG) affiliated with the Wayne State University School of Medicine. Many WSUPG physicians serve as faculty and teach medical students and hospital residents.

The School of Medicine is an active partner in nationally- and regionally-recognized research programs, and has defined several areas of noted excellence, including cancer, women's and children's medicine, cardiology and cardiovascular health, the neurosciences and ophthalmology.

Facilities: Detroit Medical Center and Other Clinical Education Partners

The Detroit Medical Center includes:

Children's Hospital of Michigan, which specializes in medical research and treatment of infants and children - in particular, pediatric hematology, oncology, cardiac surgery and the treatment of renal disease - and houses the state's poison control center.

Detroit Receiving Hospital and University Health Center, which specializes in the treatment of adult emergency and trauma cases, and includes special facilities for the care of emergency psychiatry, burn and spinal injuries. The University Health Center, connected to the hospital, is one of the country's largest multidisciplinary outpatient facilities, with twelve primary care service groups and more than twenty-five medical specialty services for ambulatory care.

Sinai-Grace Hospital, a full-service hospital offering a wide range of outpatient services.

Harper Hospital, which specializes in oncology, cardiology general surgery and a number of additional surgical specialties and sub-specialties.

Huron Valley-Sinai Hospital, located in a northern suburb, provides community hospital inpatient and outpatient services.

Hutzel Hospital, which includes among its areas of excellence obstetrics, gynecology, gynecologic oncology, ophthalmology, neonatology, perinatology and orthopedic surgery.

Rehabilitation Institute of Michigan, which uses an interdisciplinary approach to help physically disabled people reach their maximum level of independence.

Kresge Eye Institute, which is a major center for research and treatment of eye diseases.

Barbara Ann Karmanos Cancer Institute, which provides comprehensive cancer prevention, screening, diagnostics, treatment and supportive care to more than 10,000 new patients annually, and is a National Institutes of Health National Cancer Institute Comprehensive Cancer Center.

Gershenson Radiation Oncology Center, which provides technologically advanced radiation oncology services for all DMC facilities. Unique services include neutron therapy, Gamma Knife procedures and total body irradiation.

Henry Ford Hospital is a 802-bed tertiary care hospital, education and research complex located in Detroit's New Center area. The hospital is a multi-organ transplantation center and Level 1 trauma center. Henry Ford Hospital is listed in "Best Hospitals in America" Its doctors are routinely named among America's best. Henry Ford Hospital received the 2011 Malcolm Baldrige award, the nation's highest honor for innovation and performance excellence in health care.

Oakwood Hospital & Medical Center has 632 beds, and is a full-service teaching hospital in partnership Wayne State University that has served southeast Michigan for more than fifty years. OHMC is the tertiary hub for the three community hospitals of the Oakwood Healthcare System, providing high-level clinical care in a setting designed around the individuality of each patient. OHMC offers state-of-the art emergency medicine, general medicine and outpatient surgery, diagnostic imaging, labor and delivery/neonatal intensive care, pediatrics, intensive care and coronary units. Also opened in 2005, is the Fitzgerald Pavilion, the latest in fully integrated surgical suites. This $110 million expansion brings the next generation of surgery to southeast Michigan and offers the best surgical care.

The John D. Dingell VA Medical Center is a 108-bed full service medical center that provides primary, secondary and tertiary care. The medical center provides acute medical, surgical, psychiatric, neurological, and dermatological inpatient care. Primary care, medical and surgical specialties are also provided, as are mental health clinics that include substance abuse treatment, a day treatment center and a community-based psychiatric program with the goal of maintaining patients in their home community. The medical center also operates a 109-bed nursing home care unit and a Health Care for Homeless Veterans program.

St. John Health is comprised of seven hospitals plus more than 125 medical facilities in southeast Michigan offering heart, cancer, obstetrics, neurosciences, orthopedics, physical rehabilitation, behavioral medicine, surgery, emergency and urgent care.

Crittenton Hospital Medical Center provides a full continuum of clinical programs nationally ranked for quality excellence and a medical staff of nearly 500 physicians, representing a wide range of medical specialties providing primary, secondary and tertiary-level care. Crittenton has newly-renovated facilities and cutting-edge technology for providing patients with the most advanced medical care on both an inpatient and outpatient basis. Crittenton provides a campus for residents from Wayne State University's School of Medicine who are specializing in Family Medicine and Otolaryngology.

Shiffman Medical Library and Medical Learning Resource Centers

The Shiffman Medical Library serves as the health sciences library for Wayne State University, including the School of Medicine, and the Eugene Applebaum College of Pharmacy and Health Sciences. The library encourages all Wayne State University students to take advantage of the wide range of health information resources and reference assistance available. In addition, the library provides open and restricted access computing areas for WSU students, faculty and staff. In keeping with its ongoing outreach mission, the library welcomes community residents conducting research, seeking health information and for other educational purposes. Online and remote access to digital information resources of the Shiffman Medical Library and all university libraries require a WSU AccessID. Contact the library at askmed@wayne.edu or 313-577-1088, or consult the School of Medicine website for instructions on accessing electronic biomedical information.

When not in use, a twenty-seat computer training lab is set aside for study. The library makes available course materials that are placed on reserve at its service desk, which also provides copies of textbooks, media and a variety of other resources.

Student Affairs

Services include: career and supportive counseling; crisis intervention; liaison for referrals; guidance for residency application; support for student government and organization activities as well as oversight of Special Events, the Health and Wellness Program and the Medical Student Faculty Mentoring Program. The staff is committed to assisting students in every way possible as the students work toward M.D. degrees. These programs are part of the School's commitment to provide each matriculant with support services so that the rigorous educational program can be presented within as comfortable an environment as possible.

Services for Students

Health Services: Students are required to have personal comprehensive health insurance coverage through the School of Medicine health insurance plan. Students may qualify for the waiver program.

Counseling: Appointments for academic, personal and career counseling can be arranged through the Office of Student Affairs.

Mentoring: Faculty mentors are provided through the Office of Student Affairs for the purpose of giving guidance and support to the medical students throughout their medical school careers.

Health and Wellness: Health and Wellness Program was developed so that each student optimizes healthy coping strategies, finds good balance and achieves academic success throughout medical school.

Academic Resources Counseling: Referrals for academic support can be made by the student's assigned counselor to the Office of Learning and Teaching where an academic specialist is available to all students seeking to improve and/or enhance academic performance. Individual tutoring services and group review sessions are available. The mission of the School of Medicine's Office of Learning and Teaching is to provide educational services and programs for medical students who need academic support to improve their academic progress and for students to enhance their academic achievements. This Office also provides programming for Step 1 and Step 2 CK and CS support.

Medicine Degrees and Certificates (Graduate Programs)

There are two major types of academic programs in the School of Medicine - those leading to the M.D. degree and postgraduate medical education, and those programs in the basic medical sciences that offer Master of Science or Doctor of Philosophy degrees. For descriptions of these degree programs, see the Wayne State University Graduate Bulletin.

Doctor of Medicine (M.D. Program)

Office of Enrollment Management Services

Office of Admissions
Mazurek Education Commons
320 E Canfield, Suite 322
Detroit, MI 48201
Telephone (313) 577-1466
mdadmissions@wayne.edu

Admission to M.D. Program

The School of Medicine accepts 290 students for its entering class. The students are selected from a large number of applicants who apply through the American Medical College Application Service (AMCAS).

Academic Requirements for Admission

Wayne State University School of Medicine requires applicants for admission to have earned a bachelor's degree.

Required subjects for baccalaureate preparation are:

- general physics;
- inorganic and organic chemistry;
- general biology;
- college writing or composition.

It is recommended that students complete lab work in the above science courses. and take a course in statistics, ethics, and biochemistry. The student is urged to select additional subjects which will contribute substantially to a broad cultural background.

It is to be noted that when students are accepted before completion of their premedical requirements, they must maintain a satisfactory scholastic average in their continued premedical work to warrant enrollment in the School of Medicine.

The *Medical College Admission Test* is required of all applicants for admission into the first year class. Students seeking admission should take this test no later than September of the year prior to matriculation. After a preliminary review of application credentials, interviews are held with those applicants who warrant further consideration.

Admission to the First-Year Class

The School of Medicine adheres to the acceptance procedures of the Association of American Medical Colleges, including the 'Early Decision Plan.' Admission procedures of the School are:

1. No place in the first-year class shall be offered to an applicant more than one year before the actual start of instruction for that class.
2. Following the receipt of an offer of a place in the first-year class, a student shall be allowed three weeks in which to make a decision.
3. No student who has at any time been requested to withdraw for any reason from a medical school in which he/she has been registered will be accepted by the WSU School of Medicine. Students who have been dropped for poor scholarship by the School of Medicine should not expect favorable consideration for readmission.
4. Any applicant accepted by the School of Medicine who does not complete enrollment must apply for readmission and meet all requirements in force at the time of the new application.

Selection Factors

The Committee on Admissions will select applicants who, in its judgment, will make the best students and physicians. Consideration is given to the entire record, including grade point average, Medical College Admission Test scores, recommendations and interview results (one-on-one interview and multiple mini-interviews), as these reflect an applicant's personality, maturity, character and suitability for medicine. Additionally, the committee regards as desirable certain health care experiences, such as volunteering or working in hospitals, hospices, nursing homes or doctor's offices. The committee also values experience in biomedical laboratory research. Following an initial screening process, students with competitive applications are selected to complete a secondary application. Special encouragement is given to candidates from medically underserved areas in Michigan.

As a state-supported school, the institution must give preference to Michigan residents; however, out-of-state applicants are encouraged to apply. An applicant's residency is determined by university regulations. Applicants must be a U.S. or Canadian citizen or U.S. permanent resident to be eligible for admission. Students whose educational backgrounds include work outside the United States must have completed two years of course work, including the prerequisite courses at a U.S. or Canadian college or university. Canadian citizens are considered non-resident for both admission and tuition purposes. Interviews are required but are scheduled only with those applicants who are given serious consideration. Students are urged to apply by November 1.

Application and Acceptance Policies

The School of Medicine adheres to the acceptance procedures of the Association of American Medical Colleges, including the 'Early Decision Plan.' Admission procedures of this School are:

1. An American Medical College Application Services application must be filed between June 1 and December 31 of the year preceding anticipated matriculation.
2. Applicants must respond to acceptance offer within three weeks of the offer.

Diversity and Integrated Student Services

This unit supports the medical school to maintain its representation of diversity across economic, personal and social dimensions. This is accomplished through pipeline outreach programs and special projects that present a combination of academic and extracurricular activities designed to inform high school, undergraduate and post-baccalaureate students about career opportunities in medicine and other health professions, and prepare them to gain admission.

A special program feature of the unit is the Post Baccalaureate Program. This medical school preparatory program offers an opportunity to a small number of applicants who are Michigan residents, and whose undergraduate academic achievement has been compromised by certain disadvantaging factors to gain admission into medical school. Successful completion of this special one year program facilitates entry into medical school for those selected applicants from disadvantaged backgrounds.

Registration Requirements

Physical Examination

Each student must present proof of a physical examination at or before registration for the first year. Students are also required to be annually tested for TB (skin test or chest x-ray). Additional vaccines and titers may be required.

Health Insurance

Health insurance is mandatory and students must demonstrate proof of insurance at registration. Students have the option of purchasing the group plan offered by the Medical School, which can be purchased at registration.

Disability Insurance is mandatory and can be purchased at registration.

Criminal Background Check: All accepted applicants to the medical school will be required to complete a criminal background check through AMCAS and Certiphi, the selected vendor for criminal background checks.

Transcripts

Transcripts of all university-level work must be on file in the Registrar's Office for each medical student, including the degree statement from the university from which the student obtained his/her degree.

College of Nursing

Dean: Ramona Benkert

The Wayne State University College of Nursing is regionally, nationally, and internationally recognized for educating undergraduate and graduate students as competent, compassionate, and evidence-driven practitioners and scholars in the nursing profession. The College prepares nurses who apply knowledge from the liberal arts, natural and social sciences, and the discipline of nursing to promote health, prevent disease, and improve outcomes across populations and care settings.

The College is committed to research and scholarly activity that advances nursing science, improves health outcomes, and strengthens health equity in alignment with the AACN Essentials (2021). Our programs integrate knowledge for nursing practice (Domain 1) with a focus on person-centered care (Domain 2), population health (Domain 3), and scholarship for the nursing discipline (Domain 4). Students are educated to apply principles of quality and safety (Domain 5), collaborate through interprofessional partnerships (Domain 6), and engage in systems-based practice (Domain 7) to ensure high-quality, equitable care delivery.

As a discipline and a profession, nursing at Wayne State University reflects both the art and science of caring. Students learn to apply informatics and healthcare technologies (Domain 8) to support clinical decision-making, model professionalism grounded in integrity, civility, accountability, and cultural humility (Domain 9), and demonstrate leadership and self-reflection as part of their ongoing personal and professional development (Domain 10).

Learners from diverse backgrounds enter the College to begin or continue their education and thereby enrich the learning environment. The faculty supports the right of students to engage in inquiry, reflection, and dialogue as essential processes for developing clinical judgment and advancing nursing knowledge. Ongoing evaluation by both students and faculty ensures continuous improvement and maintains the integrity of the program.

As members of the academic and professional community, the faculty of the College of Nursing are committed to advancing nursing through teaching, research, practice, and service. The faculty uphold academic freedom, shared governance, and the continual integration of new knowledge into practice. Through scholarship, professional engagement, and community partnerships, the faculty enhances the reputation of the College and the University locally, nationally, and internationally. College's and the University's reputations

Accreditation

The baccalaureate program is approved by the Michigan State Board of Nursing, and graduates are admitted to the NCLEX-RN licensing examination. Upon passing the NCLEX-RN, graduates are eligible for licensure in Michigan and can also apply for licensure by endorsement to practice in any other U.S. state or territory. The baccalaureate, master's doctoral nursing practice programs of the College are accredited by the Commission for Collegiate Nursing Education (CCNE).

Academic Regulations

For complete information regarding academic rules and regulations of the University, students should consult the Academic Regulations (p. 40) section of this bulletin. The following additions and amendments pertain to College of Nursing students.

Academic Regulations Terminology

- *Professional course* is any course required in the professional nursing curriculum.
- *Satisfactory grade* is a grade of C (2.0) or better.
- *Unsatisfactory grade* is a grade below 2.0.
- *Probation* is a restricted status in the nursing program.
- *Exclusion* from the program means that the student may not register in the program. (Continued registration in the University will necessitate that the student processes a change of major to another academic program.)

Attendance

Attendance in classes and clinical practice is not just a requirement; it's a serious commitment. Students are expected to maintain an exemplary attendance record, demonstrating their dedication to their studies and future profession. Tardiness or failure to report to class may result in a reduction of the final course grade or even dismissal from the course, underlining the importance of punctuality and regular attendance.

First Day of Class: Due to time constraints and the specific nature of the curriculum, the first day of each course is compulsory, e.g., MANDATORY. Accordingly, attendance on the first day of class and clinical is mandatory. Failure to attend the first session of any scheduled course and clinical will result in penalties, including the possibility of being administratively dropped from the course. Tardiness or failure to report to class may result in a reduction of the final course grade or even dismissal from the course, underlining the importance of punctuality and regular attendance. If a student is removed from a class due to non-attendance, they will not be guaranteed a clinical space in the subsequent class offering. Moreover, non-attendance may result in an inability to secure a clinical placement in subsequent course offerings.

Travel Requirements: The student is responsible for making all travel arrangements necessary to complete degree requirements, including travel arrangements required to reach all clinical agencies.

Online Learning Assessments: The College of Nursing integrates various digital educational software packages into the UG Nursing curriculum. These include tutorials, reviews, and assessments incorporated into specific courses. If course assessments are not completed as outlined in the course syllabi, students can potentially receive an incomplete "I" grade for that assignment/course unless stated otherwise in the course syllabus. Students will have twelve months to convert the "I" grade into a passing grade (A to C). While carrying an "I" grade, students will not be permitted to progress in their studies.

Examinations

Final Examinations Policy

Final examinations in all College of Nursing courses shall be conducted in accordance with the official examination schedule published by the Wayne State University Office of the Registrar.

1. Scheduling: Final examinations will be administered on two occasions:

a. The date and time established by the University and listed on the official final examination schedule.

b. The Wednesday immediately following the University-scheduled final examination date.

2. Alternate Arrangements: The College of Nursing will not schedule additional or alternate final examination dates beyond the two established opportunities. Students are expected to make every effort to be available for both.

3. Missed Examinations and Incompletes: Students who are unable to complete both scheduled examination opportunities due to an approved Special Circumstance (as defined below) will be assigned a temporary grade of Incomplete (I) in accordance with University policy. The student will have a maximum of twelve (12) months from the end of the term to complete all outstanding course requirements and convert the "I" grade to a passing grade (A–C). Failure to do so within this timeframe will result in automatic conversion of the "I" to a failing grade (F).

4. Clinical Courses: For courses with a clinical component, the College will make every reasonable effort to accommodate the student in the next available offering, subject to space and clinical site availability. The College cannot, however, guarantee when a clinical placement will be available.

5. Special Circumstances: Special Circumstances are defined as documented events beyond the student's control that significantly interfere with examination attendance or completion. Examples include serious illness or injury, death in the immediate family, military service obligations, court appearances, or other emergencies verified through official documentation.

Missing an Examination

Students must initiate contact with their course coordinator or faculty of record before any missed examination to arrange alternative examination arrangements. This communication should occur at least 24 hours before the scheduled exam unless unforeseen circumstances prevent such notice.

Other Examinations or Assessments (e.g., Midterms)

The regulations for other exams will be outlined in the specific course syllabus. However, the rules for informing the College about missing an exam and the requirements for meeting the Special Circumstances Rule (detailed below) to take a makeup exam will still be in effect.

Special Circumstance Rules

Below are examples of events that are considered ***Special Circumstances*** for missing examinations. Students must provide **documentation** when claiming these circumstances.

- Illness on the examination day or receiving health treatment: A healthcare provider note must be provided upon return to campus/clinical.
- Death in the "immediate" family only: Valid obituary information or a Death Certificate is required.
- Jury Duty or Court Summons: A Jury duty notification or Court notice of summons is necessary.
- Incarceration: A "court notice" is required.
- Military Service: A "service notice" is required.
- Natural Disasters: verified by the university through a posting on the university website

If students are in any of these circumstances, they must immediately notify the course coordinator/faculty of record. Such students must provide the necessary documentation as evidence of their need to

take the make-up examination. Documents must be submitted to the instructor within **forty-eight hours** of missing the examination.

Time Limitation

The Traditional Program (including B.S.N. Direct Admit for First Year students) is ideally completed within three calendar years of program admission unless the UG Scholastic Policy and Admissions (SPA) Committee grants an extension.

The Second Career/Second Degree Program (including B.S.N. for Veterans students) is ideally completed within five consecutive semesters following program admission unless the Scholastic Policy and Admissions (SPA) Committee grants an extension.

Students who experience delays in their programmatic progress due to academic failure or extended leaves of absence may need to retake courses or complete additional coursework to ensure they are adequately prepared for professional nursing practice upon graduation. The Scholastic Policy and Admissions (SPA) Committee will decide whether to repeat or take additional coursework.

Authorized Leave of Absence

A student may request a *leave of absence* when personal circumstances impede their ability to allocate sufficient time to academic pursuits, jeopardizing the reasonable expectation of success in a specific program. Such requests are processed by the Associate Dean for Academic and Clinical Affairs in conjunction with the UG Scholastic Policy and Admissions Committee. Students are advised to liaise with the Office of Student Affairs for the requisite documentation and pertinent deadlines for leave of absence requests. Leaves of absence are exclusively granted to students in **good** academic standing. Students approved for a leave of absence may only resume their studies if space is available in their designated program of study. Any student undertaking an unauthorized leave of absence will be deemed to have voluntarily withdrawn from the program and must reapply for admission to the College.

Licensure Preparation

All new undergraduate students entering the program from Fall 2002 onwards who do not hold Registered Nurse (RN) status must undertake nationally normed tests at various points throughout their undergraduate program, e.g., the HESI examinations. The course syllabi will specify the application of this requirement and the weightage of the test scores in the course grading based on the CON UG HESI Testing policy. The successful completion of these test requirements is fundamental to the successful completion of the respective courses. Furthermore, passing the HESI Comprehensive Exit Exam, administered during the senior year, is an essential program requirement for degree certification by the Office of Student Affairs (OSA). Although this HESI Exit exam requirement is currently in NUR 4060, this remains a **CON programmatic graduation requirement.**

To successfully fulfill the requirements of the HESI Comprehensive Exit Exam, students must attain a **minimum** score of 900, e.g., "C" on their testing attempt. Suppose a score below 900 is achieved on the first try. In that case, non-registered nurse graduating students must complete an approved NCLEX Review course in preparation for the NCLEX licensure examination as an integral component of the program and degree certification.

Students who obtain a score of 900 or higher on the initial HESI Comprehensive Exit Exam are ***exempt*** from the requisite NCLEX Review course, although they retain the option to partake in the review. The financial responsibility for the NCLEX Review course rests with the individual student, with the average cost typically amounting to ~ $90.00. However, if the review is completed within **two weeks** of purchase, Elsevier will waive the cost of the review (considered a "trial period." All program requirements must be met before a student can be officially certified as having fulfilled their degree requirements with the State of Michigan Licensing Board. This includes all coursework in your senior year courses.

Students are permitted **three** opportunities to complete the HESI Comprehensive Exit Exam. The initial attempt is scheduled for the second week of NUR 4060 during the senior year, and subsequent exit exams will occur starting week 14 of NUR 4060. If students score 900 or higher on their first attempt on the HESI Exit exam, they have met the criteria and are not required to take subsequent HESI Exit scheduled exams. The students' fees cover all expenses related to the HESI Exit exam. If a student does not attain a score of 900 after three attempts, a grade of "C" will be assigned for NUR 4060 only if all coursework has been duly fulfilled; otherwise, an "I" grade will be issued until all coursework is completed. Non-compliance with this criterion may impact their degree certification and NCLEX exam eligibility. Moreover, failing to meet the established metric will prompt counseling by the ASO regarding its repercussions on NCLEX success. Fulfilling these CON program requisites is mandatory before the certification of a student's completion of degree requirements with the State of Michigan Licensing Board.

To embark on a career in professional nursing, success on the National Council Licensure Examination for Registered Nurses (NCLEX-RN) is imperative to practice legally. State boards of nursing oversee this examination and serve as a critical component in evaluating the eligibility of registered nurse candidates for licensure. Developed by the National Council of State Boards of Nursing (NCSBN), the NCLEX-RN is specifically designed to assess a candidate's capacity to practice safely and proficiently as a generalist registered nurse in an entry-level capacity. Its primary focus is evaluating the practical application of knowledge and skills in healthcare scenarios commonly encountered in entry-level nursing practice.

Prospective graduates must satisfactorily complete the requirements of this licensure examination before assuming professional responsibilities as registered nurses (RNs).

Scholarship

1. All students must maintain a satisfactory (2.0) grade point average (g.p.a.) in both:
   a. Cumulative grades (general education and nursing); and
   b. Professional nursing courses.
2. Students must achieve a 2.0 g.p.a. in each nursing course. A student may not continue in subsequent courses for which the failed course is a prerequisite until a minimum of 2.0 has been achieved.
3. A grade below C (2.0) in a nursing course is unsatisfactory for progression in UG programs.
4. If space is available, Students may apply to repeat a nursing course. The course may only be repeated once to raise the grade to 2.0 g.p.a. or above.
5. A maximum of **one** UG nursing course within the program may be repeated.
6. No UG nursing course for which a student has received a passing grade may be repeated without written approval of the Associate Dean for Academic and Clinical Affairs.
7. A student receiving a C- minus (1.67 g.p.a.) grade or less in either the theory or the clinical portion of any nursing course will have recorded no higher than a C-minus for the total course and will be required to complete the re-entry process to repeat it before progressing to the next clinical course.
8. The mark of "I" is appropriate if the student encounters a catastrophic situation that prevents completion of the final requirements of a

course. The mark of I is not suitable for unsatisfactory academic performance. If a mark of 'I' is given, the time limit for completion will be determined by the instructor but may not exceed one year. If the mark of "I" is received for a prerequisite course, the 'I' must be removed before enrollment in the subsequent course. After one year, if the incomplete is not completed, the grade will automatically change to an F (failure) and be treated as a failing grade.

Probation

Probationary status warns students to improve their academic performance to remain in their program.

1. Students are placed on probation if they do not maintain a minimum cumulative grade point average of 2.0 (g.p.a.).
2. Students are placed on probation if they do not maintain a minimum grade point average of 2.0 (g.p.a.) in professional nursing courses.
3. To remove probationary status, A grade point average must be returned to a minimum of 2.0 (g.p.a.). Probationary status must be removed within one calendar year.
4. Students on probation are not eligible to represent the College in any student activity.

Exclusion

A student may face expulsion from the College under the following conditions:

1. Inability to satisfactorily complete a nursing course after **two** attempts.
2. Failure in more than **one** professional nursing course.
3. Inability to remove probationary status within one calendar year.
4. Demonstrating irresponsible attendance and performance/ nonprofessional behavior at any time during enrollment in the program.
5. Failure to meet specific conditions required by the UG College Scholastic Policy and Admissions Committee for continuation in the program.
6. Inability to complete the program within the specified time limits unless an extension is granted by the UG Scholastic Policy and Admissions Committee
7. Engaging in unsafe clinical practice and/or unprofessional/unethical conduct in the classroom or the clinical setting, as outlined/defined in the BSN student handbook and the WSU Student Code of Conduct (https://doso.wayne.edu/conduct/pdf/student-code-of-conduct.pdf).

Grade Appeals Policy

Basic Principles

Assistance

Students and faculty are encouraged to contact the Assistant Dean of the College of Nursing, the Enrollment and Student Services office (OSA), or the Wayne State University Ombudsperson for assistance regarding final course grades or course grade appeals.

Timeliness of appeals process

Failure of a faculty member or any appeal officer to respond within the designated time frame of the formal appeal entitles the student to proceed to the next level of appeal. It is important to note that a failure to respond at any level does not signify a granting of the appeal. Furthermore, failure of the student to adhere to the time frames specified in the policy will result in nullification of the appeal process, meaning that the appeal will not be heard.

Process

All formal grade appeals must be submitted in written letter format, with the option of email correspondence. All submitted information must be time-stamped and dated upon receipt.

Academic dishonesty

The aforementioned policy guidelines do not pertain to allegations of student academic dishonesty. Academic dishonesty Matters are addressed per the WSU Student Code of Conduct (https://doso.wayne.edu/conduct/pdf/student-code-of-conduct.pdf) and as outlined in the Undergraduate BSN Student Handbook.

Patient safety

Students may be dismissed from a clinical course at any time if faculty, clinical faculty, or clinical agency staff identify any issues that would constitute unsafe or unprofessional practice in the clinical setting, posing a potential risk to patient safety.

**Note that "days" are counted as Sunday-Saturday, excluding University holidays.*

Appeal of Grade

Before commencing the formal appeal process, the student must engage in a **face-to-face** discussion with the course coordinator/faculty of record regarding the contested course grade within **ten** days of being notified of the course grade, e.g., the final grade posted in Academica). The faculty member will provide a written response, with copies distributed to the student, the Associate Dean of Academic & Clinical Affairs, and the Assistant Dean, Enrollment and Student Services (OSA). If the dispute remains unresolved, the student may initiate a formal appeal.

All steps of the appeal process must be followed within the specified time frame, as failure to do so will nullify the process, rendering it ineffectual.

Grade Appeal Process

The final course grade may only be appealed based on the method by which it was assigned. Course, Coordinators/Faculty of Record, are required to assess student work in accordance with established academic principles. If a student believes the final grading method was unjust and can provide evidence that the injustice was rooted in one of the **three** criteria outlined below, they can initiate an appeal following the prescribed procedure. The student bears the responsibility of substantiating their claim in the appeals process.

Grounds for appeal include:

- The utilization of non-academic criteria in grading, as specified in the university's non-discrimination/affirmative action statute: race, color, sex (including gender identity), national origin, religion, age, sexual orientation, familial status, marital status, height, weight, disability, or veteran status.
- Instances of sexual harassment or discrimination
- Assessment of student work using criteria not directly aligned with course requirements outlined in the syllabus.

Steps to Initiate a Formal Appeal

1. Student must submit a written statement detailing their objections to the faculty response, along with supporting documentation, to the Associate Dean of Academic & Clinical Affairs with copy to the Assistant Dean for Enrollment and Student Services. Documentation of any communication between student and faculty outlining the concern should be included. This statement must be submitted within 30 days following the response of the faculty member who assigned the grade.
2. Upon review of the documentation, the Associate Dean of Academic & Clinical Affairs will notify the student in writing within 21 days of

receiving the student's written appeal of the decision. As the Dean's designee, the decision of the Associate Dean of Academic & Clinical Affairs shall be the final decision at the College level.

3. Student/faculty may contact the College of Nursing, Assistant Dean, Enrollment and Student Services and/or the Wayne State University Ombuds Services at any time for assistance with any problem associated with a grade decision or grade appeal.

According to the Provost: *If, after your School/College appeal path is exhausted and you wish to continue with the grade appeal process, per the University Academic policy, you may request a Provost Review within 30 days of this decision. The request should be submitted via* the online appeal form *(*https://provost.wayne.edu/provostappealprocedure*). For assistance with the appeal process, you may contact* Ombuds Services *(*https://wayne.edu/ombuds*).*

Graduation Residency Requirement

The last thirty semester credits of the degree must be taken in residence at Wayne State University.

Graduation with Distinction

A candidate eligible for the bachelor's degree may receive a special diploma with *Cum Laude, Magna Cum Laude*, or *Summa Cum Laude* indicated. For the University guidelines regarding these distinctions, see Graduation with Distinction.

Dean's List and Honors List

Students completing twelve semester credits in study at Wayne State University are eligible for appointment to academic recognition lists each semester. The semester grade point average at Wayne State must be 3.75 or above to qualify for the Dean's List, or a 4.0 g.p.a. for students registered for six to eleven credits. The Honors List requires a minimum grade point average of 3.50. Lists of students on the Dean's List and Honors List will be posted in the College of Nursing. Students who receive marks of I or W or X and grades of N or U are not eligible. (For explanation of grades and marks, see Grading System, University (p. 55).)

Student Rights and Responsibilities

Continuance in the College is contingent upon compliance with official rules, regulations, requirements, and procedures of the University and the College of Nursing. *The student is responsible for reading this bulletin's contents pertinent to the College of Nursing and otherwise becoming informed and fulfilling all course and degree requirements in proper sequence with satisfactory scholarship.* In case of doubt regarding any matter affecting their standing as a student, the student should consult with a College of Nursing ASO. The faculty reserves the right to amend or revise the policies and requirements outlined in the College of Nursing section of this bulletin.

A student may be required to withdraw from the College when, in the faculty's judgment, behavior demonstrates that the student is unsuited for nursing, unsafe practice, and/or unethical conduct in the program without having been previously warned. (See also Exclusion, above.)

Nursing (B.S.N.)

The undergraduate nursing program has been meticulously crafted to equip students with the essential knowledge and skills required to commence their professional nursing practice upon completing the program. Graduates are awarded the Bachelor of Science in Nursing (BSN) degree, an entry into practice as a nurse generalist, and a solid foundation for pursuing advanced studies in nursing. The curriculum encompasses a comprehensive range of courses encompassing general and professional education. Moreover, the program offers diverse options tailored to accommodate the differing admissions qualifications of prospective applicants.

- BSN Direct admit for First Year (small cohort)
- BSN Traditional
- Accelerated BSN (including BSN for Veterans)
- RN-BSN
- RN-MSN options (currently in moratorium)

Admission: BSN Programs

All applications undergo thorough review to assess applicants' potential to complete a Bachelor of Science in Nursing degree successfully. The CON utilizes a "holistic admission (https://nursing.wayne.edu/admissions)" approach when evaluating potential candidates for admission. Admission to the various programs is highly competitive and primarily contingent upon factors like academic performance, volunteerism, and essay. Transcripts are meticulously evaluated for evidence of sustained full-time scholarly achievement and the likelihood of excelling in the demanding science and evidence-based curriculum. Furthermore, prerequisite courses for the WSU College of Nursing Traditional BSN and Accelerated BSN pathways must be completed within ten years of the application deadline to be considered for admission.

Nursing: BSN Direct Admit for First Year BSN

Students admitted through this category are presumed to be embarking on their initial professional nursing journey. Admission is facilitated through the Office of Undergraduate Admissions. These students are required to complete general education/pre-professional courses offered through the College of Liberal Arts and Sciences. Additionally, they are expected to undergo a comprehensive admission process conducted by the College of Nursing's Undergraduate Admission Committee. This holistic admission (https://nursing.wayne.edu/admissions/bsn/holistic-admissions) process entails a meticulous assessment of specific criteria. An essential component of this holistic approach is the fulfillment of community service requirements and the submission of an essay by the applicant detailing personal attributes and experiences that they believe would endorse their admission to the College of Nursing. The entire application packet is subject to evaluation by an admission committee comprising faculty members from the undergraduate (UG) program, College of Nursing undergraduate alumni, and community partners. One prerequisite course may be completed at a community college upon acceptance into the program.

Nursing: Accelerated BSN

Applicants within this category are deemed eligible to seek admission to the Accelerated Bachelor of Science in Nursing Program, provided they have attained a bachelor's degree or higher in a non-nursing discipline and have satisfied the stipulated prerequisites (outlined below). Applicants must complete all prerequisite courses with a grade of 'C' or higher and have achieved a minimum 3.0 grade point average in prerequisite courses to qualify for consideration. Furthermore, a grade of 2.0 or above in the science prerequisites is mandatory.

Prospective students must also undergo a comprehensive, holistic admission (https://nursing.wayne.edu/admissions/bsn/holistic-admissions) process through the College of Nursing, encompassing a meticulous evaluation of the aforementioned criteria, in addition to a prerequisite for community service and the submission of an essay delineating personal attributes and experiences that the applicant deems supportive of their admission to the College of Nursing. Notably, course prerequisites must be fulfilled at the time of application.

The complete application portfolio is subject to review by an admission committee comprising faculty members from the undergraduate (UG) program, CON UG alumni, and community partners. It is crucial to recognize that admission to the program is fiercely competitive; fulfillment of prerequisites meeting minimum requirements does not guarantee admission.

Prerequisites (Accelerated BSN)

The following prerequisite courses are required for admission consideration to the Accelerated BSN Pathway in the College of Nursing. Students who already hold a bachelor's degree but wish to pursue the Traditional (three-year) BSN Program instead of the Accelerated Second-Degree Program must complete the prerequisites specific to the Traditional BSN curriculum.

Code	Title	Credits
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
BIO 2870	Anatomy and Physiology	5
CHM 1060	General, Organic and Biochemistry	5
NFS 2030	Nutrition and Health	3
NUR 2030	Pathophysiology in Nursing (or equivalent, must be taken at a four year institution)	3
PSY 2410 or PSY 2400	Health Psychology Developmental Psychology	4
Social Inquiry Course (SI)		
Cultural Inquiry (CI)		

RN-BSN Program

The RN-BSN program is geared toward Michigan-licensed registered nurses (RNs) who have completed an associate degree or diploma program and wish to continue their professional nursing education. For requirements for this curriculum, see Nursing: RN to BSN Completion Program (https://nursing.wayne.edu/rn-bsn/).

The RN to BSN pathway does not have course prerequisites; however, the following courses/requirements must be completed before graduation from WSU. These courses may have been completed within the associate degree.

Code	Title	Credits
CHM 1060	General, Organic and Biochemistry	5
PSY 2410 or PSY 2400	Health Psychology Developmental Psychology	4
Six (6) Elective Credits		

Application to BSN Programs

Application to a Bachelor of Science in Nursing program is a dual application process.

Step 1 - Applying to Wayne State University: If you are not currently a student at Wayne State University, please ensure to submit your application to the Office of Undergraduate Admissions before the specified deadline. Along with your application, remember to submit all necessary documentation and materials, including transcripts from any post-secondary institutions you have attended. All final transcripts for prerequisites completed during the winter semester must be received by **June 1st**. It is essential to meet all the general requirements for undergraduate admission to the University.

Step II - Application to the College of Nursing: Applicants must submit the online Application for Admission to the Bachelor of Science in Nursing Program to the College of Nursing Office of Student Affairs. The applications must be submitted by the specified deadline. First-year BSN applicants should refer to the College of Nursing website for instructions. Official copies of all transcripts from high school and post-secondary institutions, along with any other required documentation (test scores, etc.), must be received in the Office of Student Affairs by **June 1st**, and not postmarked by that date.

Application Fees: Applicants for the Traditional Bachelor of Science in Nursing and the Accelerated Bachelor of Science in Nursing pathways must submit a non-refundable application fee of **$50.00** at the time of application.

All application materials mentioned above must be submitted to the relevant offices by the program's application deadline.

During the admission process, students enrolled in prerequisite coursework must provide documented proof of completing all prerequisites to the College of Nursing Office of Student Affairs no later than **June 1st**.

Non-native English-speaking applicants must submit their Internet-Based Test of English as a Foreign Language (TOEFL) scores to the College of Nursing. A minimum total score of 101 is necessary, with minimum scores of 25 in listening, 25 in reading, 25 in writing, and 26 in speaking.

Deferment

Students who have been admitted to the BSN Program but have not yet enrolled in any College of Nursing courses may request a deferral of up to one year. If approved, the deferral applies only to the specific track to which the student was originally admitted. For example, a student admitted to the Traditional BSN Pathway may not use a deferral to transfer into the Accelerated BSN Pathway.

Deferrals are considered only in cases of unexpected circumstances such as illness, pregnancy, or other significant health-related issues. Requests are not typically granted for reasons such as financial hardship, inability to complete prerequisite courses, or other non-health-related situations.

To request a deferral, students must submit a detailed written letter explaining the reason for the deferral. The letter should be addressed to the Scholastic Policy and Admission (SPA) Committee and submitted via the Office of Student Affairs at nursinginfo@wayne.edu (https://bulletins.wayne.edu/undergraduate/college-nursing/nursing-bsn/nursinginfo@wayne.edu). Students who have already registered for a College of Nursing course are not eligible for deferral.

If the deferral request is denied, the offer of admission will be withdrawn. In addition, students should be aware that financial aid awards and tuition support are not automatically deferred, and fees already paid are typically non-refundable.

Readmission

If a nursing student's attendance in the nursing clinical sequence of the undergraduate curriculum has been interrupted for more than one academic year, they must request reinstatement to the College of Nursing. They should contact the College of Nursing Office of Student Affairs (OSA) for application materials and deadline dates. It's important

to note that there is no assurance of reinstatement once a student withdraws from the program or does not progress within the specified time limitations.

Registration for Classes

All students must complete registration for mandatory classes before the commencement of the academic term. Detailed registration procedures and schedules are accessible via the official University website Schedule of Classes (http://www.classschedule.wayne.edu/). The usual full-time undergraduate program is 12-17 credits per term. The typical full-time undergraduate program comprises 12-17 credits per term.

**Clinical placements are organized by the Office of Student Affairs and the Alliance of Clinical Education. Specific requests for clinical placements are not considered.*

Enrollment in Professional Nursing Courses

Admission to the College of Nursing and successful completion of all prerequisites/corequisites identified for nursing courses.

1. **Health Clearance** - Students admitted to the College must possess a **valid clinical permit**, and their health clearance must affirm that they are in good health, free from communicable diseases, and capable of participating in an intensive professional program with extensive clinical experiences, **no exceptions**. The clearance form outlines specific health requirements, some of which must be renewed annually. Annual compliance verification must be submitted to the Immunization Tracker before the deadline. Throughout the program, students are expected to maintain a level of health that aligns with the curriculum objectives and enables safe nursing practice. Suppose a health issue arises during a student's educational program. In that case, the faculty member responsible for clinical practice will assess the student's ability to continue clinical and make recommendations to the Associate Dean for Academic and Clinical Affairs. The University and the College reserve the right to refuse or cancel a student's admission or restrict their activities if their health status warrants such action to safeguard the patient, the student, other students, or the University. The student must be mindful of due dates and ensure proper document uploads to the clinical tracker website. Failure to upload required documents correctly to clinical permit tracker will result in the student being unable to attend a clinical rotation. It will also lead to a reduction in the course grade associated with that clinical rotation.
2. **Liability Insurance** - The minimum amount of malpractice liability insurance acceptable is $1,000,000/$3,000,000 to cover each year of the student's nursing studies. Students must present a copy of their insurance policy from an approved insurer to the Office of Student Affairs by the stated deadline. This copy must show the amount of coverage, the expiration date, and the student's name. Students may not participate in clinical courses without a copy of this policy on file in OSA.
3. **BLS (Basic Life Support) for Health Care Providers Certification** - All students are required to possess Basic Life Support (BLS) for Health Care Providers (BLS-HCP) Certification or its equivalent for admission to clinical courses. Certification renewal is mandatory on an annual basis. Furthermore, students are expected to maintain current and updated certification, which must be submitted to clinical permit tracker by the specified deadline.
4. **Criminal Background and Drug Testing History** - Admission to the College of Nursing requires completion of a Criminal Background Investigation and a ten-panel drug test before starting nursing courses. The urine drug screen must be conducted at the WSU Campus Health Center. The Criminal Background Investigation aims to identify any felony conviction within the fifteen years preceding the application or a misdemeanor related to abuse, neglect, assault, battery, or criminal sexual conduct within the ten years preceding the application. A conviction for either a felony or certain specified misdemeanors disqualifies the student from participating in any clinical courses.
5. **Alliance for Clinical Education (ACEMAPP)** - All undergraduate students must take part in the Michigan Health Council ACEMAPP program for clinical education and placement. Health status reports, liability insurance, BLS (Basic Life Support) certification, criminal background checks, and drug screens are managed through the ACE and shared with participating clinical institutions. As part of the ACE program, students are required to complete mandatory training on HIPAA, OSHA, and blood-borne pathogens.

Course coordinators responsible for overseeing clinical courses are mandated to impose restrictions on students' access to clinical experiences if the students have failed to satisfy the requisite CON clinical clearance criteria. Non-compliance with the stipulated requirements at the commencement of any undergraduate clinical course will result in a 5% deduction from the final grade for that course. This deduction will increase in 5% increments for each subsequent week during which the clinical permit remains invalid.

Program Requirements

Candidates for the Bachelor of Science in Nursing degree must complete the minimum 120 semester credits in course work including satisfaction of the University General Education Requirements (p. 24) and in accordance with the academic procedures of the University (p. 40) and the College (p. 354).

Residency: The last thirty credits of the degree must be taken at Wayne State University.

Grade Point Average: Students must maintain a grade point average (g.p.a.) of at least 2.0 in total residence credit and in all nursing courses.

Curriculum and Program Requirements: To attain a BSN degree, students must fulfill all curriculum and program requirements, resolve any outstanding 'I' or 'Y' marks, and obtain a faculty recommendation. Additionally, students must complete the required minimum number of credits, follow the appropriate course sequence outlined in the curriculum, and meet all course prerequisites or corequisites.

Professional and General Education Requirements for the Traditional BSN Program

The following curriculum outlines the minimum of 120 semester credits required for the Bachelor of Science in Nursing, including 68 credits in nursing major courses.

First Year		
Fall Semester		**Credits**
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
CHM 1060	General, Organic and Biochemistry	5
PSY 1020 or PSY 1010	Elements of Psychology or Introductory Psychology	3
Quantitative Experience (QE)		3
	Credits	**15**
Winter Semester		
BIO 2870	Anatomy and Physiology	5
ENG 1020	Introductory College Writing	3
PSY 2410 or PSY 2400	Health Psychology or Developmental Psychology	4

NFS 2030	Nutrition and Health	3
	Credits	**15**
Second Year		
Fall Semester		
NUR 2010	Health Assessment	3
NUR 2030	Pathophysiology in Nursing	3
NUR 2060	Pharmacology in Nursing	3
ENG 3010	Intermediate Writing	3
Social Inquiry (SI)		3
	Credits	**15**
Winter Semester		
NUR 2050	Fundamentals of Nursing Care	5
NUR 2995	Foundations of Professional Nursing Practice	3
NUR 3405	Introduction to Research and Evidence-Based Practice	3
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
	Credits	**16**
Third Year		
Fall Semester		
NUR 3010	Comprehensive Nursing Care of the Adult I	5
NUR 3015	Psychiatric Mental Health Nursing	5
NUR 4300	Nursing Informatics	3
Cultural Inquiry (CI)		3
	Credits	**16**
Winter Semester		
NUR 3020	Comprehensive Nursing Care of the Adult II	5
NUR 4010	Integrative Care of Children and Their Families	5
NUR 4800	Transcultural Health Through the Life Cycle	3
Diversity, Equity and Inclusion (DEI)		3
	Credits	**16**
Fourth Year		
Fall Semester		
NUR 4020	Integrative Care of the Perinatal Family	5
NUR 4040	Leadership and Management in Nursing	4
Oral Communication (OC)		3
Civic Literacy (Civ)		3
	Credits	**15**
Winter Semester		
NUR 4050	Theory of Caring for Complex, Critically Ill Patients	3
NUR 4060	Transition of Nursing Knowledge into Practice	5
NUR 4120	Community/Public Health Nursing: Care of Populations	5
	Credits	**13**
	Total Credits	**121**

Professional Requirements for the Accelerated BSN Program

In addition to the Pre-Nursing prerequisites stipulated for the Accelerated BSN Degree Program, the completion of specific professional educational courses is mandated, alongside a minimum of sixty-five credits in prior baccalaureate and Pre-Nursing prerequisites.

Code	Title	Credits
First Semester (Spring/Summer)		
NUR 2010	Health Assessment	3
NUR 2060	Pharmacology in Nursing	3
NUR 4800	Transcultural Health Through the Life Cycle	3
Second Semester (Fall)		
NUR 2050	Fundamentals of Nursing Care	5
NUR 2995	Foundations of Professional Nursing Practice	3
NUR 3405	Introduction to Research and Evidence-Based Practice	3
NUR 4300	Nursing Informatics	3
Third Semester (Winter)		
NUR 3010	Comprehensive Nursing Care of the Adult I	5
NUR 3015	Psychiatric Mental Health Nursing	5
NUR 4020	Integrative Care of the Perinatal Family	5
Fourth Semester (Spring/Summer)		
NUR 3020	Comprehensive Nursing Care of the Adult II	5
NUR 4010	Integrative Care of Children and Their Families	5
NUR 4040	Leadership and Management in Nursing	4
Fifth Semester (Fall)		
NUR 4050	Theory of Caring for Complex, Critically Ill Patients	3
NUR 4060	Transition of Nursing Knowledge into Practice	5
NUR 4120	Community/Public Health Nursing: Care of Populations	5
Total Credits		**65**

Nursing: RN to BSN Completion Program (An Admissions moratorium is in effect for this program effective Fall 2027)

All students must achieve a grade of C or better in all courses cited below. A cumulative grade point average of 2.00 or above must be maintained. These courses may not be taken for Passed-Not Passed grades.

Completion of the following courses (or equivalents) is required.

Code	Title	Credits
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
BIO 2870	Anatomy and Physiology (Laboratory)	5
CHM 1020 or CHM 1060	Survey of General Chemistry (Laboratory) General, Organic and Biochemistry	4
ENG 1020	Introductory College Writing	3
PSY 1010	Introductory Psychology	4
PSY 2400	Developmental Psychology	4
SOC 1010 or ANT 1100	Understanding Human Society Introduction to Anthropology	3

RN to BSN Program: Senior Level Professional and General Education Requirements

The following upper-level professional nursing courses are required. The remaining General Education Requirements and liberal arts credits comprise the balance of the minimum 120 credits required for the Bachelor of Science in Nursing.

RN-to-BSN students are required to complete six credits of cognate courses that support the terminal objectives of the BSN program. Students are encouraged to contact the Undergraduate Program Director to discuss course options.

First Year		
Fall Semester		**Credits**
NUR 4505	Professional Nursing in the Future: Current Issues for Professional Practice RN-BSN	3
NUR 3405	Introduction to Research and Evidence-Based Practice	3
	Credits	**6**
Winter Semester		
NUR 4800	Transcultural Health Through the Life Cycle	3
NUR 4995	Writing for the Health Care Professional	3
	Credits	**6**

Spring/Summer Semester		
NUR 4044	Leadership and Management in Nursing	3
	Credits	**3**
Second Year		
Fall Semester		
NUR 4300	Nursing Informatics	3
NUR 4320	Public/Community Health Nursing	3
Cognate (See Program Director for Options)		3
	Credits	**9**
Winter Semester		
NUR 4135	Capstone Project RN-BSN	3
Cognate (See Program Director for Options)		3
	Credits	**6**
	Total Credits	**30**

Nursing: B.S.N. Honors Program

The College of Nursing Honors program offers a challenging and rewarding opportunity for students to further pursue their interests in the field of nursing. The Honors program is open to all students seeking their Bachelors of Science in Nursing and requires that students graduate with a GPA of 3.5. Completion of the honors program requirements results in an honors degree designation on the diploma. Interested students should contact their Academic Services Officer in the Office of Student Affairs.

Departmental Honors Requirements

To earn Departmental Honors in addition to the requirements for a Bachelor of Science in Nursing, students must complete the Honors Assignments associated with the Honors 1, 2, and 3 courses as outlined in the NURH Guidelines. They are also required to complete an HON 42XX course, which will count towards their accumulation of 12 Honors hours. While honors students must accumulate a minimum of 12 credits of Honors courses, nursing students typically accumulate 12-19 honors credits.

Nurse Practitioner (NP) AGRADE

The NP AGRADE program is available to academically strong students completing the BSN program who are interested in progressing to advanced nursing practice positions, specifically nurse practitioner positions. Upon graduation, these master's graduates are eligible to sit for NP specialty certification and enter future NP practice. The benefit of the AGRADE program is that undergraduate students can begin a master's degree while simultaneously completing their bachelor's degree. Coursework taken during a student's senior year (proposing nine credits) can qualify toward the master's degree.

Students, in consultation with their advisor, can select the MSN NP graduate courses that will count toward required courses in the master's program. The graduate coursework completed while enrolled as an undergraduate is assessed at the undergraduate tuition rate, resulting in significant tuition savings.

Admission Criteria

UG students may apply for the NP AGRADE program no earlier than the semester in which ninety credits are being completed. Applicants at time of application to the AGRADE Program must have a minimum of overall GPA 3.5. After admission, the AGRADE program requires a continuing undergraduate cumulative grade point average of at least a 3.5 and a grade of B or higher in master's coursework.

MSN NP AGRADE Advising

AGRADE advising is provided by the Office of Student Affairs Advising team, the Director of the MSN program, and the Specialty Coordinators in the College of Nursing.

Requirements

The following master's core courses in the MSN NP program, listed below, may be included in the undergraduate plan of work, providing 9 credits.

Code	Title	Credits
NUR 7000	Statistics in Nursing	3
NUR 7105	Theoretical Foundations for Nursing	3
NUR 8625	Evidence Based Nursing Practice: Theoretical and Methodological Issues	3

NOTE: The Master's program with a clinical NP specialty is completed under Plan C (coursework only).

Eugene Applebaum College of Pharmacy and Health Sciences

Dean: Brian Cummings

In 1890, the Detroit College of Pharmacy was founded as a program in the Detroit Medical College, the forerunner of the Wayne State University School of Medicine. The Detroit College of Pharmacy later separated from its parent institution, operated independently for two years, and in 1907, affiliated with the Detroit Institute of Technology. In response to the urging of Detroit area pharmacists another program was developed from the six-year course in pharmacy established at Cass Technical High School into a new College of Pharmacy organized by the Detroit Board of Education in 1924. This College of Pharmacy and the Detroit Board of Education's Colleges of Medicine, Education, Liberal Arts, Engineering and Graduate School were united in 1933 into a university called the College of the City of Detroit and named Wayne University in 1934. In 1957, one year after Wayne University became Wayne State University, the College of Pharmacy at the Detroit Institute of Technology joined the College of Pharmacy at Wayne by merging into Wayne State University's system of schools and colleges.

In 1974, Pharmacy merged with the Division of Allied Health to form a college devoted to educating the modern health care team. Mortuary Science, which was started as a unit of the School of Business Administration in 1943, evolved into a separate department and eventually became part of the College of Pharmacy and Allied Health Professions in 1985. In 2002 the College changed its name to the Eugene Applebaum College of Pharmacy and Health Sciences to recognize the contributions of Eugene Applebaum, a 1960 alumnus of the college's pharmacy program, and occupied the new facility which opened in 2002. In 2003 the College reorganized from nine departments to the four departments that exist today.

The College occupies a state-of-the-art facility, located on the campus of the Detroit Medical Center, one of the Midwest's leading centers for healthcare, research, and education. The Center boasts a high concentration of health professionals including the faculty and students of the Wayne State University School of Medicine, one of the nation's largest medical schools. The Eugene Applebaum College of Pharmacy and Health Sciences is designed to provide students with the latest tools to prepare them for health careers in the new economy.

Mission and Vision

The College mission is to advance the health and well-being of society through the preparation of highly-skilled health care practitioners, and through research to discover, evaluate, and implement new knowledge to improve models of practice and methods of treatment in pharmacy and health sciences in ways of both local and global relevance.

Our vision is to serve as a preeminent model for learning, scholarship, and engagement impacting health, safety, and well-being worldwide through leadership, innovation, and the interconnectedness of our disciplines.

The College offers a variety of undergraduate, graduate-professional, and graduate programs designed to provide advanced-level professional training, basic research, and scholarly activities in the various health science fields. Detailed information on each program may be found in the Departmental sections.

College Organization

The Eugene Applebaum College of Pharmacy and Health Sciences is organized into four academic departments: Applied Health Sciences; Health Care Sciences; Pharmacy Practice; and Pharmaceutical Sciences. Academic programs exist within each department as follows:

Department of Applied Health Sciences

Medical Laboratory Science

Students in medical laboratory science learn the scientific principles and theories behind many laboratory tests performed to aid in the diagnosis of disease. During the latter part of the curriculum students become proficient in the performance of these tests and familiar with practical aspects of the clinical laboratory. This work is indispensable to effective patient care because results of laboratory analysis often establish a basis for diagnosis which must be made before treatment can be instituted.

Mortuary Science

The program in mortuary science prepares students for a career in funeral service. The curriculum provides the study of the fundamentals of applied biological and physical sciences as background for understanding techniques and procedures applicable to the preparation and disposition of human bodies and to public health and safety measures. Other areas of study include a thorough understanding of the theory and a proficiency in the practice of the technical skills pertinent to funeral service and the instillation of high standards of ethical conduct required to foster and uphold the dignity of funeral service.

Pathologists' Assistant

The pathologists' assistant program trains personnel to assist the pathologist in the performance of postmortem examinations and in the preparation of surgical specimens for study. Additional training prepares the student to take responsibility for tasks designated by a supervising pathologist such as budgetary, superintendence, and teaching duties.

Department of Health Care Sciences

Nurse Anesthesia

The nurse anesthetist is a specialist with extensive education and training in Nurse Anesthesia leading to a Doctor of Nurse Anesthesia Practice. Graduates must take and pass a national certification examination to be granted a specialty license and title of Certified Registered Nurse Anesthetist (CRNA) and are re certified every two years. CRNAs are qualified to provide all types of anesthesia services to adults, children, and infants for any type of surgical interventions. They are employed in major teaching, and tertiary care institutions, trauma, community, and rural hospitals. CRNAs also

function as a key member on the cardiopulmonary resuscitation team and are responsible for care of patients in respiratory distress to establish and secure a patent airway. This program is offered only at the graduate level and students should consult the Graduate Bulletin.

Occupational Therapy

The occupational therapy program prepares the student to assume clinician, researcher, educator, and consultative roles that assist individuals who are limited in the ability to perform tasks required in normal routines of daily living: self-care, work, and play/leisure. The entry level Master's Degree in Occupational Therapy incorporates undergraduate and graduate education. Students learn theoretical concepts and their application related to the restoration, development, and maintenance of physical, psychological, social, emotional, and cognitive functions. The theory-based curriculum includes instruction in the use of specific evaluative procedures; the application of a wide variety of activities related to daily living tasks, including creative and manual skills; and the procedures for functioning as a member of a health care team. The occupational therapist's goal is to promote meaningful occupations and maximize functional independence in collaboration with the client. This program is offered only at the graduate level and students should consult the Graduate Bulletin for details.

Physical Therapy

Physical Therapy is a dynamic health profession that develops, coordinates and utilizes selected knowledge, skills and techniques in planning, organizing and directing programs for the care of individuals whose ability to function is impaired or threatened by disease or injury. The practice of physical therapy includes: examination, evaluation, diagnosis, prognosis, intervention, and analysis of outcomes.

Physical Therapists provide services to patients/clients who have impairments of body function and structure, activity limitations or participation restrictions or changes in physical function and health status resulting from injury, disease or other causes. Physical therapists must be able to collaborate with a variety of professionals, address risk factors to health, be leaders and providers in the areas of prevention and promoting health, wellness and fitness, serve as educators, consultants, administrators and advocates, utilize critical inquiry skills and direct and supervise the provision of physical therapy services (Guide to Physical Therapist Practice, APTA, 2003).

Some examples of diagnoses of individuals who might be seen by a physical therapist include stroke, low back pain, ACL knee injury, Parkinson's Disease, spinal cord injury, amputation, heart attack, athletic injury, arthritis, cerebral palsy, rotator cuff (shoulder) injury, total joint replacement, spina bifida, general health and personal training, congestive heart failure, emphysema, cancer, head injury, multiple sclerosis, learning disabilities, speed and agility training, and many more. This program is offered only at the graduate level and students should consult the Graduate Bulletin for details. Wayne State students may apply to the program with 90 undergraduate credit hours if all other pre-requisite courses are completed.

Physician Assistant Studies

The mission of the physician assistant studies program is to train highly-qualified physician assistants for primary care in inner-city and other under-served areas of the State of Michigan. This is a graduate-level program designed to meet the need for qualified medical professionals; it is two years in length, and classes begin in May of each year. Interested students should consult the Graduate Bulletin for details.

Radiation Therapy Technology

This health care discipline utilizes ionizing radiation for the treatment of malignant disease. This field requires a basic understanding of and interest in science, especially mathematics and physics, as well as emotional maturity and a desire to assist in the management of patient care. The program is a four-year curriculum consisting of two years of pre-professional and two years of professional course work.

Radiologic Technology

Radiologic Technology is a health care discipline that utilizes ionizing radiation for the diagnosis of disease processes in the human body. This field requires a basic understanding of mathematics and science and a desire to serve patients. As a radiographer, one has the opportunity to combine interpersonal and patient assessment skills while employing highly technical equipment. A diagnostic radiologic technologist is able to formulate exposure factors dependent on procedure, pathology and individual patient dynamics; assist radiologists in more invasive procedures such as fluoroscopic studies; evaluate images for quality and accuracy; and provide support to patients anxious about their health. These technologists are typically employed in hospitals, clinics, educational institutions, and commercial equipment corporations as staff radiographers, clinical supervisors, administrators, educators, marketing personnel and applications specialists.

Department of Pharmacy Practice

The Department of Pharmacy Practice prepares students for entry into the pharmacy profession through coursework in the applied use of drug therapy in the treatment and prevention of human disease, provision of patient-centered care in clinical practice environments, and conducts research related to the rational use, delivery, and access to drugs and other therapeutic modalities. Pharmacy Practice also includes service and leadership to the University and profession of pharmacy and the public related to education and the optimal use of medications.

Department of Pharmaceutical Sciences

The Department of Pharmaceutical Sciences shares responsibility for the Doctor of Pharmacy program with the Department of Pharmacy Practice. Teaching and learning in the Pharm.D. program are is designed for the graduate to improve human health, wellness and safety. The Pharmaceutical Sciences span from basic to multidisciplinary and translational aspects of human health, including the conception, discovery, formulation, delivery, action and safety of therapeutic medicines and other agents. Ph.D. and M.S. programs specializing in medicinal chemistry, pharmaceutics and pharmacology / toxicology provide a stimulating and supportive environment for advanced education and for the successful completion of original research projects. Ph.D. candidates receive Graduate Research Assistantships consisting of competitive stipends, remission of tuition and full health insurance. The department is home to research-intensive programs of study covering a wide range of specialized areas for outstanding postdoctoral fellows and undergraduates. Department members provide much-needed expertise to organizations that are committed to the treatment and prevention of human disease, and to advancing the health and safety of animals and the environment. They are leaders in their service to the University and the professions of pharmacy and pharmaceutical sciences through research, education and outreach. Graduates of these programs

are changing the world, one step at a time, through a rich academic tradition founded upon prizing excellence, extending collegiality and making a difference locally and globally.

Accreditation

The Higher Learning Commission accredits Wayne State University and professional programs in this College are accredited by their respective agencies. Please visit program tabs to see individual accreditation information or visit Accreditation (p. 16).

Academic Regulations: College of Pharmacy and Health Sciences

For complete information regarding academic rules and regulations of the University, students should consult the Academic Regulations (p. 40) section of this bulletin. The following additions and amendments pertain to health sciences students.

Academic Regulations Terminology

1. *Professional course* means any course required in the Pharm.D., D.P.T. or M.O.T curriculum and any course approved for professional elective credit and elected by the student for that purpose.
2. *Satisfactory grade* means a grade of C or above, or a grade of S.
3. *Unsatisfactory grade* means a grade of C-minus or below 2.0 grade points, or a mark of X or unauthorized W Marks of X or marks of W which have not been authorized will be treated as an F.
4. *Probation* means a restricted status in the program (see below).
5. *Dismissal* from the program means that the student may no longer register in the program or elect professional course work. Continued registration in the University requires that a Change of Status to another program be initiated by the student.

Academic and Professional Progress

The College expects its students to develop professional competence and to satisfy the same high standards of exemplary character, appearance, and ethical conduct expected of health care professionals. To merit confidence and esteem, both personally and in the health care professions, appropriate dress and demeanor are expected of each student in their respective academic and professional program.

Each program has a process or committee in place to review student performance regularly and makes decisions concerning probationary status. A student may be dismissed from the College at any time for an unsatisfactory academic or professional record, for irresponsible attendance, or other failures to diligently pursue the academic and professional program.

Outside Employment

The curriculum has been arranged with the presumption that the student will devote full time and energy to their academic program. Internships, fieldwork and other pharmaceutical employment are recognized as an integral part of the academic and professional growth of a pharmacy or health science student. The student, however, is responsible for maintaining the appropriate balance between such activity and satisfactory achievement in the classroom.

Attendance

Regularity in attendance and performance is necessary for success in college work. At the beginning of each course the instructor will announce and/or include in the syllabus the specific attendance required of students as part of the successful completion of the course. Effective Fall semester 2016, a new policy requires students to respond to a request for course participation (http://reg.wayne.edu/gotoclass.php) confirmation.

Admission to Pre-professional Programs

Students preparing to apply to a professional program in the College may apply to the Bachelor of Science with a major in Applied Health Sciences or pursue a pre-professional track in the College of Liberal Arts and Sciences (options are medical laboratory science, mortuary science, occupational therapy, pharmacy, physical therapy, radiation therapy technology and radiologic technology). Applicants must fulfill requirements for general undergraduate admission (https://bulletins.wayne.edu/undergraduate/general-information/admission/) to the University. The Office of Admissions is located in the University Welcome Center, Wayne State University, Detroit, Michigan 48202; telephone: 313-5773577. Admissions counselors are available for personal conferences to aid prospective students.

Admission to Professional Programs

All professional programs in the College are limited in the number of applicants that can be accepted. This limitation is created not only by the number of faculty members available but also by the number of positions available in health care facilities where much of the field work experience is conducted at a 1:1 or 1:2 faculty-to-student ratio.

Students are admitted to the professional program annually. Since each program has special requirements for admission, students are urged to attend one of the monthly Information Meetings (http://www.cphs.wayne.edu/meetings.php) (mandatory for some programs) for advising and application deadline dates a year before they plan to enter. Individuals can register for the free monthly Information Meetings online. Students are to check with each program to verify the deadline date for admission to that program.

For admission to the professional programs in the College, applicants must have completed all equivalent pre-professional courses and other requirements. Students admitted to the professional program usually have a grade point average of 2.5 ('A' = 4.0) or better.

Although academic achievement is important, personal qualities and professional behaviors are considered of equal importance since the students selected will eventually be working as members of a team in the delivery of health care. Therefore, criteria for selection are also based on such qualities as maturity, motivation, knowledge of the profession, ability to communicate, personal integrity and empathy for others. Consequently, evaluations from faculty and academic advisors, as well as a personal interview, are given great weight in the selection of candidates by admissions committees.

Academic Advising

A staff of academic advisors is available in the University Advising Center, 1600 Adamany Library, for students interested in health sciences professions.

Students, during their sophomore year, should confer with the professional program advisor of the health sciences profession of their choice, during attendance at one of the Monthly Information Meetings, whenever they have questions about degree requirements, academic regulations, course elections, programs of study, or difficulties in their academic work. Course elections are arranged in consultation with the professional program advisors.

Normal Program Load

The requirements for graduation are based upon a normal program of fifteen credits per semester for eight to ten semesters. Because courses are of varying length, students cannot always arrange programs of exactly fifteen credits; hence the normal load is fourteen to eighteen credits.

Academic Misbehavior

Academic Honesty: Students are expected to abide by the principle of honesty which is fundamental to the life of a scholarly community. If any act of academic misbehavior, which includes cheating, plagiarism, or other acts are discovered, the instructor is expected to take appropriate

action, which can include one or more of the following: reprimand, repeat of assignment, a failing grade for the assignment, a failing grade for the course. Serious acts of dishonesty can lead to suspension or dismissal.

In any instance of academic misbehavior occurring in any course offered by the Eugene Applebaum College of Pharmacy and Health Sciences, as defined in section 2 of the WSU Student Code of Conduct (https://doso.wayne.edu/conduct), the provisions of Section 10.1 of the Student Code of Conduct will be implemented as follows:

The faculty member may, without filing a charge, adjust the grade downward (including downgrading to a failing grade) for the test, paper, or other course-related activity in question, or for the entire course. In any case, the faculty member shall provide the student with a copy of section 10.1 of the Student Code of Conduct and a copy of the member prepared by Ombuds Services, explaining the Ombuds Service's role, referred to in section 1.5 of the Student Code of Conduct.

Academic misbehavior policies of individual programs may vary from the above. Please see individual program for more information.

Probation

If a student's work falls below the required cumulative g.p.a. for professional studies, he/she will be placed on probation. If a student incurs a serious grade point deficiency in a semester, or remains on probation for more than one semester, he/she will not be allowed to re-register in the College unless he/she obtains permission from his/ her respective program or department. Such permission will be granted only after an appraisal of the student's situation and some assurance from the student that the previous causes of failure will not prevail in the proposed program.

Program Probation: A student whose semester g.p.a. falls below the required average will be placed on program probation. Each student must meet the academic and probationary requirements of his or her program.

Removal of Probation: The student will be removed from probation at the end of any semester in which he/she achieves a satisfactory overall g.p.a. as determined by the program.

Please see individual programs for more detailed information on program probation and dismissal policies.

Student Rights and Responsibilities

The College and its faculty reserve the right to dismiss a student at any time who does not appear to be suited for the work or whose conduct or academic standing is regarded as unsatisfactory. Students are urged to review the specific policies of their respective program or department.

Grade Appeals

Official Policies and Procedures
College Policy No. 89.01 FINAL COURSE GRADE APPEALS

Approved 4/30/2013, Correction 3/26/15, UPDATED August 14, 2015, Adopted September 16, 2015, **Approved September 28, 2016 Provost Office addendum September 13, 2017. Provost Office update July 12, 2018, and November 13.2018, February 23, 2021. Approved April 28, 2021.**

THIS VERSION REPLACES AND SUPERSEDES ALL PRIOR VERSIONS OF FINAL COURSE GRADE APPEALS POLICY. This policy is effective immediately for final course grades received for Fall 2016 and all terms going forward.

The following is the policy implemented for Final Course Grade Appeals in the Eugene Applebaum College of Pharmacy and Health Sciences.

At the beginning of each term, the instructor is to inform students in writing of the criteria used in arriving at grades for the class including the relative importance of prepared papers, quizzes and examinations, class participation and attendance. Where student performance in other practical and structured activities is relevant in evaluating professional competency, criteria used in such evaluations should be stated. Written materials should be graded in a timely manner and such materials, together with comments and an explanation of grading criteria, are to be made available to students. Students should be encouraged to discuss any class related problems with the instructor.

Instructors are expected to evaluate student work according to sound academic standards.

Equal expectations should be required of all students in a class (although more work is expected from graduate students than from undergraduates) and grades should be assigned without departing from announced procedures.

It is the instructor's prerogative to assign grades in accordance with his or her academic and professional judgment and the student assumes the burden of proof in the appeals process. Grounds for appeals are: (1) evaluation of student work by criteria not directly reflective of performance relative to course requirements; (2) sexual harassment or discrimination; or (3) the application of non-academic criteria in the grading process, as listed in the university's non-discrimination/ affirmative action statute: race, color, sex (including gender identity), national origin, religion, age, sexual orientation, familial status, marital status, height, weight, disability, or veteran status.

Final grade appeals and dismissal appeals that fail to cite one or more of the above criteria will be automatically rejected and will not be considered on the merits. Dismissal for failure to cite appeal criteria does not extend the deadline for filing an amended appeal.

This final course grade appeal policy does not apply to allegations of academic misbehavior. Academic misbehavior matters are addressed by Section 10.1 of the WSU Student Code of Conduct.

Definition: Instructor - Instructor applies to full-time, fractional-time, part-time faculty as well as Graduate Teaching Assistants, Adjuncts, and Academic Staff with teaching duties.

Final Course Grade Appeals Policy and Procedure

Informal Final Course Grade Review

1. Prior to an appeal of a course final grade all issues must first be directed to the instructor of the course for consideration of resolution.
2. The initial request of a grade review should be made directly to the instructor in an informal discussion during office hours or by a requested scheduled appointment.
3. If a student has documented efforts to obtain an informal meeting with the instructor and is unable to schedule this meeting within ten calendar days the student will then have the right to proceed to a formal grade appeal within thirty calendar days following posting of the final course grade. The instructor should make every reasonable effort to meet with the student during this time period prior to a formal appeal.

Formal Final Course Grade Appeal Policy and Procedure

If the final grade in question remains unchanged after the informal final course grade review, any formal Course Grade Appeal to change the grade in question must be initiated in writing by the student within thirty calendar days following the posting of the final course grade. The student must submit a formal written appeal together with a and completed a grade appeal form prescribed by the College to the appropriate

Department Chair (or designee). This formal appeal must include a copy of the current course syllabus and a student appeal letter including detailed justification for the appeal. This documentation must explicitly state which of the three criteria of allowable rationales is applicable and how the alleged violation occurred.

Formal Final Course Grade Appeal

1. The Department Chair shall provide a time-stamped and dated copy of the formal student course grade appeal to the instructor, program director or program/department grade appeal committee. The Department Chair will then request input and/or response from the instructor, program director or the program/department grade appeal committee.
2. Student or Faculty involved in a grade appeal process may contact the University Ombuds Services at any time for assistance with any questions associated with a grade decision or the grade appeal process.
3. The Department Chair may convene an ad hoc special review committee (or charge an existing committee) to advise on any dispute.
4. The Department Chair shall review all documentation and respond in writing to the student within thirty calendar days of receiving the formal course grade appeal. The Department Chair will place, in writing, the final decision to the student, instructor, program director, program/department grade appeal committee or the reason for any delay in decision. The decision of the Department Chair can be appealed to the Office of the Dean.
5. Appeals to the Office of the Dean must be submitted in writing within ten calendar days of the postmarked response from the Department Chair. The Dean or his/her designee must respond to the student appeal within thirty calendar days. The decision of the Dean or his/her designee is the final decision at the College level.
6. If the appeal is denied at the Dean (or designee) of the College level, and the College appeal path is exhausted, if the student wishes to continue with the grade appeal process, per the University Academic policy (https://provost.wayne.edu/academic-policy), the student may request a Provost Review within 30 days of this decision. The request should be addressed to Dr. R. Darin Ellis, Associate Provost for Academic Programs. **The request should be submitted via the online appeal form (https://provost.wayne.edu/provostappealprocedure).** For assistance with the appeal process, the student may contact Ombuds Services. The student's formal appeal for Provost Review must include a copy of the current course syllabus, the initial student appeal letter including detailed justification for the appeal, the Department Chair's (or designee's) response letter, and the Dean's (or designee's) written response. The decision of the Provost or his/her designee is final. No further appeal is possible.

Dismissal Policy

College Policy No. 89.06
Established and Approved September 28, 2016

The following is the policy implemented when a student has been dismissed from a program or department in the Eugene Applebaum College of Pharmacy and Health Sciences. Specific guidelines for dismissal are available (by programs and departments) in student handbooks and in other electronic formats on program, department, and College web pages.

Combined Grade Appeal/Dismissal Policy

If the final course grade leads to dismissal, the dismissal will be considered simultaneously in the final course grade appeal process. There is no separate or additional appeal process for a dismissal based on a final course grade. This would be referred to as a "combined" appeal. In the event the combined final grade/dismissal appeal is denied by the Dean (or designee) a final appeal can be made by the student to the Provost as part of the combined grade appeal/dismissal process.

If dismissal results from an unprofessional behavior violation or other non-academic reason (https://doso.wayne.edu/conduct/nonacademic-misconduct) not addressed within the program or department student handbook, the **WSU Student Code of Conduct** will be applied. Academic misbehavior matters are addressed by Section 10.1 of the **WSU Student Code of Conduct.**

Definition: Instructor - Instructor applies to full-time, fractional-time, part-time faculty as well as Graduate Teaching Assistants, Adjuncts, and Academic Staff with teaching duties.

Combined Grade Appeal/Dismissal Policy and Procedure

Informal Grade Appeal/Dismissal Review

1. Prior to a combined appeal of a grade/dismissal all issues must first be directed to the instructor of the course for consideration of resolution.
2. The initial request should be made directly to the instructor in an informal discussion during office hours or by a requested scheduled appointment.
3. If a student has documented efforts to obtain an informal meeting with the instructor and is unable to schedule this meeting within ten calendar days the student will then have the right to proceed to a formal combined grade appeal/dismissal process. The instructor should make every reasonable effort to meet with the student during this time period prior to a formal appeal.

Formal Combined Grade Appeal/Dismissal Appeal Policy and Procedure

If the dismissal status remains unchanged after the informal meeting with the instructor, the formal Grade Appeal/Dismissal process must be initiated in writing by the student within thirty calendar days following the notification of the final course grade that precipitated the dismissal. The student must submit a formal written appeal to the appropriate Department Chair (or designee). This formal appeal must include a copy of the current course syllabus and a student appeal letter including detailed justification for the appeal of the dismissal.

Formal Combined Grade Appeal/Dismissal Process

1. The Department Chair (or designee) shall provide a time-stamped and dated copy of the formal student dismissal appeal to the instructor, program director or program/department appeal committee. The Department Chair (or designee) will then request input and/or response from the instructor, program director or the program/department appeal committee.
2. Student or Faculty involved in a dismissal appeal process may contact the University Ombuds Services at any time for assistance with any questions associated with a grade decision or the grade appeal/ dismissal process.
3. The Department Chair (or designee) may convene an ad hoc special review committee (or charge an existing committee) to advise on any dismissal.
4. The Department Chair (or designee) shall review all documentation and respond in writing to the student within thirty calendar days of receiving the formal dismissal appeal. The Department Chair (or designee) will place, in writing, the final decision to the student, instructor, program director, program/department appeal committee or the reason for any delay in decision. The decision of the Department Chair (or designee) can be appealed to the Dean.
5. Appeals to the Dean must be submitted in writing within ten calendar days of the postmarked response from the Department Chair (or

designee). The Dean or his/her designee must respond to the student appeal within thirty calendar days. The decision of the Dean or his/her designee is the final decision at the College level.

6. If the appeal is denied at the Dean (or designee) of the College level and the College appeal path is exhausted, if the student wishes to continue with the final grade/dismissal appeal process, per the University Academic policy, the student may request a Provost Review within 30 days of this decision. The request should be addressed to Dr. R. Darin Ellis, Associate Provost for Academic Programs. **The request should be submitted via the online appeal form.** For assistance with the appeal process, the student may contact the Ombuds Services. The student's combined grade appeal/dismissal for Provost Review must include a copy of the current course syllabus, the initial student appeal letter including detailed justification for the appeal, the Department Chair's (or designee's) response letter, and the Dean's (or designee's) written response. The decision of the Provost or his/her designee is final. No further appeal is possible.

Dismissal Policy and Procedure

This applies to appeals of any and all dismissals that occurred because of academic, non-academic, or professional behavior violations.

Informal Dismissal Review

1. Prior to a dismissal all issues must first be directed to the instructor of the course for consideration of resolution.
2. The initial request should be made directly to the instructor in an informal discussion during office hours or by a requested scheduled appointment.
3. If a student has documented efforts to obtain an informal meeting with the instructor and is unable to schedule this meeting within ten calendar days the student will then have the right to proceed to a formal dismissal appeal process. The instructor should make every reasonable effort to meet with the student during this time period prior to a formal appeal.

Formal Dismissal Appeal Policy and Procedure

If the dismissal status remains unchanged after the informal meeting with the instructor, the formal dismissal process must be initiated in writing by the student within thirty calendar days following the notification of the action that precipitated the dismissal. The student must submit a formal written appeal to the appropriate Department Chair (or designee). This formal appeal must include a letter including detailed justification for the appeal of the dismissal.

Formal Dismissal Process

1. The Department Chair (or designee) shall provide a time-stamped and dated copy of the formal student dismissal appeal to the instructor, program director or program/department appeal committee. The Department Chair (or designee) will then request input and/or response from the instructor, program director or the program/department appeal committee.
2. Student or Faculty involved in a dismissal appeal process may contact the University Ombuds Services at any time for assistance with any questions associated with the dismissal process.
3. The Department Chair (or designee) may convene an ad hoc special review committee (or charge an existing committee) to advise on any dismissal.
4. The Department Chair (or designee) shall review all documentation and respond in writing to the student within thirty calendar days of receiving the formal dismissal appeal. The Department Chair (or designee) will place, in writing, the final decision to the student, instructor, program director, program/department appeal committee or the reason for any delay in decision. The decision of the Department Chair (or designee) can be appealed to the Dean.
5. Appeals to the Dean must be submitted in writing within ten calendar days of the postmarked response from the Department Chair (or designee). The Dean or his/her designee must respond to the student dismissal appeal within thirty calendar days. The decision of the Dean or his/her designee is the final decision at the College level.
6. If the appeal is denied at the Dean (or designee) of the College level and the College appeal path is exhausted, if the student wishes to continue with the final grade/dismissal appeal process, per the University Academic policy, the student may request a Provost Review within 30 days of this decision. The request should be addressed to Dr. R. Darin Ellis, Associate Provost for Academic Programs. **The request should be submitted via the online form.** For assistance with the appeal process, the student may contact the Ombuds Services. The student's combined grade appeal/dismissal for Provost Review must include a copy of the current course syllabus, the initial student appeal letter including detailed justification for the appeal, the Department Chair's (or designee's) response letter, and the Dean's (or designee's) written response. The decision of the Provost or his/her designee is final. No further appeal is possible.

Suspension

In extenuating circumstances, a suspension may be recommended during the appeal process. Suspension is a temporary removal of a student from participation in educational activities. While suspended, the student is placed on an administrative leave of absence.

Suspension may occur for failure to meet program/department, College or University requirements, because of a serious allegation of unprofessional behavior, or when a student is deemed to be a danger to others or him/herself. A recommendation for suspension can be made in writing to the student by the Assistant Dean for Student Affairs, the Associate Deans for Pharmacy or Health Sciences in consultation with the Dean of Students or the Office of the Provost.

Dismissal Policies Listed by Program/Department

Students should refer to their program or department for the applicable dismissal policy.

College Bachelor's Degree Requirements

Specific requirements for the several bachelor's degrees offered by the College are enumerated in the departmental and program sections of this bulletin. Following are general College and University policies governing baccalaureate programs.

High School Preparation (Recommended)

Students who plan to enter the University as freshmen should have included in their high school programs at least three years of English, one year of algebra, one year of plane geometry, at least one course in a laboratory science, and at least two years of a foreign language. Some programs require additional work in mathematics and science. High school students and their parents are encouraged to attend the Eugene Applebaum College of Pharmacy and Health Sciences Information Meetings (http://www.cphs.wayne.edu/highschool.php) held on the first Tuesday of each month at 6 p.m..

Residence

The last thirty credits of work applicable to the degree, exclusive of credit by special examination, must be completed in an undergraduate college or school of Wayne State University. This does not apply to the Bachelor of Science in Applied Health Sciences program.

Time Limitations

It is the policy of the College that preprofessional science courses must be completed within six years just prior to admission to a professional program. Exceptions to this policy may be made on a case-by-case basis at the sole discretion of the program faculty. Documentation of competency during post-graduation/pre-admission employment must be provided by the applicant requesting the exception. There is no appeal for this exception request of this policy.

Student Support Services and Organizations

Office of Student Affairs

The Office of Student Affairs (OSA) provides program information, monthly information meetings and advising support to prospective and current students for the degree and certificate programs offered by the College. From this office prospective students can obtain advice about admission requirements and program prerequisites and have their transcripts evaluated for transfer equivalencies. Additionally, information on registration and financial aid; enrollment verification required for financial aid, internship licensing, or other purposes is processed through this office. The Office also audits student records for completion of General Education Requirements and program requirements prior to graduation. The OSA staff participates in the various activities with the main campus, including recruitment fairs, graduation, new student convocations, FestiFall, prospective student open house, and Scholars Day. The OSA staff supports EACPHS student organizations, facilitate Community Apple Days, participate in numerous recruitment activities such as career and educational fairs at local middle schools, high schools, colleges, and universities.

Student Organizations

There are many student organizations within the College that allow a student to be active in professional and extracurricular activities. Please contact individual program offices for more information regarding student organizations.

Applied Health Sciences

Chairperson: Mark Evely

The mission of the Department of Applied Health Sciences is to provide students with highly effective and quality educational experiences that address contemporary challenges directly impacting public health, health care, environmental and workplace issues.

- Applied Health Sciences (B.S.) (p. 369)
- Applied Health Sciences and Exercise and Sport Science Minor (https://bulletins.wayne.edu/undergraduate/college-pharmacy-health-sciences/applied-health-sciences/applied-health-sciences-exercise-sport-science-minor/)
- Law for Applied Health Sciences Minor (https://bulletins.wayne.edu/undergraduate/college-pharmacy-health-sciences/applied-health-sciences/law-applied-health-sciences-minor/)
- Medical Laboratory Science (p. 371)
- Mortuary Science (B.S.) (p. 374)
- Laboratory Science Concentration (B.H.S.) (p. 373)

Applied Health Sciences (B.S.)

The Bachelor of Science with a major in Applied Health Sciences provides an interdisciplinary program for students with an interest in health care. Students will emerge with strong foundations in medical terminology, anatomy and physiology, communication within a health care setting, interdisciplinary patient care, critical thinking and writing, ethics, and diversity across the health care continuum. The curriculum consists of a variety of pathways to prepare students for application to a health care professional program or as a stand-alone degree to work in various health science settings.

Admission requirements for this program are satisfied by the general requirements for undergraduate admission (p. 34) to the University.

Candidates must complete 120 credits in course work including satisfaction of the general education requirements (p. 24), departmental major requirements, departmental minor requirements, program concentration or program elective requirements (for the general concentration) and supplemental free elective requirements, as necessary. All coursework must be completed in accordance with the academic regulations of the College of Pharmacy and Health Sciences (p. 365) and the academic regulations of the University (p. 40).

Major Requirements (Health Science Core)

All major courses must be completed with a minimum grade of C.

Code	Title	Credits
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2870	Anatomy and Physiology	5
or AHS 3025	Human Anatomy and Physiology for Applied Health Sciences	
MLS 3330	Medical Terminology	1
or AHS 3000	Medical Terminology for Applied Health Sciences	
AHS 2010	Introduction to Applied Health Sciences	3
AHS 2020	Applied Health Sciences Communication	3
AHS 2030	Advanced Statistics for Applied Health Sciences	4
AHS 3010	Advanced Applied Health Sciences Professions	3
AHS 3020	Multicultural Approaches to Health Care	3

AHS 3030	Human Physiology for Applied Health Sciences	3
AHS 4010	Interprofessional Education in Applied Health Sciences	3
AHS 4020	Pathophysiology for Applied Health Sciences	3
AHS 4090	Capstone in Applied Health Sciences	3
Total Credits		**38**

Minor Requirement

Any approved university minor (18-25 credits) is acceptable. It must include at least three courses that have not been used to fulfill requirements for any major or other minor.

Free Electives

Free electives are variable, as necessary to complete the minimum 120 credits required for the program.

Other Degree Requirements

- Students must complete a minimum of 15 credits in program concentration coursework.
- Students must complete a minimum of 30 credits at Wayne State University.
- At least 15 credits in the Health Sciences Core must be taken at Wayne State University.
- 21 credits must be taken at the 3000 level or higher.

Program Concentrations

Courses within this section of the undergraduate program are designed to prepare students for a high demand career in a health profession.

General Concentration

In the General Concentration, students must work with the program's Academic Advisor to develop a personalized plan of work that meets all degree requirements. The plan must be approved by the Program Director.

Pre-Occupational Therapy

Code	Title	Credits
KIN 3580	Biomechanics	3
PSY 2400	Developmental Psychology	4
PSY 3310	Introduction to Psychopathology	4
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the OT graduate/ professional degree program.		
COM 1010	Oral Communication: Basic Speech	3
PS 1010	American Government	4
PSY 1010	Introductory Psychology	4
STA 1020	Elementary Statistics	3
Social Inquiry course (cannot be satisfied using PS 1010)		3-4
Total Credits		**28-29**

Pre-Pathologists' Assistant

Code	Title	Credits
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
Organic Chemistry with Lab		5
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the Pathologists' Assistant graduate degree program		
General Chemistry with Lab		5
ENG 1020	Introductory College Writing	3
MAT 1000 or above OR STA 1020		3-4
Total Credits		**21-22**

Pre-Pharmacy

Code	Title	Credits
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
CHM 2220 & CHM 2230	Organic Chemistry II and Organic Chemistry II Laboratory	5
CHM 5600	Survey of Biochemistry	3
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the Pharmacy graduate/ professional degree program.		
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
ENG 1020	Introductory College Writing	3
COM 1010	Oral Communication: Basic Speech	3
MAT 2010	Calculus I	4
STA 1020	Elementary Statistics	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
Total Credits		**46**

Pre-Physical Therapy

Code	Title	Credits
Chemistry (CHM) course		3
PHY 2140 & PHY 2141	Physics for the Life Sciences II and Physics for the Life Sciences Laboratory	5
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the PT graduate/ professional degree program.		
ENG 1020	Introductory College Writing	3
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
STA 1020	Elementary Statistics	3
PSY 1010	Introductory Psychology	4
Chemistry (CHM) course with lab		4-5
Total Credits		**27-28**

Pre-Physician Assistant

Code	Title	Credits
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
CHM 1030	Survey of Organic/Biochemistry	4
PSY 2400	Developmental Psychology	4
Concentration courses below fulfill general education credits and are needed as prerequisites for the admission to the Physician Assistant graduate degree program.		
CHM 1020	Survey of General Chemistry	4
ENG 1020	Introductory College Writing	3
ENG 3010	Intermediate Writing	3

STA 1020	Elementary Statistics	3
NFS 2030	Nutrition and Health	3
Total Credits		**29**

In the Bachelor of Science in Applied Health Sciences Honors Program, students will complete a minimum of twelve credit hours within existing BSAHS courses. The honors options courses are among the core required courses in the Bachelor of Science in Applied Health Sciences program. The courses include Advanced Applied Health Sciences Professions (AHS 3010), Interprofessional Education in Applied Health Sciences (AHS 4010), Capstone in Applied Health Sciences (AHS 4090), and Honors-level Seminar (HON 4200+ level).

Medical Laboratory Science

Office: 420 Mortuary Science Building; 313-577-2014
Program Director: Ronette Chojnacki, MHA, MLS (ASCP)
https://cphs.wayne.edu/medical-laboratory-science/

The Medical Laboratory Science programs (Bachelor of Science in Medical Laboratory Science and Bachelor of Health Science with a concentration in Laboratory Science) encompass health professions dedicated to providing accurate diagnostic information to medical practitioners. The field offers challenging opportunities for people with aptitudes in the basic sciences and interest in a health care career. The programs at Wayne State University provide students with the technical knowledge and specialized skills necessary for entry-level work as laboratory professionals. Graduates of the BS in MLS program are eligible to take a national certification examination, which is required for most hospital-based clinical laboratory science positions. The Bachelor of Health Science with a concentration in Laboratory Science degree is a good choice for students interested in entering a subsequent graduate program.

Both programs have pre-professional and professional curriculum components. The pre-professional component consists of science and non-science prerequisite courses and the general education curriculum. The professional program begins with the junior year and is taught by the faculty of the Department of Applied Health Sciences. Didactic course work continues in the senior year and students in the BS in MLS program also complete a clinical experience in an affiliated clinical laboratory.

- Medical Laboratory Science (B.S.) (p. 371)
- Laboratory Science Concentration (B.H.S.) (p. 373)

Medical Laboratory Science (B.S.)

The Bachelor of Science in Medical Laboratory Science program consists of two years of pre-professional courses and two years of professional courses. The program fulfills the requirements for clinical laboratory science education of the National Accrediting Agency for Clinical Laboratory Sciences. Upon completion of this program, the student receives a Bachelor of Science in Medical Laboratory Science degree and is eligible to take a national certification examination in Medical Laboratory Science. Granting of the Bachelor of Science in Medical Laboratory Science degree IS NOT contingent up the student's passing any type of external certification or licensure examination.

This program is accredited by:

> National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
> 5600 N. River Road, Suite 720, Rosemont, IL 60018
> Phone: 773-714-8880 Fax: 773-714-8886
> Email: info@naacls.org
> Website: www.naacls.org

The work of the medical laboratory scientist involves performing a vast array of laboratory tests to provide accurate diagnostic information to the physician and the health care team. The medical laboratory scientist operates sophisticated laboratory instrumentation, evaluates and utilizes the best possible testing methods, and effectively teaches and supervises students and laboratory personnel. While the majority of medical laboratory scientists work in hospitals or other clinical laboratories, graduates are also prepared for positions in federal, state and local public health departments, in industrial or research laboratories and in medical laboratory science education.

The Medical Laboratory Science program utilizes the facilities of the Eugene Applebaum College of Pharmacy and Health Sciences, the faculty

of the Department of Applied Health Sciences, and the laboratories and pathology departments of clinical affiliates. This program includes clinical experiential coursework for all students who meet or exceed grade requirements.

Admission

Admission to the professional program requires completion of the pre-professional course requirements and satisfaction of specific admission requirements listed below. The application deadline for matriculation into the professional program is May 1 of each year for the subsequent Fall semester.

Since applicants who are admitted will eventually be working as members of a health care team, the admissions committee evaluates candidates based on their personal qualities as well as their academic achievement. Therefore, throughout the interview and the completion of other application requirements, criteria such as an applicant's maturity, motivation, knowledge of the profession, interpersonal skills, personal integrity, and empathy for others are evaluated.

Admission Requirements

The student wishing to apply to the professional program must meet the following admission requirements:

1. Cumulative grade point averages by the end of the second semester of the year preceding admission to the professional program of
   a. overall grade point average of 2.7 or above in pre-professional courses
   b. grade point average of 2.7 or above in all science and mathematics prerequisite courses
   c. no grade lower than 'C' in any pre-requisite course.
2. No more than two repeats or withdrawals (marks of 'W') in science courses preferred. (If all courses are withdrawn in a single semester, it counts as one 'W.')
3. Completion of all pre-professional courses (or their equivalents) by the end of the Spring/Summer semester prior to beginning the professional program (up to two general education courses can remain to be completed within the first professional year after admission).
4. Completion of the professional program application form and associated requirements and submission of official transcripts to:

   Eugene Applebaum College of Pharmacy and Health Sciences
   Office of Student Affairs
   259 Mack Avenue, Suite 1600
   Detroit, MI 48201

APPLICATION DEADLINE: The deadline for applications is May 1. Prospective students are urged to submit applications as early as possible. Specific directions for submitting application materials are indicated on the website.

APPLICATION REVIEW: All applications will be reviewed for completeness. The Admissions Committee will interview qualified applicants with completed applications submitted by the deadline date. A number of criteria will be evaluated, including academic achievement and personal qualities. Upon completion of all admission interviews, applicants will be notified of the final admission decision. This typically occurs in June of each year.

All requests for additional information should be addressed to the Department of Applied Health Sciences, Medical Laboratory Science Program, Eugene Applebaum College of Pharmacy and Health Sciences.

Prerequisite Coursework

Math and science prerequisites effective for the 2022 admission cycle:

Code	Title	Credits
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
BIO 2870	Anatomy and Physiology	5
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory [1]	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
MAT 1070	College Algebra	5

[1] General Chemistry I and General Chemistry I Lab were formerly numbered CHM 1220 and CHM 1230.

Pre-professional Curriculum

There are three components of coursework that must be completed prior to beginning the Medical Laboratory Science program: (1) math and science prerequisite requirements; (2) non-science prerequisite requirements; and (3) University General Education requirements (p. 24). The following requirements are listed by their Wayne State University title and course number. For comparable courses at other colleges, students should consult the Office of Transfer Credit (https://wayne.edu/transfercredit).

All pre-professional coursework must be completed with a grade of 'C' or better.

Math and science prerequisite coursework must be completed within six years prior to admission to the professional program. Exceptions to this policy may be made on a case-by-case basis at the discretion of the program faculty. Documentation of competency must be provided by the applicant requesting the exception

Code	Title	Credits
Pre-professional Courses		
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
BIO 2870	Anatomy and Physiology	5
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
MLS 2080	Medical Laboratory Science Seminar	1
MLS 3330	Medical Terminology	1
COM 1010	Oral Communication: Basic Speech	3
ENG 1020	Introductory College Writing	3
ENG 3010	Intermediate Writing (or any Intermediate Composition (IC) course)	3
MAT 1070	College Algebra	5
STA 1020	Elementary Statistics	3

University General Education Requirements:	
Cultural Inquiry (CI)	3
Social Inquiry (SI)	3
Diversity, Equity and Inclusion (DEI)	3
Global Learning Inquiry (GL)	3
Civic Literacy (CIV)	3
Total Credits	**63**

Candidates for the Bachelor of Science in Medical Laboratory Science degree must complete 120-134 credits in course work, including sufficient credits to fulfill the University General Education Requirements (p. 24) not satisfied by either required courses or the student's choice of electives in the pre-professional program. The distribution of the total credits for the degree will be between the pre-professional program and the following professional program.

MLS Professional Curriculum

Science courses in this program are taken under the direction of the faculty of Medical Laboratory Science in cooperation with the faculty of the Department of Applied Health Sciences and the staff of affiliated clinical institutions.

Third and Fourth Years

Code	Title	Credits
MLS 3020	Hematology I	4
MLS 3040	Immunohematology I	4
MLS 3080	Instrumentation Lecture and Laboratory	3
MLS 3100	Urine and Body Fluid Analysis	4
MLS 3280	Clinical Chemistry Lecture and Laboratory	3
MLS 4040	Laboratory Operations	2
MLS 4210	Hemostasis Lecture and Laboratory	2
MLS 4230	Hematology II	4
MLS 4240	Immunohematology II	4
MLS 5500	Immunology and Serology	3
MLS 5510	Diagnostic Microbiology I	4
MLS 5520	Diagnostic Microbiology II	4
MLS 5530	Medical Laboratory Science Simulation Laboratory	2
MLS 5550	Molecular Diagnostics	3
MLS 5996	MLS Clinical Pathology Review	2
Total Credits		**48**

Clinical Experience

(Second Semester/Senior Year):

Code	Title	Credits
MLS 4000	Clinical Hematology	5
MLS 4010	Clinical Chemistry	4
MLS 4020	Clinical Blood Bank	3
MLS 4030	Clinical Microbiology	4
Total Credits		**16**

Courses are completed at a clinical laboratory affiliated with the Eugene Applebaum College of Pharmacy and Health Sciences.

Medical Laboratory Science Honors

This program is open to students pursuing a Bachelor of Science in Medical Laboratory Science degree who maintain an overall cumulative grade point average of 3.3 or higher and complete a minimum of twelve honors course credits.

Code	Title	Credits
MLS 5590	MLS Honors Thesis Project	3
At least one HON 42XX interdepartmental Honors seminar		3
Select a minimum of 6 additional credits earned utilizing Honors Option in two or more of the following MLS program courses:		6
MLS 3020	Hematology I	
MLS 3040	Immunohematology I	
MLS 3080	Instrumentation Lecture and Laboratory	
MLS 3100	Urine and Body Fluid Analysis	
MLS 3280	Clinical Chemistry Lecture and Laboratory	
MLS 4040	Laboratory Operations	
MLS 4210	Hemostasis Lecture and Laboratory	
MLS 4230	Hematology II	
MLS 4240	Immunohematology II	
MLS 5500	Immunology and Serology	
MLS 5510	Diagnostic Microbiology I	
MLS 5520	Diagnostic Microbiology II	
MLS 5550	Molecular Diagnostics	
Total Credits		**12**

Laboratory Science Concentration (B.H.S.)

The Bachelor of Health Science with a concentration in Laboratory Science is an excellent degree for students who wish to specialize in laboratory studies or advanced medical training outside of the typical hospital or clinical laboratory setting. This program is designed to provide students with necessary coursework to either continue with MLS studies after graduation or to apply to graduate programs in a health care field of their choice. The clinical experience is not included in this degree.

Students applying for admission to this program must apply through the Medical Laboratory Science admission procedure. See the Bachelor of Science in Medical Laboratory Science program page for details.

Pre-professional Curriculum

Preprofessional science courses must be completed within the six years just prior to admission to a professional program. Exceptions to this policy may be made on a case-by-case basis at the discretion of the program faculty. Documentation of competency must be provided by the applicant requesting the exception.

These courses are taken under direction of the College of Liberal Arts and Sciences.

Pre-professional curriculum requirements for the Bachelor of Health Science with a concentration in Laboratory Science are identical to those for the Bachelor of Science in Medical Laboratory Science. Please see the Bachelor of Science in Medical Laboratory Science requirements page for details.

The BHS with a concentration in Laboratory Science degree requires a total of 120 credits.

Professional Curriculum

Required Courses

Code	Title	Credits
MLS 3020	Hematology I	4
MLS 3080	Instrumentation Lecture and Laboratory	3
MLS 3100	Urine and Body Fluid Analysis	4
MLS 3280	Clinical Chemistry Lecture and Laboratory	3
MLS 4210	Hemostasis Lecture and Laboratory	2
MLS 4230	Hematology II	4
MLS 5500	Immunology and Serology	3
MLS 5510	Diagnostic Microbiology I	4
MLS 5520	Diagnostic Microbiology II	4
MLS 5550	Molecular Diagnostics	3
Total Credits		**34**

Approved Electives

Sufficient electives may be taken to complete the minimum of 120 credits needed for graduation. Electives must be approved by the MLS Program Director and may include (list is not all-inclusive):

Code	Title	Credits
MLS 3040	Immunohematology I	4
MLS 4040	Laboratory Operations	2
MLS 4990	Professional Directed Study	1
Genetics		
Advanced Physiology		
Nutrition		
Cell Biology		
General Physics		
Advanced Psychology		
Ethics:		
PHI 1110	Ethical Issues in Health Care	
or PHI 2320	Introduction to Ethics	
MLS 5530	Medical Laboratory Science Simulation Laboratory	2

Mortuary Science (B.S.)

Mark T. Evely, Program Director
313-577-1202; evely@wayne.edu

The Mortuary Science bachelor degree program at Wayne State University is accredited by the American Board of Funeral Service Education (ABFSE), 992 Mantua Pike, Suite 108, Woodbury Heights, NJ 08097 (816) 233-3747. Web: www.abfse.org (http://www.abfse.org/).

National Board Examination pass rates, graduation rates, and employment rates for this and other ABFSE-accredited programs are available at www.abfse.org (http://www.abfse.org/docs/ABFSEDirectory.pdf#page=38). in the Directory of Accredited Programs.

Wayne State University is accredited by the Higher Learning Commission and complies with its provisions on ethical and responsible conduct as defined in Higher Learning Commission Assumed Practices, Number CRRT.B.10.020.

Program Learning Outcomes

1. Explain the importance of funeral service professionals in developing relationships with the families and communities they serve.
2. Identify standards of ethical conduct in funeral service practice.
3. Interpret how federal, state, and local laws apply to funeral service in order to ensure compliance.
4. Apply principles of public health and safety in the handling and preparation of human remains.
5. Demonstrate technical skills in embalming and restorative art that are necessary for the preparation and handling of human remains.
6. Demonstrate skills required for conducting arrangement conferences, visitations, services, and ceremonies.
7. Describe the requirements and procedures for burial, cremation, and other accepted forms of final disposition of human remains.
8. Describe methods to address the grief-related needs of the bereaved.
9. Explain management skills associated with operating a funeral establishment.
10. Demonstrate verbal and written communication skills and research skills needed for funeral service practice.

Traditional and Online Courses

Courses are offered in traditional and online formats. Please see the Mortuary Science Student Handbook (http://cphs.wayne.edu/mortuary-science/pdf/student_handbook.pdf) for additional information and requirements for online courses.

Clinical Requirements

Students must complete embalming and funeral directing clinical requirements as listed in the Mortuary Science Student Handbook (http://cphs.wayne.edu/mortuary-science/pdf/student_handbook.pdf).

Academic Advising and Transcript Evaluations

Academic advising, transcript evaluations, and questions regarding transfer credits are available through email to cphsinfo@wayne.edu or by calling 313-577-1716.

Grading Policy

Minimum Grade

Students in the Mortuary Science Program are required to maintain a program curriculum minimum GPA of 2.75 for continued enrollment and satisfactory completion. GPA is calculated at the end of each semester to determine whether continued enrollment is possible. Each course must be passed with a grade of "C" or better. A grade of less than "C" will result in dismissal from the program.

Grade of 'F'

A grade of 'F' indicates that the required class was failed. No credit will be given for the course. Receiving a grade of F in any course will result in dismissal from the program.

Mark of 'I'

A mark of 'I' indicates that course requirements were not completed or submitted as required. The mark is given at the discretion of the instructor. The student is required to meet with the instructor and submit a written Plan of Work confirming the agreement regarding the method, manner and timing of completing the requirements. Failure to complete requirements by the established deadline will result in the 'I' mark being converted to an 'F'.

Unless otherwise noted in a course syllabus, the following scale will be used in course grading:

93 - 100% A
90 - 92% A-
87 - 89% B+

83 - 86% B
80 - 82% B-
77 - 79% C+
73 - 76% C
70 - 72% C-
67 - 69% D+
63 - 66% D
60 - 62% D-
below 60% F

Final grades for MS 3970, MS 3980, and MS 4000 will be entered as P or N (pass or no-pass) based on the completion of required hours, tasks and activities.

Grades may be viewed in Academica (http://academica.aws.wayne.edu/). Grades are usually posted within 24 hours of an instructor submitting them. You will receive an e-mail informing you when grades are posted.

Time Limitations

Students may enroll full-time for three consecutive semesters (1 year to complete the program) or part-time for six consecutive semesters (2 years to complete the program). Students must complete the Program within two years of initial admission. Students who fail to complete the program within two years of initial admission must: (1) re-apply to the program and (2) fulfill all program requirements, including additional or different coursework in effect at the time of re-application.

Professional Licensure

The Bachelor of Science in Mortuary Science from Wayne State University meets or exceeds the educational requirements for licensure in every state.

Admission Requirements

1. Minimum of 2.75 GPA
2. All pre-professional coursework must be completed with a grade of "C" or better.
3. Test of English as a Foreign Language (TOEFL)-required only if English is not your first language
4. Minimum of 64 credits, including all program-specific pre-requisites and University General Education requirements.
5. Pre-professional coursework taken at an accredited college or university is acceptable
6. Completion of all pre-professional courses by the end of the spring/summer semester before admission to the program (unless an exception is granted by the program)
7. All applicants must attend one monthly Information Meeting at the Eugene Applebaum College of Pharmacy and Health Sciences.

Applicants who have been previously dismissed from the program must have a minimum cumulative GPA and program GPA of 2.75 to be eligible for readmission.

How to Apply

Students must submit the Mortuary Science Program Application (http://www.cphs.wayne.edu/mortuary-science/apply.php). The application deadline is June 15th of the year an applicant wants to enter the program.

Degree Requirements

Candidates for the Bachelor of Science in Mortuary Science must satisfactorily complete:

1. Sixty-four credits of Program-Specific Prerequisites and General Education requirements listed below;
2. Fifty-six credits in the Mortuary Science professional program curriculum;
3. Embalming and Funeral Directing clinical requirements as listed in the Mortuary Science Student Handbook (http://cphs.wayne.edu/mortuary-science/pdf/student_handbook.pdf)
4. The Arts and Sciences sections of the National Board Examination within thirty days of completion of coursework.

All prerequisite, general education, and professional courses must be passed with a grade of C or higher. The overall GPA for professional courses must be 2.75 or higher.

Pre-professional Program

There are two components of coursework that must be completed prior to beginning the Mortuary Science program: (1) program-specific prerequisites; and (2) University General Education requirements (p. 24). The professional curriculum in Mortuary Science consists of fifty-six credits, so an applicant must earn sixty-four credits, including the program prerequisites and general education requirements before entering the program. If the General Education and program prerequisites do not add up to sixty-four credits, elective courses must be taken to complete the sixty-four total credits needed prior to entering the program. This sixty-four plus fifty-six formula equals the 120 total credits required for the Bachelor of Science degree. The courses below are listed by their title and course number at Wayne State University. For comparable courses at other colleges, students should consult the Office of Transfer Credit (http://transfercredit.wayne.edu).

Prerequisite courses must be completed with a grade of 'C' or better.

Prerequisites for Students Without a Prior Bachelor's Degree

Code	Title	Credits
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2870	Anatomy and Physiology	5
MLS 3330	Medical Terminology	1
CHM 1000	Chemistry and Your World	4
COM 1010	Oral Communication: Basic Speech	3
PH 2100	Introduction to Public Health	3
COM 2200	Interpersonal Communication	3
ENG 1020	Introductory College Writing	3
ENG 3010	Intermediate Writing	3
PSY 1010	Introductory Psychology	4
PHI 1050	Critical Thinking	3
SOC 1010	Understanding Human Society [1]	3
One course in a business field (ACC, BA, ECO, MGT)		

[1] Or any Social Inquiry (SI) course.

Prerequisites for Students With a Prior Bachelor's Degree

Code	Title	Credits
PH 2100	Introduction to Public Health [2]	3
MLS 3330	Medical Terminology	1
COM 2200	Interpersonal Communication	3
PSY 1010	Introductory Psychology	4
One course in a business field (ACC, BA, ECO, MGT)		

[2] Or BIO 1510 and BIO 1511.

University General Education Requirements

General Education courses are required for every graduate of Wayne State University. The following General Education courses must be satisfied:

- Civic Literacy (CIV)
- Cultural Inquiry (CI)
- Global Learning (GL)
- Diversity, Equity, and Inclusion (DEI)
- Quantitative Experience (QE)

General Education courses are required for every graduate of Wayne State University. Applicants may satisfy the general education requirements in one of the following ways:

1. earning a bachelor's degree from a regionally accredited institution,
2. earning an Associate of Arts (AA), Associate of Liberal Arts (ALA), Associate of Science (AS) or Associate of Baccalaureate Studies (ABS) degree from a Michigan community college,
3. obtaining a Michigan Transfer Agreement (MTA) stamp
4. obtaining a MACRAO stamp, or
5. completing courses in satisfaction of the University General Education requirements.

Professional Program

Full-time Professional Curriculum

All professional courses must be completed with a grade of "C" or better. The National Board Examination (NBE) is a degree requirement and must be taken within thirty (30) days of completing MS 5996. All coursework must be completed within two years of initial admission to the Program.

Fall Semester		**Credits**
MS 3970	Practicum I	3
MS 3500	Embalming I	2
MS 3600	Restorative Art I	3
MS 3800	Funeral Directing	3
MS 3830	Psychology of Death and Dying	3
MS 4050	Anatomy for Mortuary Science	2
MS 4250	Pathology and Microbiology for Mortuary Science	3
	Credits	**19**
Winter Semester		
MS 3980	Practicum II	3
MS 3300	Religions, Values, and Death	2
MS 3400	Funeral Service Law and Ethics I	3
MS 3510	Embalming II	2
MS 3610	Restorative Art II	2
MS 3810	Funeral Service Marketing and Merchandising	3
MS 3100	Thanatochemistry	2
MS 5350	Funeral Service Communications	1
	Credits	**18**
Spring Semester		
MS 3620	Preparation for Disposition	2
MS 3760	Funeral Service History and Trends	2
MS 3840	Funeral Service Applications	3
	Credits	**7**
Spring/Summer Semester		
MS 3410	Funeral Service Law and Ethics II	3
MS 4000	Practicum III	3
MS 4450	Funeral Service Management and Accounting	3
MS 5996	Professional Review	3
	Credits	**12**
	Total Credits	**56**

Part-time Professional Curriculum

**Two years to complete professional curriculum*

First Year		
Fall Semester		**Credits**
MS 3800	Funeral Directing	3
MS 3830	Psychology of Death and Dying	3
MS 4250	Pathology and Microbiology for Mortuary Science	3
	Credits	**9**
Winter Semester		
MS 3300	Religions, Values, and Death	2
MS 3400	Funeral Service Law and Ethics I	3
MS 3810	Funeral Service Marketing and Merchandising	3
MS 5350	Funeral Service Communications	1
	Credits	**9**
Spring Semester		
MS 3760	Funeral Service History and Trends	2
	Credits	**2**
Spring/Summer Semester		
MS 3410	Funeral Service Law and Ethics II	3
MS 4450	Funeral Service Management and Accounting	3
	Credits	**6**
Second Year		
Fall Semester		
MS 3500	Embalming I	2
MS 3600	Restorative Art I	3
MS 3970	Practicum I	3
MS 4050	Anatomy for Mortuary Science	2
	Credits	**10**
Winter Semester		
MS 3100	Thanatochemistry	2
MS 3510	Embalming II	2
MS 3610	Restorative Art II	2
MS 3980	Practicum II	3
	Credits	**9**
Spring Semester		
MS 3620	Preparation for Disposition	2
MS 3840	Funeral Service Applications	3
	Credits	**5**
Spring/Summer Semester		
MS 4000	Practicum III	3
MS 5996	Professional Review	3
	Credits	**6**
	Total Credits	**56**

Health Care Sciences

Interim Chairperson: Diane Adamo

The Department of Health Care Sciences consists of six programs that share a common theme of excellence in the education and training of those involved in patient care. The department is housed in the Eugene Applebaum College of Pharmacy and Health Sciences (EACPHS) building which is near main, large health care institutions and close to the Wayne State University Medical School. Many of the department's faculty, who are involved in health care related research, offer students opportunities to assist in research. This has enabled greater appreciation for health care management and clinical decision-making.

- Physical Therapy Concentration (B.H.S.) (p. 377)
- Radiation Therapy Technology (B.S.) (p. 378)

Physical Therapy Concentration (B.H.S.)

Office: 2248 EACPHS; 313-577-1432
Director: Kristina Reid, Physical Therapy Program
https://cphs.wayne.edu/physical-therapy/

Physical Therapists provide services to patients/clients who have impairments of body function and structure, activity limitations, and participation restrictions or changes in physical function and health status resulting from injury, disease, or other causes. Physical therapists collaborate with a variety of professionals, address risk factors to health, are leaders and providers in the areas of prevention and promoting health, wellness and fitness, serve as educators, consultants, administrators, and advocates, utilize critical inquiry skills and direct and supervise the provision of physical therapy services. Physical Therapy services include examination, evaluation, diagnosis, prognosis, and intervention primarily for individuals with musculoskeletal, neuromuscular, cardiopulmonary, and/or integumentary conditions. Physical therapists practice in a wide variety of settings including hospitals, outpatient clinics, private practice, schools, academia, home care, industrial clinics, sports clinics, rehabilitation centers, and health and wellness programs. Students interested in the physical therapy profession should also visit the American Physical Therapy Association (http://www.apta.org) website.

The physical therapy curriculum at Wayne State University is a professional degree program leading to the Doctor of Physical Therapy (https://bulletins.wayne.edu/graduate/college-pharmacy-health-sciences/health-care-sciences/physical-therapy-dpt/) degree. The entire program involves a pre-professional component: ninety credits of undergraduate course work; a first year of physical therapy courses taken under qualified graduate status; and the final two and one half years of Physical Therapy courses taken under regular graduate status. Only those portions of the program that may be completed during the first four years of what is usually construed as an undergraduate matriculation are presented in this Bulletin. The balance of the program is presented in the Graduate Bulletin.

The program of study in physical therapy is accredited by the:

> Commission on Accreditation in Physical Therapy Education for the Doctor of Physical Therapy program
> Attn: Accreditation Dept.
> 1111 N. Fairfax St.
> Alexandria VA 22314-1488
> (http://www.apta.org (http://www.apta.org/))

Graduates who receive a Doctor of Physical Therapy degree are eligible to take the national physical therapy licensure examination and the Canadian licensure examination and for active membership in the American Physical Therapy Association.

Admission Requirements

Admission to the Doctor of Physical Therapy (D.P.T.) degree program is required to complete the B.H.S. physical therapy concentration requirements. Admission to the D.P.T. program is highly competitive and requires completion of the pre-professional program with a minimum undergraduate GPA of 3.0 and a minimum C (2.0) grade in each prerequisite course. Students should refer to the Graduate Bulletin (https://bulletins.wayne.edu/graduate/college-pharmacy-health-sciences/health-care-sciences/physical-therapy-dpt/) for all admission and course requirements for the D.P.T. degree.

Program Requirements

The Eugene Applebaum College of Pharmacy and Health Sciences has established a combined undergraduate and graduate program in Physical Therapy. Students admitted to the Doctor of Physical Therapy (D.P.T.) program are enrolled simultaneously in the undergraduate Bachelors of Health Science (B.H.S.) with a concentration in physical therapy degree program and the graduate D.P.T. degree program. Students are eligible to apply for the B.H.S. degree after completion of the first full year in the program; a minimum of thirty credits will be applied toward both the undergraduate and graduate degree.

PLEASE NOTE: Student may NOT apply to or earn the Bachelor of Health Science with a concentration in physical therapy degree retroactively or after a subsequent higher level degree has been conferred.

Degree Requirements

All course work for the B.H.S. physical therapy concentration must be completed in accordance with the academic procedures of the University (p. 40) and the College (p. 365) governing undergraduate scholarship and degrees. Students will need to complete one hundred and twenty credits with a GPA of 2.0 or better, including courses taken that apply to the concentration. Students who have successfully completed at least 30 credits at Wayne State University are eligible.

Course Requirements

Code	Title	Credits
Science Prerequisite Courses		
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2870	Anatomy and Physiology	5
Three credits of Biology at the 3000-level or higher (waived for students with a prior bachelor's degree)		3
PHY 2130	Physics for the Life Sciences I	4
PHY 2131	Physics for the Life Sciences Experimental Laboratory	1
PHY 2140	Physics for the Life Sciences II	4
PHY 2141	Physics for the Life Sciences Laboratory	1
Two chemistry courses with at least one lab, as long as topics do not overlap (options for chemistry courses listed below)		8-10
CHM 1020	Survey of General Chemistry	
CHM 1030	Survey of Organic/Biochemistry	
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	

CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	
Non-Science Prerequisite Courses		
ENG 1020	Introductory College Writing	3
PSY 1010 or PSY 1020	Introductory Psychology Elements of Psychology	4
STA 1020	Elementary Statistics	3
6 additional credits in upper division (3000 level +) courses concentrated in one area		6
General Education Requirements (waived for students with a prior bachelor's degree)		
Civic Literacy (CIV)		
Cultural Inquiry (CI)		
Diversity, Equity and Inclusion (DEI)		
Global Learning (GL)		
Intermediate Composition (IC)		
Oral Communication (OC)		
Social Inquiry (SI)		
Electives		
To reach 90 credits		0-22
B.H.S. Physical Therapy Concentration Courses		
Select up to 30 credits of the following:		30
PT 5010	Clinical Applications I	
PT 5020	Foundations of Physical Therapy	
PT 5030	Basic Patient Care in Physical Therapy	
PT 5120	Human Growth and Development	
PT 5300	Surface Anatomy	
PT 5320	Basic Examination and Evaluation Procedures	
PT 5400	Neurosciences for Health Care Professionals	
PT 5410	Clinical Medicine I	
PT 5430	Clinical Medicine II	
PT 5500	Kinesiology and Biomechanics	
PT 5505	Clinical Applications of Human Anatomy	
PT 5510	Clinical Applications of Human Anatomy: Laboratory	
PT 5650	Pathophysiology for Health Sciences	
PT 5660	Pathokinesiology	
PT 6300	Research I: Critical Thinking	
PT 6310	Advanced Exercise Physiology	
PT 6700	Motor Learning and Motor Control	

Honors Designation

Students enrolled in the Irvin D. Reid Honors College while completing the pre-concentration requirements will be eligible for the Honors distinction with the B.H.S. degree if all requirements set forth by the Honors College have been met.

Radiation Therapy Technology (B.S.)

Office: 5134 EACPHS: 313-577-5711
Program Director: Jeannetta Greer
http://cphs.wayne.edu/rtt

Radiation therapy technology is a health care discipline which utilizes ionizing radiation for the treatment of malignant diseases. This field requires a basic understanding of and interest in science, especially mathematics and physics, as well as emotional maturity and a desire to assist in the management of patient care. A radiation therapist has the unique opportunity to blend knowledge and skills of mathematics, medical science, and psychology in his or her everyday work. The therapist comes to know patients over a period of several months and becomes an important presence in their health care, a continued contact that is the source of much satisfaction and professional pride. The Bachelor of Science Degree program in Radiation Therapy Technology at Wayne State University is designed to prepare students for the technical, theoretical and psychological aspects of this career.

Radiation therapists are typically employed in hospitals, clinics, educational institutions, and commercial equipment corporations as staff therapists, clinical supervisors, administrators, educators, and technical marketing personnel. A radiation therapist is able to:

- operate sophisticated radiation equipment to deliver a planned course of radiation therapy;
- assist the physicist in quality assurance and in treatment planning procedures, and in the calibration of equipment;
- observe the clinical progress of the patient undergoing radiation therapy, and recognize when a patient's condition requires the attention of a physician; and
- assist in providing psychosocial support for patients who are dealing with the stress of their illness.

The Bachelor of Science in Radiation Therapy Technology is a four-year degree program consisting of two years of pre-professional courses and two years of professional courses. The program is accredited by the:

Joint Review Committee on Education in Radiologic Technology (http://www.jrcert.org/)
20 N. Wacker Drive, Suite 2850
Chicago IL 60606-3182
312-704-5300.

The program complies with the professional curriculum of the American Society of Radiologic Technologists. Upon completion of the program, the student receives a Bachelor of Science Degree in Radiation Therapy Technology and is eligible to take the national certification examination administered by the American Registry of Radiologic Technologists.

Admission to Pre-professional Program

The first two years (pre-professional program) are taken in the College of Liberal Arts and Sciences as a Pre-Radiation Therapy major, the admission requirements of which are satisfied by general admission (https://bulletins.wayne.edu/undergraduate/general-information/admission/) to the University. Students should consult with the University Advising Center, 1600 Adamany Library, regarding course selection. Students are urged to attend a College Information Night to learn about the professional program and application process: Information Meeting (https://slate.wayne.edu/portal/eacphs).

Recommended High School Preparation: Students interested in a career in radiation therapy technology should take as many of the following high school courses as possible: biology, chemistry, mathematics, physics, computer science, keyboarding, speech, and composition.

Admission to Professional Program

Admission to the professional program requires completion of the above pre-professional course requirements and satisfaction of specific admission requirements listed below. The application deadline is November 30 for matriculation into the professional program for the subsequent spring/summer term.

Students should work with an advisor in the University Advising Center (313-577-2680) to stay current with pre-professional coursework

and program admission requirements. The program faculty provides career advisement at the Eugene Applebaum College of Pharmacy and Health Sciences' Monthly College Information Meeting held on the first Tuesday of each month. Attendance of at least one monthly meeting is a mandatory application requirement prior to the beginning of the application process.

Since applicants who are admitted will eventually be working as a member of a health care team, the admissions committee evaluates candidates based on their personal qualities as well as their academic achievement. Therefore, throughout the interview and the completion of other application requirements, such criteria as a student's maturity, motivation, knowledge of the profession, interpersonal skills, personal integrity, and empathy for others is evaluated.

Professional Program Admission Requirements

The student applying to the professional program must meet the following admission requirements:

1. Completion of all pre-professional courses (or their equivalents) by the end of the winter term for spring semester program start.
2. Hold a minimum 2.5 cumulative GPA and a minimum 2.7 math and science prerequisite GPA.
3. Completion of a RTT Program Application (https://slate.wayne.edu/register/?id=d373900e-8fe5-4447-a96e-5b3657b7f031) and submission of all required documentation.
4. Submission of official transcripts from all college institutions attended (other than Wayne State).
5. Attendance at a Monthly College Information Meeting (http://cphs.wayne.edu/admissions/before-you-apply.php) at the Eugene Applebaum College of Pharmacy and Health Sciences, held the first Tuesday of each month at 6:00pm. Out-of-state applicants should contact a Radiation Therapy Technology faculty member for options to accommodate individual circumstances.
6. Two clinical visits to affiliate institutions. If clinical sites are unavailable, alternative arrangements can be made. Call 313-577-5711 to schedule a visit. Out-of-state applicants should contact a Radiation Therapy Technology faculty member for options to accommodate individual circumstances.
7. Submission of two references via the application portal from an employer/supervisor and a college professor/advisor, preferably one from each.
8. Completion of at least 57 credit hours before starting the professional program requirements.
9. Satisfaction of the University General Education requirements.

Application Deadline: The application and deadline for submission of required materials is November 30. Prospective students are urged to submit applications as early as possible when the application opens in mid-summer.

Application Review: All applications will be reviewed for completeness and the Admissions Committee will review all qualified applicants submitted by the deadline. The Admissions Committee will notify applicants of their interview status. Interviews are typically conducted in February of each year. A number of criteria will be evaluated, including academic achievement and personal qualities. The Radiation Therapy Technology Program typically notifies each applicant of a final admission decision in March.

Pre-professional Program

Each of the following required pre-professional courses (or its equivalent) must be completed with a minimum grade of C (2.00 GPA, where A = 4.0).

First and Second Years

Code	Title	Credits
AHS 3000	Medical Terminology for Applied Health Sciences	1
BIO 1500 & BIO 1501	Basic Life Diversity and Basic Life Diversity Laboratory	4
BIO 1510 & BIO 1511	Basic Life Mechanisms and Basic Life Mechanisms Laboratory	4
BIO 2870	Anatomy and Physiology	5
CHM 1020	Survey of General Chemistry (and lab)	4
COM 1010	Oral Communication: Basic Speech	3
ENG 1020	Introductory College Writing	3
ENG 3010	Intermediate Writing	3
MAT 1800	Elementary Functions	4
PHI 1050	Critical Thinking	3
PHY 2130	Physics for the Life Sciences I	4
PHY 2131	Physics for the Life Sciences Experimental Laboratory	1
PHY 2140	Physics for the Life Sciences II	4
PHY 2141	Physics for the Life Sciences Laboratory	1
PS 1010	American Government	4
PSY 1010	Introductory Psychology	4
PSY 2300	Psychology of Everyday Living	4
or PSY 2400	Developmental Psychology	
or PSY 2410	Health Psychology	
University Requirements (see General Education Program Requirements) (p. 24)		

Professional Program

Degree Requirements

Candidates for the degree Bachelor of Science in Radiation Therapy Technology must complete a minimum of 120 credits, including professional coursework, the University General Education Requirements (https://bulletins.wayne.edu/undergraduate/general-information/general-education/), and any needed elective credit. The total course work will be distributed between two years of pre-professional courses and the two-year professional program as outlined below. Courses in the professional program are taken in the Eugene Applebaum College of Pharmacy and Health Sciences. Enrollment requires full-time student status for six consecutive terms (twenty-four months), during which time students take didactic and clinical courses. The clinical program includes approximately twenty hours per week of clinical education at multiple affiliate institutions in the greater metropolitan Detroit area. Such institutions include urban and suburban hospitals.

While most required courses are scheduled during usual daytime hours, students are required to attend some courses or individual class sessions in early evening.

Third Year		Credits
RT 3000	Concepts of Clinical Care	3
RT 3010	Introductory Radiation Physics	3
RT 3020	Clinical Radiation Physics	3
RT 3110	Clinical Aspects of Radiation Therapy	3
RT 3140	Topographic Anatomy and Medical Imaging	3
RT 3200	Therapeutic Interactions in Oncology Care	2
RT 3310	Clinical Practicum I	4
RT 3320	Clinical Practicum II	4
RT 3330	Clinical Practicum III	4
RT 5650	Pathophysiology for Health Sciences	3
	Credits	**32**

Fourth Year		
RT 4110	Clinical Radiation Oncology	4
RT 4120	Basic Clinical Dosimetry	4
RT 4140	Oncologic Pathology	2
RT 4150	Radiobiology of Radiation Oncology	2
RT 4220	Radionuclide Physics	3
RT 4240	Radiation Therapy Technology Seminar	3
RT 4300	Quality Assurance	2
RT 4350	Clinical Practicum IV	4
RT 4360	Clinical Practicum V	4
RT 4370	Clinical Practicum VI	4
RT 5990	Directed Study in Radiation Therapy Technology (Max 5)	1-5
	Credits	**33-37**
	Total Credits	**65-69**

Scholarship

Students in the professional program are subject to high academic and professional standards. A grade of 'C' (2.00) or above is required in each professional course, and the student must maintain a program grade point average of 2.70. A grade of 'C-minus' (1.67) in a professional course indicates unsatisfactory performance; repetition of the course is required, and review by the Academic Committee will occur. A second grade of 'C-minus' or below, or a single grade of 'D' or less (1.00 or less) will result in immediate dismissal from the professional program. Academic standards and program probation policies are subject to change. Academic standards and policies are published annually; copies are available upon request from the Radiation Therapy Technology Program.

Liability Insurance

Each student is required to have professional liability insurance during the entire length of the professional program. Neither the clinical affiliates, nor Wayne State University, assume liability for student actions during clinical education.

Radiation Therapy Technology Honors

The Radiation Therapy Technology Honors Program is an opportunity for students to learn more about areas in radiation therapy that peaks the student's interest. This provides students with a great opportunity to go beyond the classroom and explore more ways to enhance their academic experience and patient care skills.

Requirements

Code	Title	Credits
Graduate with a minimum cumulative university GPA of 3.5		
Complete an Honors Seminar course (HON 42XX)		3
Honors 1 - Third Year		
RT 3200	Therapeutic Interactions in Oncology Care	2
Must have a minimum 3.3 cumulative GPA from Wayne State University to begin Honors 1.		
Honors 2 - Fourth Year		
RT 4240 & RT 4110	Radiation Therapy Technology Seminar and Clinical Radiation Oncology	7
Must have a 3.3 cumulative GPA from Wayne State University and a 3.4 GPA in Radiation Therapy courses to start Honors 2.		
Honors 3 - Fourth Year		
RT 4370	Clinical Practicum VI	4
Must have a minimum cumulative GPA of 3.3 from Wayne State University and a 3.5 GPA in RT courses to begin Honors 3.		
Total Credits		**16**

Pharmaceutical Sciences

Office: 3610 EACPHS; 313-577-1047
Chairperson: Steven Firestine
https://applebaum.wayne.edu/pharmaceutical-sciences

The Eugene Applebaum College of Pharmacy and Health Sciences has established a combined undergraduate and graduate program for those admitted to the Doctor of Pharmacy (PharmD) program. Qualified senior students may enroll simultaneously in the undergraduate Bachelor of Health Science with a concentration in pharmaceutical sciences degree program and the graduate Doctor of Pharmacy (Pharm.D.) degree program and apply a maximum of thirty-three credits toward both the undergraduate and graduate degree.

Those who are enrolled in this program may expect to complete the B.H.S. pharmaceutical sciences concentration and the Pharm.D. degrees in seven years of full-time study.

NOTE: The B.H.S. pharmaceutical sciences concentration does not qualify the holder for licensure as a pharmacist. The Pharm.D. degree is required to qualify the holder for licensure as a pharmacist.

- Pharmaceutical Sciences Concentration (B.H.S.) (p. 380)
- Pharmacy (Pharm.D.) (p. 381)

Pharmaceutical Sciences Concentration (B.H.S.)

PLEASE NOTE: Application to or awarding of the Bachelor of Health Science with a concentration in pharmaceutical sciences degree retroactively or after a subsequent higher level degree in this discipline has been conferred is not permitted.

The Eugene Applebaum College of Pharmacy and Health Sciences has established a combined undergraduate and graduate program. Qualified senior students may enroll simultaneously in the undergraduate Bachelor of Health Science with a concentration in pharmaceutical sciences degree program and the graduate Doctor of Pharmacy (Pharm.D.) degree program and apply a maximum of thirty-three credits toward both the undergraduate and graduate degree.

Those who are enrolled in this program may expect to complete the B.H.S. pharmaceutical sciences concentration and the Pharm.D. degrees in seven years of full-time study.

NOTE: The B.H.S. pharmaceutical sciences concentration does not qualify the holder for licensure as a pharmacist. The Pharm.D. degree is required to qualify the holder for licensure as a pharmacist.

Admission Requirements

All applicants must satisfy the undergraduate admission (p. 34) requirements to the University. Admission to the Doctor of Pharmacy degree program (see below) prior to the beginning of the senior year is required for completion of the B.H.S. pharmaceutical sciences concentration program. Admission to the Pharm.D. program is highly competitive. Students should refer to the Graduate Bulletin for admission and course requirements for the Pharm.D. degree.

Program Administration

The Office of Student Affairs in the Eugene Applebaum College of Pharmacy and Health Sciences will certify completion of the B.H.S. pharmaceutical sciences concentration/Pharm.D. program. When students complete requirements for the B.H.S. pharmaceutical sciences concentration, they will complete an application for graduation with

accompanying fee in order for the graduation audit to be completed prior to degree certification. Information about applying for degree can be found online (http://reg.wayne.edu/students/graduation.php).

The B.H.S. pharmaceutical sciences concentration degree requires completion of a minimum of 120 credits consisting of courses prerequisite to admission to the Pharm.D. program and courses that comprise the first year of that program. This curriculum is outlined below as science prerequisites, non-science prerequisites, General Education Requirements (p. 24), and First Professional Year requirements.

All course work for the B.H.S. pharmaceutical sciences concentration must be completed in accordance with the academic procedures of the University (p. 40) and the College (p. 365) governing undergraduate scholarship and degrees. Students will need to complete 120 credits with a g.p.a. of 2.0 or better, including courses taken that apply to the pharmaceutical concentration. Students who have successfully completed at least the first professional year in the Pharm.D. program at Wayne State University are eligible for the B.H.S. pharmaceutical sciences concentration degree.

Code	Title	Credits
Science Requirements		
BIO 1510	Basic Life Mechanisms	3
BIO 2270 & BIO 2271	Principles of Microbiology and Principles of Microbiology Lab	5
BIO 2870	Anatomy and Physiology	5
BIO 3200	Human Physiology	3
CHM 1100 & CHM 1130	General Chemistry I and General Chemistry I Laboratory	5
CHM 1140 & CHM 1150	General Chemistry II and General Chemistry II Laboratory	5
CHM 1240 & CHM 1250	Organic Chemistry I and Organic Chemistry I Laboratory	5
CHM 2220 & CHM 2230	Organic Chemistry II and Organic Chemistry II Laboratory	5
CHM 5600	Survey of Biochemistry	3
MAT 2010	Calculus I	4
PHY 2130 & PHY 2131	Physics for the Life Sciences I and Physics for the Life Sciences Experimental Laboratory	5
Non-Science Prerequisites		
COM 1010	Oral Communication: Basic Speech	3
ENG 1020	Introductory College Writing	3
STA 1020	Elementary Statistics	3
Additional General Education Requirements		
Social Inquiry (SI)		3
Cultural Inquiry (CI)		3
Global Learning Inquiry (GL)		3
Diversity, Equity & Inclusion Inquiry (DEI)		3
Civic Literacy Inquiry (CIV)		3
Intermediate Composition (IC)		3

First Professional Year (P-1) Requirements

Fall Semester		Credits
PHA 4105	Pathophysiology 1	3
PHA 4125	Drug Literature Evaluation and Foundations of Research	3
PSC 4115	Pharmaceutics I	3
PSC 4125	Introduction to Pharmaceutical Sciences: Medicinal Chemistry / Pharmacology / Immunology	3
PPR 4115	Social Administrative Sciences and Professional Development I	3
	Credits	**15**
Winter Semester		
PHA 4205	Pathophysiology II	2
PHA 4225	Principles of Pharmacotherapy I: Respiratory, Gastroenterology, Allergy, Ophthalmology	4
PHA 4235	Pharmacotherapeutic Problem Solving I: Respiratory, Gastroenterology, Allergy, Ophthalmology	2
PSC 4215	Pharmaceutics II	2
PSC 4225	Autonomic Pharmacology	2
PPR 4245	Patient Care Lab 1	1
PPR 4255	Social Administrative Sciences and Professional Development II	2
	Credits	**15**
Spring/Summer Semester		
PPR 4315	Pharmacy Jurisprudence I and Professional Responsibility	2
PPR 4365	Introductory Pharmacy Practice Experience I	1
	Credits	**3**
	Total Credits	**33**

Additional undergraduate or professional courses may be needed to achieve the minimum 120 credits required to earn the B.H.S. degree.

Clinical Education Requirements

Clinical Education is provided throughout the Pharm.D. program including during the required B.H.S. pharmaceutical sciences concentration courses. Patient care involves inherent risk of exposure to potential diseases, particularly blood-borne pathogens, and the risk of possible mishaps in patient care. Therefore, all students are required to maintain health insurance coverage and liability insurance, both of which must be in effect prior to and during all periods in which the student is involved in clinical education. The student is responsible for the cost of these insurances and all other costs (such as travel, parking) associated with the clinical experiences throughout the program.

Pharmacy (Pharm.D.)

The Pharm.D. is a graduate degree program which requires specific preparation at the undergraduate level herein cited as pre-professional course work. Thus the admission process may be construed as two-tiered in that students must complete specific pre-professional course work and may apply to the Pharm.D. program prior to their senior year. One such route into the Pharm.D. program is by way of the B.H.S. pharmaceutical sciences concentration.

Pre-professional Admission (Pharm. D.)

Admission requirements: The pre-professional program is taken in the College of Liberal Arts and Sciences for which admission requirements are satisfied by the general requirements for undergraduate admission (p. 34) to the University. Counselors are available in the Office of Admissions for personal conferences to aid the prospective student.

Recommended High School Preparation: Fifteen units of high school work are required for admission. The following units are recommended:

English: 4 units
Foreign Language: 1-2 units
Mathematics: 4 units
Laboratory Science: 3 units
Social Studies and History: 2 units

Students will find it advantageous to have had at least one year each of algebra, biology, chemistry, and physics. English, mathematics, and science are strongly recommended.

Applicants whose first language is not English must satisfy the University's English proficiency requirements (https://wayne.edu/admissions/international/english-proficiency). If coursework was completed at a non-US institution, transcripts must be evaluated by a WSU approved evaluation service (WES). The official course-by-course evaluation must be sent to PharmCAS.

Pre-professional Course Requirements

The undergraduate pre-professional preparation for admission to the Pharm.D. degree program is cited in the B.H.S. with a concentration in pharmaceutical sciences (p. 380) section of this bulletin. These courses (or their equivalents) may be taken at Wayne State University, another university, or a community college. All prerequisite courses and General Education Requirements should be completed prior to admission to the pharmacy curriculum. All such courses (or their equivalents) must be completed with the grade of C (2.0 g.p.a.) or better. Grades of C-minus or below, or numerical grades below 2.0 g.p.a., are not acceptable.

Because of rapid changes in technology, pre-professional science credits must be completed within six years prior to admission to the professional program.

Professional Program Admission

Admission to the Doctor of Pharmacy Curriculum is granted only for the Fall semester. Enrollment in this curriculum is limited to applicants who have met the general University admissions requirements by the stipulated deadline, who satisfy the admission criteria stated below, and who present evidence of professional admissibility and promise of academic and professional competence in pharmacy.

Application: Admission applications to the Doctor of Pharmacy curriculum are available through the Pharmacy College Application Service (PharmCAS) (http://www.PharmCAS.org).

Application Deadline: Deadline for submission of complete application materials to PharmCAS is at the beginning of January. Exact dates change yearly and are posted on the WSU PharmD Admissions page (https://applebaum.wayne.edu/pharmd/admissions) and PharmCAS.

Admission Criteria: Admission to the Doctor of Pharmacy curriculum is competitive and the following criteria are used to evaluate applications from prospective students. Admission decisions are made by the Admissions Committee of the College.

1. Completion of prerequisite courses with a minimum grade of "C" or better (2.0 on a 4.0 grade scale). Completion of prerequisites with minimum grades does not guarantee admission.
2. The WSU PharmD program does not require minimum cumulative or prerequisite GPAs; however, these GPAs will still be considered in the overall review for admission.
3. WSU admissions requirements promote student success by assessing preparedness and academic potential in the unique context of each student's personal experience. Admission assessment will consider all achievements in order to enroll students with a broad range of characteristics and perspectives. These include but are not limited to academic achievement, creativity, initiative, motivation, leadership, persistence, service to others, intellectual curiosity, exceptional personal or academic recognition, unusual talent or ability, substantial experience with other cultures, and ability to overcome significant challenges. These variables will be assessed through written statements as well as interview questions.
4. Two completed professional recommendations must accompany the completed application form. The applicant is encouraged to solicit the recommendations from two faculty members or one faculty member and one employer.
5. Applicants must include a personal resume, outlining community or vocational activities, honors, employment, extracurricular and volunteer activities.
6. Applicants whose first language is not English must satisfy the University's English proficiency requirements.
7. A personal interview is required.
8. Students who are offered admission to the Pharm.D. program will have a Criminal Background Check. This will be performed by Certiphi, Inc through PharmCAS. Matriculation into the program will depend on the results of that check.

Further information concerning the Doctor of Pharmacy Program can be found in the Wayne State University Graduate Bulletin.

Pharmacy Practice

Office: 2190 EACHPS; 313-577-0115
Chairperson: Lynette R. Moser
https://applebaum.wayne.edu/pharmacy-practice

The WSU Doctor of Pharmacy program educates students to become valued providers of health care services. Our graduates use evidenced-based practice to ensure optimal health of the patient and of the public and will provide leadership in advancing pharmacy practice and health policy.

The practice of pharmacy has experienced profound changes during the past three decades as its traditional role in drug distribution has increasingly expanded to incorporate the concept of comprehensive medication management. This philosophy charges pharmacists with the responsibility for providing drug therapy that achieves defined results and improves a patient's quality of life. Pharmacists are expected to interact with patients and other health care providers to assure that the drug therapy prescribed is appropriate, administered, and monitored in a way that assures achieving the desired outcomes.

The ability of pharmacists to play an increasingly active role in drug therapy is being recognized at state and national levels. At the state level pharmacists have been recognized as having the ability to initiate or modify drug therapy, either through collaboration with a physician or by independent authority. In Michigan, pharmacists are allowed to prescribe under delegated authority of a licensed practitioner. Examples of services provided by pharmacists include:

- disease state screening (examples are: blood pressure monitoring for hypertension, glucose monitoring for diabetes, cholesterol monitoring, bone densitometry for osteoporosis)
- monitoring and adjusting anticoagulation therapy
- monitoring and adjusting antibiotic therapy.

A major impetus for these changes is a result of the realization of the added value of pharmacists input into therapeutic decision making in a manner that can result in cost reduction through prevention of problems arising from adverse drug experiences, drug-drug and drug-food interactions, errors in prescribing or administering medications, and poor adherence.

The Doctor of Pharmacy (p. 381) program at Wayne State University is offered through the Departments of Pharmacy Practice and Pharmaceutical Sciences. The pre-professional components of the program are described in the Department of Pharmaceutical Sciences (p. 381) section of this bulletin. The professional curriculum is described in detail in the Wayne State University Graduate Bulletin.

- Pharmaceutical Sciences Concentration (B.H.S.) (p. 380)
- Pharmacy (Pharm.D.) (p. 381)

School of Social Work

Dean: Sheryl Kubiak

The School of Social Work is an integral part of Wayne State University, an urban university in a culturally diverse, industrialized, metropolitan area. The School is committed to its teaching, research, and service activities to address the problems of people living in this environment. Through applied research, work in the classroom, and placements in human service organizations that are the sites for practicum education, students learn how to provide effective social services and influence social policies.

The School's specific mission lies in teaching the knowledge, values, ethics, and skills of the social work profession. Graduates of the School are expected to understand the needs of vulnerable populations and those for whom the quality of life is threatened. Through research on practice, faculty and doctoral students contribute to the social work profession's knowledge base. Both faculty and students serve the community by participating in professional societies, civic and community groups, and human service organizations.

Social Work study prepares professionals to help alleviate the challenges in living for individuals affected by poverty, racism, sexism, ageism, homophobia, unemployment, as well as those experiencing emotional issues and/or physical and developmental impairments. Social work students learn theoretical perspectives and evidence-based methods of practice to guide competent intervention with individuals, families, groups, communities, and organizations. Doctoral students master advanced research competencies required to engage in applied research for social work practice and social welfare policy. Consistent with its emphasis on serving individuals in the Detroit metropolitan area, the School shares a commitment with the University for recruiting students of minority ethnic backgrounds.

The School of Social Work offers opportunities for study at the undergraduate and graduate levels to prepare students for practice in the profession of social work. Its principal programs lead to the Bachelor of Social Work and the Master of Social Work degree.

Curriculum: The Bachelor of Social Work degree program prepares students for entry-level generalist practice. Course work in this program includes University-wide General Education Requirements as well as the core competencies for social work practice. An introductory elective course, SW 1010, is open to freshman and sophomore students interested in exploring the social work profession but not yet matriculated in the B.S.W. program. Non-degree elective courses are also available for those who have previously earned bachelor's and/or master's degrees in social work or other disciplines and wish to further their education by acquaintance with social work issues. At the graduate level, the Master of Social Work degree program includes concentrations in Interpersonal Practice and Community Engagement and Social Action. The School also provides continuing education institutes and workshops for persons employed in the fields of social work and social welfare.

Informational Meetings: The School holds informational meetings (http://www.socialwork.wayne.edu/) to acquaint prospective students with its Bachelor of Social Work and Master of Social Work programs. Ph.D. Program informational meetings are held monthly during the fall semester of each academic year. Potential program applicants are encouraged to attend a meeting focused on the program of his/her interest prior to applying for admission.

Accreditation

The Bachelor of Social Work and the Master of Social Work degree programs are accredited by the Council on Social Work Education, the national accrediting body for professional social work education. There is no accreditation process for doctoral programs in social work; however, the School is a member of the Group for the Advancement of Doctoral Education in Social Work, the professional organization that provides guidelines and oversight for doctoral degree programs in social work.

Academic Regulations

For complete information regarding academic rules and regulations of the University, students should consult the Academic Regulations (p. 40) section of this bulletin. The following additions and amendments pertain to the School of Social Work.

Students in the School of Social Work are responsible for informing themselves of all rules, regulations and requirements, complying with all official procedures, and fulfilling all course and degree requirements in proper sequence with satisfactory scholarship. In case of doubt regarding any matter, the student should consult the School's Academic Services Officer. The primary responsibility rests with the student. All students are required to file a *Plan of Work* with the School's Academic Services Officer, and to update the plan periodically. Electives should be selected in consultation with the School's Academic Services Officer.

The faculty of the School of Social Work has the responsibility to require a student to withdraw at any time prior to receipt of the degree when, in its judgment, the student fails to do satisfactory work. Such decisions may be based on deficiencies in performance in class or field or in personal fitness for the profession. The faculty has adopted a set of criteria and procedures for academic termination. Copies are available via the School of Social Work's website and also may be obtained in the Dean's office.

Every effort is made to assist students whose academic work suffers as a result of conditions beyond their control such as personal illness, serious illness in the immediate family, or similar extenuating circumstances.

Attendance and Residency

Students are expected to attend all sessions of courses for which they are registered and to notify the instructors or their secretaries prior to the class session, if possible, when absence is necessary due to illness or similar emergency. Absence from the field practicum must be reported prior to the scheduled time, both to the agency and the faculty field liaison. Consistent absence or tardiness in classes or the field practicum may have an adverse effect on the student's grade and may result in termination from the B.S.W. program.

A student must complete thirty semester credits in the School of Social Work and must be in residence during the final semester prior to graduation.

Maximum Hours

A student engaged in full-time or part-time study in the School of Social Work should plan a program in consultation with the Academic Services Officer, limiting the Plan of Work to required courses and electives in order to maintain a standard of scholarly attainment and academic excellence.

Application for Degree

Application for the degree must be filed in the University Records Office no later than the Friday of the 4th week of classes for the semester in which the student expects to complete the requirements for the degree. The applicant must be recommended for the degree by the faculty. The applicant is requested and expected to attend the commencement at which the Bachelor of Social Work (B.S.W.) degree is conferred.

Academic Credit and Work/Life Experience

No academic credit for life experience or previous work experience will be awarded in the Bachelor of Social Work or Master of Social Work degree programs, in whole or in part, in lieu of the field practicum or of courses in professional foundation areas.

Student Leave of Absence

A student who is in good standing in the Bachelor of Social Work degree program may request a leave of absence from course and field work in the School for up to one year. In order to be considered in good standing, a B.S.W. student must maintain grades of 'C' or better in classroom courses in the B.S.W. (professional) component of undergraduate study, and must not earn marks below Satisfactory in practicum. Upon return from an approved leave of absence, a student's revised plan of work is based on the time in the academic year when the leave of absence was granted. If a student leaves at or before mid-semester, then she or he will have to repeat course or practicum. Specific information on the procedure for requesting a leave of absence is available in the Office of Admissions and Student Services. Students may request one leave of absence for up to one academic year during the time they are enrolled in the degree program.

Withdrawal from Degree Programs

A student who has been admitted to the Bachelor of Social Work degree program or the Master of Social Work degree program shall be considered to have withdrawn if he/she is not enrolled in a course or field work during any semester of an approved planned program of study. In order to withdraw in good standing from any degree program, a student must formalize the withdrawal from the program with the Assistant Dean for Student Affairs. A copy of the procedure for withdrawal may be obtained from the School of Social Work 's Office of Admissions and Student Services.

Nondiscrimination Policies

The School is bound by and actively endorses the university policy (p. 20) of nondiscrimination respecting all persons regardless of race, color, sex, national origin, religion, age, sexual orientation, marital status or physical or mental disability, and which expressly forbid sexual harassment or discrimination in hiring. The School prohibits discrimination against individuals because of political orientation. Copies of School and University nondiscrimination policies may be obtained in the Office of the Dean.

Social Work (B.S.W. Program)

The Bachelor of Social Work (B.S.W.) degree program prepares students for entry-level generalist social work practice during the junior and senior years of undergraduate matriculation. The B.S.W. curriculum is comprised of approximately two-thirds of professional social work undergraduate core courses and one-third co-requisite and elective courses. Practicum Education is an integral part of the B.S.W. curriculum and requires students to apply their coursework to community-based settings within a supervised learning environment.

The B.S.W. program features full-time or extended part-time study. Instruction is classroom-based (traditional) and a fully online cohort (WOW! Program (https://socialwork.wayne.edu/bsw/online)). Regardless of whether students are in the face-to-face program or the online cohort program, all students must participate in practicum which requires their physical presence at the community-based setting for 16 hours per week (two full days) during the senior year. Students are admitted to the B.S.W. program in the Fall semester.

Admissions Process

Direct Admit for Freshmen

Students in this category are admitted through the Office of Undergraduate Admissions (p. 34) under pre-social work status and complete general education/pre-professional courses.

Prior to beginning the professional curriculum that commences in the Fall semester of the junior year, pre-social work students must apply and be admitted to the BSW program and meet the following criteria:

- Grade point average of 2.5 or above.
- Submit an admissions portfolio that consists of:
  - Personal Interest Statement to the School of Social Work.
  - Copy of all transcripts
  - Educational resume
  - Minimum of 16 hours of social service hours is required.

Pre-social work students must also attend a required advising session to learn about the professional and ethical requirements of the BSW program and discuss fitness for the profession. Completion of SW 1010 may be sufficient to meet these requirements.

Additional details on the process and due dates can be found on the School of Social Work (https://socialwork.wayne.edu/bsw/requirements) website.

Transfer Admissions

Students in this category are admitted through the Office of Undergraduate Admissions (p. 34). Applications for admission to the B.S.W. program may be submitted after the student has completed a minimum of twenty-four semester credits in undergraduate course work or its equivalent at the freshman and sophomore levels. Applicants must have earned a minimum overall grade point average of 2.5. Applicants must have completed specified social work pre-professional courses, submit the admissions portfolio (personal interest statement, copy of transcripts from all colleges attended, educational resume, and documentation of community service hours), and attend a required advising session.

Completed applications are given a careful review in order to admit students who show evidence of suitability and fitness for the profession of social work and the ability to successfully complete their undergraduate professional education in social work.

All B.S.W. programs start in the fall semester.

Main campus, Full-time
Main campus, Part-time
Where Online Works! (WOW) Full-Time
Where Online Works! (WOW!) Part-Time

Application Deadline: June 1
All applicants are encouraged to submit applications as soon as possible as admissions will close once program capacity has been reached. Applications may be submitted beginning in the Fall term prior to the student's anticipated start of the first term of the program.

All students admitted to a B.S.W. program must attend the mandatory orientation prior to beginning the professional curriculum in the Fall semester.

Admission to a B.S.W. program is conditional until all application requirements are completed. The student must present a transcript verifying completion of sixty semester credits, grade point average, and completed pre-professional coursework and admissions portfolio. The letter of admission does not constitute a contract; admission may be withdrawn if a student fails to meet program requirements.

Transfer of Undergraduate Credit: A maximum of twelve (12) Technical, Vocational, or Applied Practice credits (designated 'TVA') in the human service areas (for example, mental health, child care, gerontology, empathy training, human services, and substance abuse) will count toward the degree. Any such transfer credits will be counted as general elective credit. Social work courses from programs not accredited by the Council on Social Work Education (CSWE) also will be transferred as 'TVA' general elective credit.

Readmission

Students who have been enrolled in a planned program leading to the Bachelor of Social Work degree, who have withdrawn from the program, and who wish to be considered for readmission to complete degree requirements, must follow regular procedures for admission to the School, including the submission of an updated admissions portfolio. Generally, the B.S.W. curriculum requires that students complete two continuous terms of practicum when actively enrolled in the program. Readmitted students who previously completed only one term of practicum in the senior year will be required to repeat this term, and may be required to enroll concurrently in a course or courses in social work practice methods or a Directed Study in social work.

Students requesting readmission may be required to obtain assessments of their physical or mental health from health or mental health professionals approved by the School. The School of Social Work reserves the right to refuse to readmit a student to the social work program if the physical or mental health status of the student indicates such action is warranted in order to safeguard clients, agencies, the student, other students, or the School. Due to changes in accreditation requirements, the School of Social Work does not accept credits for undergraduate social work courses that are older than six years at the time of degree completion.

Pre-Professional Requirements and Electives

To qualify for admission to the Bachelor of Social Work program in the School of Social Work, sixty semester credits (or its equivalent) must have been completed at the freshman and sophomore levels of undergraduate study. The required credits must be distributed according to the curricular pattern cited below. Many pre-social work courses also help satisfy the University General Education Requirements. To obtain

the minimum of 60 credits required to be considered for admission into the School of Social Work, students could take, in addition to the pre-requisites, elective courses from professional schools, whether at WSU or from a transfer institution.

Social Sciences: The following distribution of courses is required.

1. (DEI) Introduction to Social Work and Social Welfare: 3 credits
2. (GL) History: 3-4 credits
3. (CIV) American Government: 3-4 credits
4. (SI) Introductory Sociology: 6-8 credits

Natural Sciences: The following distribution of courses is required, including a laboratory course in one of areas designated below.

1. (NSI) Biology: 3-4 credits
2. (NSI) Introductory Psychology (3-4 credits) and psychology electives (3-4 credits)
3. (NSI) One course (3-4 credits) to be selected from the following: Anthropology, Physics, Chemistry, Geology, Astronomy.

English: The following distribution of courses is required.

1. (BC) Freshman Composition: 3 credits
2. (IC) IC requirement: ENG 2390, ENG 3010, ENG 3020, or ENG 3050 : 3 credits

(CI) Cultural Inquiry: 6 credits

(OC) Communications*:* 2-3 credits

(QE) Quantitative Experience: 3 credits

(DEI) Diversity, Equity and Inclusion: 3-4 credits

Electives*:* Recommended: Select electives from General Education Requirements in Global Learning (GL), Social Inquiry (SI) and Diversity, Equity and Inclusion (DEI). Electives should be selected in conjunction with the School's Student Advisor.

B.S.W. Degree Requirements

The Bachelor of Social Work degree requires satisfactory completion of a minimum of one hundred twenty (120) credits. The sixty (60) credits in the freshman and sophomore years include prerequisite courses for admission to the professional component of the program, 51 of the 60 credits acquired during the junior and senior years are from practicum work and practicum-related courses. Electives are available to complete the required one hundred and twenty credits for graduation.

Grade Point Average: To be awarded a Bachelor of Social Work degree, the student must achieve a cumulative grade point average of 2.0, and a grade point average of 2.0 during the junior and senior years. A minimum of thirty credits must be earned in residence in the School of Social Work, and the student must be in residence during the final semester prior to graduation.

Student Professional Conduct Requirements: Any breach of the values and ethics of the social work profession articulated in the Professional Code of Ethics as established by the National Association of Social Workers (NASW) (2021) may result in termination from the B.S.W. program. Student violations of the Wayne State University Student Code of Conduct will be forwarded to the University Student Conduct Officer for review and disposition. Students who apply with past, current and/or pending legal charges of record may be eligible and admitted to the B.S.W. program; however, an interview with the Assistant Dean and the Director of Practicum Education is required during the admissions process to review the circumstances and disposition of such legal charges. Legal charges of record may have implications for Practicum Placement and Social Work Licensure. An agency placement is a non-negotiable requirement for Practicum Education to complete the B.S.W. Program. Social Work Licensure is required for B.S.W. graduates to identify and practice as Social Workers.

Curricula

The undergraduate social work curriculum is structured to provide the knowledge, values, cognitive and affective processes, and skills essential for entry-level generalist social work practice. It is comprised of five curricular areas: 1) human behavior and the social environment, 2) research, 3) social work practice, 4) social welfare policy and services, and 5) practicum education. The professional component of the curriculum is built upon a liberal arts foundation in the social and behavioral sciences, the humanities, English, mathematics, and the natural sciences.

Students enrolled in field education are placed in a wide variety of social service agencies and work directly with individuals, families, groups, organizations and communities. Emphasis is placed in providing social work services in urban areas with the poor and oppressed, persons of color, and other at-risk populations that represent many ethnic, racial and cultural groups. The practicum experience is designed to integrate the classroom curricula with the practical realities of social work practice. Practicum builds the skill and knowledge base of the student, and stresses both amelioration and prevention of personal, interpersonal and social problems, as well as improvement of the human condition.

All students are required to file an educational Plan of Work with the School of Social Work Student Advisor and to update this plan on a regular basis.

Online Program: The B.S.W. degree is also offered as a fully online program of study during the junior and senior year, with the exception of the practicum, which must be completed at the physical site of the organization to which the student is assigned. Online curriculum requirements are identical to the traditional B.S.W. classroom "on campus" program option, and may require students to work in teams or conduct research in the community as part of their course requirements.

Students interested in matriculating in the online program must have access to an updated computer system and related software necessary for successful completion of all courses, and must also be able to manage their time and schedules to accommodate the demands of an online program and practicum education. Curriculum requirements are listed below.

The admissions process is the same as the traditional program with the exception that the program utilizes the cohort model structure. Once enrolled, students may NOT register for any B.S.W. courses offered in a campus classroom setting. Interested students should visit the School website (http://www.socialwork.wayne.edu/) for additional information.

Required Professional Content

Third Year		
First Semester		**Credits**
SW 3010	Social Work Practice Method I	4
SW 3030	Professional Writing for Social Workers	2
SW 3510	Human Behavior in the Social Environment	3
SW 3710	Social Welfare and the Social Work Profession: History, Trends and Basic Concepts	3
	Credits	**12**
Second Semester		
SW 3020	Social Work Practice Method II	3
SW 3110	Diversity, Oppression and Social Justice	3

SW 3410	Foundations of Ethics and Values in Social Work	3
SW 3810	Research Methods, Data Analysis, and Practice Evaluation I	3
	Credits	**12**
Fourth Year		
First Semester		
SW 4010	Social Work Group Theory and Practice	3
SW 4441	Practicum Education Seminar I	1
SW 4710	Social Welfare in the United States: Current Programs	3
SW 4810	Research Methods, Data Analysis, and Practice Evaluation II	3
SW 4995	Practicum Practice in Social Work	5
	Credits	**15**
Second Semester		
SW 4020	Social Work Macro Theory and Practice	3
SW 4442	Practicum Education Seminar II	1
SW 4997	Integrative Seminar in Social Work	3
SW 4996	Practicum Practice in Social Work	5
	Credits	**12**
	Total Credits	**51**

Electives

Electives must be selected in consultation with the School of Social Work Student Advisor.

Social Work Honors Program

Social Work students of high achievement are eligible to participate in the School of Social Work Honors Program, available through the University Honors College and the School of Social Work. Honors Option credits are achieved by completing enhanced assignments in connection with specified social work courses during the junior and senior years. All Social Work Honors Option course work and the final Honors Thesis are to be completed within the required social work curriculum, under the approval and supervision of a social work instructor. All Honors Options and the final thesis will include work beyond normal course requirements, to be agreed upon between the student and Program Director.

Students interested in applying to the Social Work Honors Program must present a cumulative grade point average of 3.50 or better, submit an application to the BSW Director, and develop an academic plan of work with the School of Social Work Student Advisor. Honors Option forms are available through the Honors College website. The Honors Option form must be signed by the instructor and the BSW Director and must be returned to the Honors College before the published deadline each semester, usually within the first 2-3 weeks of the start of the semester.

It is the student's responsibility to make sure that the Honors Option instructor reviews and grades the completed work and that the grade is submitted properly to the Honors College. Students are required to complete a minimum of sixteen credits under the Honors Option, including 10 credits of enhanced coursework, 3 credits of HON 42XX, and a Honors Thesis project in SW 4997, and maintain a cumulative grade point average of at least 3.50. Additional information is available from the BSW Director.

Social Work students can apply to the Social Work Honors-AHEC (Area Health Education Center) Scholars Program. This option expands the BSW Honors students' training and clinical/field experience through innovative clinical, didactic, and community-based activities. Students interested in applying to the Social Work Honors AHEC Scholars Program must follow the same application as the Social Work Honors program and apply for the AHEC Scholars Program. Students are required to complete the requirements of the Social Honors program and the AHEC requirements. AHEC Scholars is a 2-year program commitment, requiring approximately 80 hours per year, totaling 160 hours. Forty of these hours include professional clinical training in Detroit. Students are expected to attend mentoring sessions twice a semester with the BSW Program Director and attend AHEC meetings that will occur in a combination of in person and virtual synchronous and asynchronous modalities.

Practicum Education

All students enrolled in SW 4998, Practicum Education in Social Work I and II, are required to carry professional liability insurance (now provided by the School) as a condition of Practicum.

The Practicum Education Manual contains a description of the practicum education program and the policies and procedures related to the program. Students are responsible for observing the procedures governing practicum work practice which are detailed in the manual. The manual is located on the School website.

Practicum Education Health Clearances Policy

The School may require students in practicum to obtain assessments of their physical or mental health from health or mental health professionals approved by the School. The School of Social Work reserves the right to refuse to place or direct a student in practicum education if the physical or mental health status of the student indicates such action is warranted in order to safeguard clients, agencies, the student, other students, or the School.

Agencies

The following agencies are representative of those who have worked with members of the Faculty in practicum instruction during recent academic years:

36th District Court
5 Healthy Towns Foundation
7 Sky Home Health Care
Accentcare Hospice & Palliative Care of Michigan
ACCESS - Behavioral Health
ACCESS - CHRC
Accompany Health
Affecting Change, LLC
Affirmations Community Center
All Well-Being Services
Allen Park Public Schools
Alternatives for Girls
Alzheimers Association - Greater Michigan Chapter
Arbor Circle
Arc of Northwest Wayne County, The
Area Agency on Aging 1B
Area Agency on Aging 1C - The Senior Alliance
ARISE Counseling Center and Training Institute
Arts Academy in the Woods
Ascension Crittenton
Assured Family Services - Juvenile Assessment Center
Assured Hospice
Autism Alliance of Michigan
Avalon Housing
Avondale School District
Barbara Ann Karmanos Cancer Institute
Bay Arenac ISD
Be Mindful Therapy LLC
Becoming Counseling Services
Behavioral Care Management Group
Behavioral Care Solutions
Behavioral Center of America - Stone Crest Ctr.
Behavioral Center of Michigan

Being Human Group
Berkley School District
Best Buy Health
Bethany Christian Services - Foster Care Adoption - Muskegon
Beyond Focused
Beyond The Surface Counseling & Consulting LLC
Bicentennial Tower
Big Brothers Big Sisters of SE Michigan
Birmingham Public Schools
Black Family Development, Inc.
Blood Cancer Foundation of Michigan, The
Bloomfield Child and Family Counseling - Bloomfield
Bloomfield Child and Family Counseling - Troy
Blue Water Counseling
Bridging Communities Inc.
Brighter Tomorrow Wellness Center
Brighton Hospice
BUILD Institute
Building Twentyone
C.O.O.R. ISD
Camp Oakland
Canadian Mental Health Association, Windsor-Essex County Branch
Capuchin Soup Kitchen - Emergency Assistance
Care House - Macomb County Child Advocacy Center
Care House of Oakland County
Care Matters
CARE of Southeastern Michigan
Carefirst Community Health Services
Catholic Charities of SE Michigan - Port Huron
Catholic Charities of Southeast Michigan
Cedar Creek Hospital
Center For Counseling, The - Virtual
Center for Forensic Psychiatry
Center For Relationship And Sexual Health, The
Centra Wellness Network
Central City Integrated Health
Cesar Chavez Academy High School
Cesar Chavez Academy Lower Elementary
Chaldean Community Foundation
Chane Reaction Counseling Services
Charlevoix-Emmet ISD
Child Advocacy Center of Lapeer County
Child and Family Charities
Children's Hospital of Michigan
City of Detroit
Clarkston Community Schools
Clear Path Counselling & Psychotherapy Services
Clintondale Middle School
CNS Health Care
CNS Healthcare - Children, Youth & Intellectual Dev. Disabilities
CNS Healthcare - Infant Mental Health
Community & Home Supports, Inc.
Community Action Network Hikone Community
Community First Health Centers - Algonac
Community First Health Centers - New Haven
Community Health and Social Services (CHASS) Center, Inc.
Community Housing Network, Inc.
Community Living Services, Inc.
Community Mental Health - Clinton, Eaton, & Ingham Counties
Community Programs, Inc.
Community Roots
Compassus Hospice
Congress of Communities
Conner Creek Life Solutions
Corewell Health - Advance Care Planning
Corewell Health - Dearborn, Oakwood Campus
Corewell Health - Royal Oak
Corewell Health - Trenton Southshore Campus
Corewell Health - Troy
Corewell Health -Taylor
Corewell Health Center for Exceptional Families
Corewell Health fmr Beaumont Health - Wayne Campus
Corewell Health fmr Beaumont Rehabilitation and Continuing Care-Dearborn
Corewell Health fmr Beaumont Teen Health Center-Taylor
Corewell Health/UHS- Metropolitan Behavioral Health
Corktown Health Center
Corporation for Supportive Housing
COTS
Courtyard Manor of Wixom
Covenant House Michigan
Crestwood School District
CSI Support & Development
CST Counseling and Transitional Services
Davison Community Schools
DaVita - Multiple Locations
Dawn Farm
Dearborn Public Schools
Department of Health & Human Services
Department of Health & Human Services - Macomb
Department of Health & Human Services - Port Huron
Department of Health & Human Services - South Central
Department of Health & Human Services - Washtenaw County
Department of Health & Human Services - Western Wayne
Detroit Action
Detroit Area Agency on Aging
Detroit Area Agency on Aging - Caregiver Support
Detroit Disability Power
Detroit Justice Center
Detroit Life Is Valuable Everyday (DLIVE)
Detroit Public Schools Community District
Detroit Receiving Hospital - Medical/Case Mgmt.
Detroit Receiving Hospital - Psychiatry
Detroit Regional Chamber Detroit Promise Path Program
Detroit Rescue Mission Ministries
Detroit Wayne Integrated Health Network - Children's Initiatives
East China School District - St. Clair
Easterseals MORC - Auburn Hills (Families)
Easterseals MORC - Macomb County - Center Line (Adult, Families, IDD)
Easterseals MORC - Macomb County - Clinton Township (Adult, Families, IDD)
Easterseals MORC - Southfield (Adult)
Ebenezer Community and Cultural Center
ECN Detroit - Eastside Community Network Detroit
Ecorse Public Schools
Ecorse Public Schools - Ralph J. Bunce Elementary School
Ele's Place - Ann Arbor
Ele's Place - Lansing
Elmhurst Home, Inc.
Embodied Wellness, PLLC
Emergence Collective
EMU Counseling and Psychological Services
Ennis Center for Children
Essex County Diversion Program
FairSky
Families Against Narcotics
Family and Children's Services of Midland
Family and Community Services, Inc.
Family Assessment Clinic
Family Empowerment Program, The

Family Medical Center - Detroit
Family Medical Center - Temperance
Family Services Windsor-Essex
Family, Health & Harmony, LLC
Federal Community Defender Office
Fitzgerald Public Schools
Flint Odyssey House, Inc.
FOCUS Detroit
Forest View Hospital
Forever Families
Fostering Futures
Foundations Detroit
Fraser Public Schools
Fresenius Kidney Care
Full Circle Foundation
Garden City Public Schools
GEE Academies
GEE Academies/Frontier Int'l Academy
Genesee Health System
Genesee Intermediate School District
Gesher Human Services - Southfield
Gianna House
Gibraltar School District
Gier Park Elementary
Gilda's Club Metro Detroit
Girls Group
Global Detroit with Caribbean Community Service Center
Global Psychological
Grandmont Rosedale Development Corporation
Gratiot-Isabella RESD
Growing Well Clinical Therapy, LLC
Growth Works - Garden City
Growth Works - Plymouth
Guidance Center, The
Guidance Center, The - Adult Behavioral Health
Guidance Center, The - Center for Excellence
Guidance Center, The - Kids-TALK Children's Advocacy Center
Guiding Harbor
H3 - Hope, Healing, and Health
Hamtramck High School
Hamtramck Public Schools
Hannan Center
Happy Mama Counseling PLLC
Harambee Care
Harbor Oaks Hospital
Harmony In Action Windsor (HIA)
HAVEN
Havenwyck Hospital - Inpatient Program
Havenwyck Hospital- Outpatient Services
Hazel Park Schools
Healing Hearts Therapy LLC
Health Department of Northwest Michigan - School Health Division
Healthy Heart Counseling Services
Heart to Heart Hospice
Hegira
Hegira -Taylor
Helm at the Boll Life Center, The
Henry Ford Behavioral Health
Henry Ford Eastwood Behavioral Health - Clinton Twp.
Henry Ford Eastwood Behavioral Health - Livonia
Henry Ford Eastwood Behavioral Health - Residential
Henry Ford Eastwood Behavioral Health - St. Clair Shores
Henry Ford Eastwood Behavioral Health Eastwood - Detroit
Henry Ford Health Behavioral Services
Henry Ford Health System - Greenfield Health Systems
Henry Ford Health System - Henry Ford Cancer Institute
Henry Ford Health System - Hospice
Henry Ford Health System - Population Health Management
Henry Ford Health System-School Based & Community Hlth. Prog.
Henry Ford Hospital - Infectious Diseases
Henry Ford Macomb
Henry Ford SandCastles
Henry Ford Warren Hospital
Henry Ford Wyandotte Hospital
Heritage Elementary
Higher Learning Services
Hilltop Counseling
Holy Cross Services
Home of New Vision
Homeless Action Network Detroit - HAND
Honor Community Health
Hope and Thrive Counseling and Therapeutic Services, LLC
Hope Clinic
Hope Community Outreach and Development
Hope In Counseling
Hope Network New Passages - Flint/Saginaw
Hope of Detroit Academy
Hospitality House Food Pantry
House of Sophrosyne
Humanistic Wellness Center
Hurley Medical Center
Huron Behavioral Health
ICHANGE
Imani Ya Kupinga
Imlay City Schools
Impact Consulting Services
Institute of Gerontology
Integral/TherapMe/Intertwined
Integrated Behavioral Health LLC
Interfaith Hospitality Network at Alpha House
International Academy of Flint
International Therapy Solutions, PLLC
Jackson Healing Clinic
Jewish Family Services of Washtenaw County
Jewish Senior Life
John Allen Elementary School
John D. Dingell VA Medical Center
John D. Dingell VA Medical Center - Mental Health
John McGivney Children's Centre
Journey To Healing
Judson Center - Farmington Hills
Judson Center - Macomb County Services
Judson Center - Royal Oak
Just TRI Recovery, PLLC
Karmanos Cancer Institute Farmington Hills
Key Development Center
KindMind Counseling - Clarkston
LACASA
Lake Orion Community Schools
Lakeview Public Schools
Lapeer Community Schools - ISD
Lapeer County Community Mental Health
Lenawee Community Mental Health Authority
Leona Group, The
Life Journey Psychological Services, PLLC
Light of The World Deliverance Ministries International
Lighthouse MI
Lily Hospice
Lincoln Behavioral Services - Gathering Place Clubhouse
Lincoln Behavioral Services, Redford

Lincoln Park Public Schools
Lincoln Park Public Schools - Max Paun Elementary
Linden Charter Academy
Lineage Foundation for Good
Livingston County Community Mental Health
Livingston Educational Service Agency
Livonia Public Schools
Logical Choice LLC
Loring Therapy
Macomb Co. Community Services Agency - Office of Senior Services
Macomb County Community Mental Health
Macomb County Community Mental Health - ACT
Macomb County Office of Public Defender
Macomb Family Services
Macomb Intermediate School District
Madison Carver Academy
Madison School District
Maka SIL & Group Home, Inc.
Maritime Academy of Toledo, The
Maryvale - Rotary Home
Marywood Nursing Care Center
Matrix Human Services - Community Support
Matrix Human Services - Youth Assistance Program
MCHS Family of Services
McLaren Hospital - Macomb
MCTS Rose Program
Mel Bornstein Clinic
Melvindale-Northern Allen Park Schools - Allendale Elem.
Merrill Palmer Skillman Institute - Project LAUNCH Initiative
MI Organization on Adolescent Sexual Health (MOASH)
Michigan Association for Infant Mental Health
Michigan Coalition Against Homelessness
Michigan Collegiate Schools
Michigan Community Health Worker Alliance (MiCHWA)
Michigan Community Resources
Michigan Community VNA
Michigan Crisis Response Association
Michigan Department of Health and Human Services
Michigan Department of Health and Human Services - Genesee County
Michigan Legal Services
Michigan Minds Matter
Michigan Modern Psychology
Michigan Parkinson Foundation
Michigan Progressive Health
Michigan Roundtable for Just Communities
Mid Michigan Community Action Agency
Milford Counseling, Inc.
Mindful Journey LLC
Mindsight Counselling Services
MiSide
MiSide - Adult Services
MiSide - CCBHC
MiSide - Children's Outpatient Services
MiSide - Early Childhood Mental Health
MiSide - Housing Resource Center/Homeless Services
MiSide - MiEarlyYears
Momentum Academy
Motor City Center for Hope - Dearborn
Motor City Center for Hope - Detroit
Motor City Center for Hope - Eastpointe
Motor City Mitten Mission
Muskegon Heights Academy
MyMichigan Medical Center Midland
NAMI DETROIT
Naseeha Mental Health
National Alliance on Mental Illness (NAMI) - Help Line
National Association of Social Workers - Michigan Chapter
National Council of Alcoholism & Drug Dependence
National Council of Alcoholism & Drug Dependence - Administration
National Kidney Foundation of Michigan, The - Disease Prevention
Neighborhood Defender Service of Detroit
Neighborhood Service Organization
New Frontier Counseling Services
New Haven Community Schools
New Oakland Family Centers
New Paths Inc.
Noah at Central
North Flint Neighborhood Action Council
Northern Lakes Community Mental Health
Northville Public Schools
Novi Community School District
Oak Park Schools
Oakdale Recovery Center (Hegira Health, Inc.)
Oakland Community Health Network (OCHN)
Oakland County Sheriff's Office
Oakland Family Services-Pontiac
Oakland Health LLC
Oakland Livingston Human Service Agency
Oakland Schools Technical Campus - Northeast
Oakland Schools Technical Campus - Northwest
Oakland Schools Technical Campus - Southeast
Oakland Schools Technical Campus - Southwest
OhioGuidestone
On Your Side Family Services, LLC
OnPoint
Opening New Doors LLC
Optalis Healthcare
Optimum Adult Day Services
Orchards Children's Services
Orchards, The
Ozone House
Paragon Psychological Services
Parent Empowerment Center
Partners 4 Health
Pathways 2 Christian Counseling Center
PCS-Global, Inc.
Peace of Mind Therapy
Peaceful Mind Counseling Services
Personalized Nursing LIGHT House, Inc.
Pontiac General Hospital
Pope Francis Center
Positive Images, Inc.
PR Kids MIHP
Presbyterian Village of Michigan - Hartford Village
Professional Counseling Center
Professional Outreach Counseling Services
Promedica Hospice - Flint
Psychological Professional Services, P.C.
PsyGenics, Inc.
Purple Change Wellness and Purple Change Wellness Institute of Trauma Recovery
Quality Care Hospice
Racquet Up Detroit
Rainbow Center of Michigan
Ravenwise Consulting
Reach Charter Academy
Recovery Technology
Redford Union Schools - Beech Elementary
Redford Union Schools - Hilbert Elementary
Rehabilitation Institute of Michigan

Relationship Academy MI
Renewal Christian Counseling Center
Residential Hospice
Revived Mind Counseling
Richmond Community Schools
Rivers Bend PC
Rochester Community Schools - Long Meadow Elementary
Rochester Community Schools - University Hills
Rochester Community Schools - West Middle School
Rockford Public Schools
Romeo Community Schools - Indian Hills Elementary School
Rooted in Community
Rosa Parks Geriatric Clinic
Royal Oak School District
Ruth Ellis Center
Sacred Heart Rehabilitation - Clearview Residential
Sacred Heart Rehabilitation Center
Sacred Heart Rehabilitation Center - St. Clair Shores
SafeHouse Center
Saginaw County Community Mental Health Authority
Saginaw Psychological Services
Saginaw Township Community Schools
Samaritan Behavioral Center
Samaritas - Behavioral Health - Grand Rapids
Samaritas - SE Behavioral Health
Sanctum House
Sanilac County Community Mental Health
SASHA Center
Sault Ste. Marie Tribe of Chippewa Indians Anishnaabek Community and Family Serv
SAY Detroit Play Center at Lipke Park
Serve Squad
Shanle Psychological Services - Detroit
Shanle Psychological Services - Flint
Shanle Psychological Services - Lincoln Park
Shanle Psychological Services - Pontiac
Shanle Psychological Services - Roseville
SHAR, Inc.
Siena Literacy Center
Sinai-Grace Hospital - Psychiatry
Six Feet Over
Sobriety House, Inc.
Society for the Advancement of Sexual Health
Sollars and Associates, Inc.
South Arbor Charter Academy
South Lake Schools
South Lyon Schools
Southeast Michigan Senior Regional Collaborative
Southfield Mental Health Associates
Southgate Community Schools
Southwest Detroit Environmental Vision
Spaulding for Children
Spectrum Child and Family Services
Spectrum Juvenile Justice Services
St. Anthony Healthcare Center
St. Clair County Community Mental Health
St. John Community Health - Teen HYPE
St. Michael and All Angels Episcopal Church
St. Vincent and Sarah Fisher Center
Starfish Family Services - IMH (Infant Mental Health)
Starfish Family Services - Lifespan Clinical Services
Starfish Family Services - School-Based Therapy
State Appellate Defender Office
Student Advocacy Center
Swartz Creek Community Schools
Team Wellness Center
Therapeutics, LLC
Therapy Collective of Michigan, The
Therapyology
Third Judicial Circuit Court - Family Assessment Services
Thriving Enhanced Services, LLC (DBA Superior Center)
Thumb Area Psychological Services, LLC
Tipton Academy
Toledo Zoo, The
Training & Treatment Innovations, Inc.
Transformational Choices Holistic Counseling and Therapy
Transportation Riders United, Inc. (aka TRU)
Travelers Aid Society of Metropolitan Detroit
Tri-County Counseling Services
Trinity Health - Behavioral Health
Trinity Health IHA Medical Group
Trinity Health Oakland Hospital
Troy School District
Troy School District - Athens High School
True Therapy Services
Tuckerville LLC/Tuckerville Transitions Org.
Turning Point, Inc.
United Children and Family Head Start
United Way/Centraide Windsor - Essex County
Unity Counseling, LLC
University of Chicago Health Lab
University of Michigan CAPS
University of Michigan Health System
Uplift Family Services
Urban Renaissance Center
VA Medical Center-Ann Arbor
Van Buren ISD
Van Dyke Public Schools
Venture Counseling Center
Victim's Assistance Program - Detroit Police Dept.
Virtual Dialysis Support Center
Walled Lake Consolidated Schools
Walter P. Reuther Psychiatric Hospital
Walter P. Reuther Psychiatric Hospital-Child & Adolescent Serv.
Warren Consolidated Schools
Warren Woods Public Schools
Washtenaw County Community Mental Health (WCCMH)
Washtenaw County Public Defender
Washtenaw County Sheriff's Office
Waterford School District
Wayne County Medical Examiner's Office
Wayne County Prosecutor's Office
Wayne Metro Community Action Agency
Wayne State University - School of Social Work, Behavioral Health Crisis
Wayne-Westland Community School District
Wellspring Lutheran Services - New Directions Livonia
Western Wayne Family Health Center
Westwood Heights Schools District
Willow of Wonder Child & Family Therapy
Windsor Essex Children's Aid Society
Windsor Family Health Team
Windsor Regional Hospital
Wolverine Human Services - Vassar
WSU - Athletics
WSU - Business and Community Law Clinic
WSU - Center for Latino/a and Latin American Studies
WSU - Center for Social Work Research
WSU - Champions Aspiring to Make Pathways to Success Program (CHAMPS)
WSU - College of Education Upward Bound Prog.

WSU - Counseling & Psychological Services (CAPS)
WSU - Dean of Students Office - Care, Support and Intervention Team
WSU - DMC HIV/AIDS Program
WSU - Early Childhood Support Clinic
WSU - Legal Advocacy for People with Cancer Clinic at Wayne Law School
WSU - MI Developmental Disabilities Institute
WSU - Office of Sexual Violence Prevention and Educ.
WSU - Promoting Protective Policy
WSU Physician's Group
WSU Physician's Group - Psychiatry & Behavioral Neurosciences
WSU School of Social Work - Continuing Educ.
WSU SSW Center for Behavioral Health and Justice (CBHJ)
Yescare - St Clair County Jail
Ypsilanti School District
Yunion, The
YWCA of Kalamazoo
Zaman International

Social Work and Social Justice Minor

The minor in social work and social justice will provide undergraduate students from different majors with the opportunity to learn how to apply practical solutions to fostering environments that are socially just, diverse, inclusive, and equitable.

The minor requires a minimum of eighteen credits.

Code	Title	Credits
Social Work Courses (12 credits)		
SW 1010	Introduction to Social Work and Social Welfare	3
SW 3110	Diversity, Oppression and Social Justice	3
SW 3710	Social Welfare and the Social Work Profession: History, Trends and Basic Concepts	3
Select a Social Work elective from the list below:		3
SW 5755	Introduction to Child Welfare	
SW 6010	Equitable Partnerships with Families and Communities	
SW 6500	Social Work and the Law	
SW 6535	Youth, Delinquency, and Juvenile Justice	
SW 6540	Effects of Drugs and Alcohol on Physical and Social Functioning	
SW 6575	Violence Prevention and Intervention	
SW 6585	Introduction to International Social Work	
SW 6810	Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Health and Well-Being	
SW 6991	Special Topics in Social Work *	
CLAS Electives (6 credits)		
Select from the following courses:		6
African American Studies		
AFS 2010	African American Culture	
AFS 2600	Race and Racism in America	
AFS 5110	Black Women in America	
Anthropology		
ANT 1100	Introduction to Anthropology	
ANT 3400	Introduction to Medical Anthropology	
ANT 3530	Native Americans	
ANT 3550	Arab Society in Transition	
Criminal Justice		
CRJ 1010	Introduction to Criminal Justice	
CRJ 2550	Race, Crime and Justice	
CRJ/GSW 2650	Gender and Crime	
CRJ 2750	Diversity Issues in Criminal Justice	
CRJ/PH 3050	Mental Health and Crime	
CRJ 3200	Police and Society	
CRJ 3350	Corrections	
CRJ 3700	The Judicial Process	
CRJ 4740	Constitutional Criminal Procedure	
CRJ 5995	Special Topics in Criminal Justice *	
Environmental Science		
BIO 3500	Ecology and the Environment	
BIO 6420	Ecotoxicology and Risk Assessment	
Gender/Sexuality and Women's Studies		
GSW 2500	Humanities Perspectives on Gender, Sexuality, and Women	
GSW 2600	History of Women, Gender and Sexuality in the Modern World	
GSW 2700	Social Science Perspectives on Gender, Sexuality, and Women	
GSW 5200	Feminist, Gender, and Queer Theory	
Peace and Conflict Studies		
PCS 2000	Introduction to Peace and Conflict Studies	
PCS 2010	Topics in Peace and Conflict Studies *	
PCS 2050	The Study of Non-Violence	
PCS 5000	Dispute Resolution	
PCS 5100	Advanced Special Topics *	
Political Science		
PS 3080	Gender and Politics	
PS 3100	American Legal Systems and Processes	
PS 3250	Detroit Politics: Continuity and Change in City and Suburbs	
PS 3520	Theories of Justice	
PS 3550	American Political Philosophy: What is Freedom?	
PS 5030	African American Politics	
PS 5120	Constitutional Rights and Liberties	
Public Health		
PH 3100	Social and Behavioral Aspects of Public Health	
PH 3900	LGBTQ Health	
English		
ENG 3050	Technical Communication I: Reports	
ENG 3060	Technical Communication II: Presentations	
ENG 3200	Grant Writing	
ENG 5695	Publishing Practicum *	
Sociology		
SOC 2201	Race Relations in Metro Detroit	
SOC 2202	Gendered Worlds	
SOC 2300	Social Inequality	
SOC 4201	Seminar in Race and Ethnicity	
SOC 4203	Seminar in Global Inequality and Development	
Total Credits		**18**

* Consult an advisor if using this course to satisfy the elective requirement.

Law Minor

The law and social work minor consists of a combination of classes offered through the School of Social Work, along with law classes taught by the Law School faculty. The emerging intersection of law and social work provides an opportunity for connections between social work practice and broader struggles to advance human rights and social, economic, and environmental justice. The minor in law and social work will provide undergraduate students with the opportunity to integrate expertise from both the Social Work and Law disciplines examining subjects including the inter-working of major social welfare programs, law as an evolving social institution, the lifecycle of a case in court, and the fundamentals of legal analysis

Practitioners with this minor will gain the knowledge needed to advocate for social justice reform at the micro, mezzo and macro levels in subjects such as criminal justice, policy and community practice, child welfare, aging, health, mental health, and housing. With an emphasis on the relationship between law and social work practice, graduates will develop the skills needed to utilize these interdependent fields including logical and critical thinking skills, oral and written communication, reading comprehension and analysis. Social work students who complete this minor will be well-positioned to enter any number of fields, such as state and local government, education, immigration, human resources, or advocacy.

The minor in law requires a minimum of 17 credits. To achieve the minor, social work students must maintain a 2.5 cumulative GPA, and complete the following required courses.

Code	Title	Credits
Law courses		**9**
LEX 5000	Law in Social Context	
LEX 5010	Law and Harm	
LEX 5020	Legal Procedure	
Social Work courses		**8**
SW 4710	Social Welfare in the United States: Current Programs	
SW 6500	Social Work and the Law	
Select one course from the following list:		
SW 5720	Social Services for Older Adults	
SW 5755	Introduction to Child Welfare	
SW 6100	Child Welfare and Social Systems: Context for Case Management Practice	
SW 6535	Youth, Delinquency, and Juvenile Justice	
SW 6585	Introduction to International Social Work	
Total Credits		**17**

Additional Academic Programs

Air Force (ROTC)

The Air Force Officer Education Program at the University of Michigan provides Wayne State University students the opportunity to earn a commission as a second lieutenant in the U.S. Air Force through the Air Force Reserve Officer Training Corps (AFROTC). Three- and four-year programs are offered. All AFROTC classes are conducted on the University of Michigan campus, Ann Arbor, MI; registration is managed by AFROTC. Interested students should contact AFROTC at 734-764-2403 or visit Room 154 at North Hall on the Ann Arbor campus. Students who enroll as cadets in the Air Force Officer Education Program, successfully complete the program, and receive a university degree are commissioned as second lieutenants in the United States Air Force.

Admission to introductory-level courses in this program is open to anyone, but admission to junior-level standing is open only to students having matriculate status in a four-year degree program at one of the resident sponsoring institutions.

Career Opportunities: Men and women can serve in a wide range of flying duties as aircrew members or in many technical fields as well as in numerous other non-technical specialties. Advanced education or technical training for these career areas may be obtained on active duty at Air Force expense.

Three- and Four-Year Program: The four-year program consists of eight terms (sixteen credits) of course work. The first four terms (freshman and sophomore years) comprise the General Military Course (GMC). During the summer following this sequence each student is required to attend a four-week summer field training session. After completing field training, students enroll in the last four terms (junior and senior years) of AFROTC called the Professional Officer Course (POC). Questions about the three-year program should be directed to the AFROTC at 734-764-2403.

Financial Benefits and Scholarships: All students enrolled in the POC, whether or not on scholarship, receive a monthly stipend during the academic school years. Uniforms, AFROTC books, and equipment are furnished free of charge. Pay and travel allowance are provided to attend field training. AFROTC provides scholarships on a competitive basis for periods of two and three and one-half years. These scholarships provide tuition, laboratory fees, a book allowance, and the monthly stipend. Room and board are not furnished.

Obligation to the Air Force: After graduation and commissioning, graduates are called to active duty in the Air Force. The standard period of service is four years for non-aircrew members, six years for navigators, and ten years for pilots. Obligations for aircrew members begin following graduation from aircrew training. A contractual obligation is incurred for non-scholarship students when they enter the POC. Scholarship students incur an obligation in their sophomore year.

Course of Study: Students enroll in one AFROTC course (AERO) during each term of participation in the program. In addition to the lecture, there is a mandatory two-hour Leadership Laboratory during each of the eight terms, for those students who are eligible for the commissioning program.

Military Science (ROTC)

The James and Patricia Anderson College of Engineering currently sponsors the Army Reserve Officers Training Corps (AROTC) and provides Wayne State University students with an Officer Education Program through a partnership agreement with the University of Michigan. The Officer Education Program allows qualified applicants to receive commissions as Second Lieutenants in the United States Army. Other interested students throughout the University may select military science courses, offered as Basic Engineering credits, for elective credit without participating in leadership training or incurring any military obligation. Army ROTC offers both a four-year and a two-year program. The four-year program consists of a two-year basic course, a two-year advanced course, and a four-week summer camp known as the Leadership Development and Assessment Course (LDAC), normally attended between the junior and senior years at Joint Base Lewis-McChord, Washington. Students having prior ROTC, including Junior ROTC (JROTC), or prior military service may be given placement credit for part or all of the basic course at the Professor of Military Science's approval. The two-year program is by application only and consists of a four-week Leadership Training Course (LTC) in Fort Knox, Kentucky, a two-year advanced course, and LDAC. All students with a minimum of two years of school remaining (graduate or undergraduate) are eligible. Students must notify the department prior to February 15 of their sophomore year if they are interested in this program. ROTC cadets are eligible for four-, three-, and two-year scholarships which can be used to pay either tuition and fees, or room and board, as well as money for books. In addition, the advanced course students and all scholarship students receive a tax-free subsistence allowance during the school year. ROTC books and uniforms are furnished at no cost to students. Cadets who maintain high academic, fitness, and leadership standards are eligible to apply for Regular Army Commissions. Interested students should visit the Wayne State University Army ROTC program (http://omvae.wayne.edu/rotc/) website.

Basic Engineering ROTC Courses

BE 1101 Introduction to Officership Cr. 1
Classroom introduction to leadership, and the experiential examination of leadership, followership, decision-making, and group accomplishment of tasks. Offered Every Other Year.

BE 1102 Introduction to Leadership Cr. 1
Continuation of B E 1101; focus on communications, leadership, and problem-solving. The light infantry platoon and the troop leading process. Offered Every Other Year.
Prerequisite: BE 1101 with a minimum grade of C-

BE 2201 Innovative Tactical Leadership Cr. 1
Military organizational leadership with focus on leadership development and interpersonal group dynamics. Offered Every Other Year.
Prerequisite: BE 1102 with a minimum grade of C-

BE 2202 Leadership in Changing Environments Cr. 2
Challenges of leading in complex contemporary operational environments. Cross-cultural challenges of leadership applied to practical Army leadership tasks and situations. Offered Every Other Year.
Prerequisite: BE 1102 with a minimum grade of C-

BE 3301 Leading Small Organizations I Cr. 2
Leadership development and interpersonal and group dynamics. Methods of visualizing, planning and leading organizations to achieve set goals. Offered Every Other Year.

BE 3302 Leading Small Organizations II Cr. 2
Offered Every Other Year.
Prerequisite: BE 3301 with a minimum grade of C-

BE 4401 Leadership and Management Cr. 3
Multiple styles and theories of leadership; ethical decision making, especially as relating to changing organizational and individual behavior; accomplishing goals in resource-constrained environments. Offered Every Other Year.
Prerequisite: BE 3302 with a minimum grade of D-

BE 4402 Military Professionalism and Professional Ethics Cr. 3
Evaluation and assessment of needs of subordinate units and individuals; near-term and short-term plans to address these needs. Analysis of a historical battle as well as analysis of moral and leadership dilemmas in history. Offered Every Other Year.
Prerequisite: BE 4401 with a minimum grade of C-

COMPLETE COURSE LIST

A

- ACC - Accounting (p. 400)
- ACO - Art: Core (p. 403)
- ACR - Art: Ceramics (p. 403)
- ACS - Art: Special Seminars (p. 404)
- ADA - Art: Digital Art (p. 405)
- ADN - Art: Design (p. 405)
- ADR - Art: Drawing (p. 406)
- ADX - Art and Design Exposure (p. 407)
- AED - Art Education (p. 407)
- AET - Alternative Energy Technology (p. 408)
- AFA - Art: Design and Merchandising (p. 409)
- AFI - Art: Fibers (p. 410)
- AFS - African American Studies (p. 411)
- AGD - Art: Graphic Design (p. 413)
- AH - Art History (p. 415)
- AHS - Applied Health Sciences (p. 417)
- AIA - Art: Interior Design (p. 418)
- AID - Art: Industrial Design (p. 419)
- AME - Art: Metalsmithing (p. 420)
- AN - Anesthesia (p. 420)
- ANA - Anatomy and Cell Biology (p. 424)
- ANT - Anthropology (p. 424)
- APA - Art: Painting (p. 430)
- APH - Art: Photography (p. 431)
- APR - Art: Printmaking (p. 432)
- ARB - Arabic (p. 433)
- ARM - Armenian (p. 434)
- ART - Art Courses (p. 435)
- ASE - American Sign Language (p. 435)
- ASL - Art: Sculpture (p. 436)
- ASN - Asian Studies (p. 437)
- AST - Astronomy (p. 437)
- AT - Art Therapy (p. 438)
- ATR - Athletic Training (p. 439)
- AUD - Audiology (p. 440)

B

- BA - Business Administration (p. 442)
- BBE - Bilingual/Bicultural Education (p. 444)
- BE - Basic Engineering (p. 444)
- BIO - Biological Sciences (p. 445)
- BLW - Business Law (p. 456)
- BMB - Biochemistry and Molecular Biology (p. 456)
- BME - Biomedical Engineering (p. 457)
- BMS - Basic Medical Science (p. 461)

C

- CB - Cancer Biology (p. 461)
- CE - Civil Engineering (p. 463)
- CED - Counselor Education (p. 471)
- CHE - Chemical Engineering (p. 473)
- CHI - Chinese (p. 476)
- CHM - Chemistry (p. 477)
- CLA - Classics (p. 484)
- CMT - Construction Management (p. 485)
- COM - Communication (p. 487)
- CRJ - Criminal Justice (p. 495)
- CSC - Computer Science (p. 498)
- CTE - Career and Technical Education (p. 505)

D

- DNC - Dance (p. 505)
- DR - Dispute Resolution (p. 509)
- DSA - Data Science and Analytics (p. 509)
- DSB - Data Science for Business (p. 510)
- DSE - Data Science for Engineering (p. 510)

E

- ECE - Electrical and Computer Engineering (p. 511)
- ECO - Economics (p. 517)
- ED - Education (p. 522)
- EDA - Educational Administration (p. 523)
- EDP - Educational Psychology (p. 525)
- EED - English Education (p. 528)
- EER - Educational Evaluation and Research (p. 529)
- EET - Electrical/Electronic Engineering Technology (p. 531)
- EGR - Engineering: Special Topics (p. 531)
- EHP - Educational History and Philosophy (p. 532)
- EI - Entrepreneurship and Innovation (p. 532)
- ELE - Elementary Education (p. 533)
- ELI - English Language Institute (p. 537)
- ELR - Employment and Labor Relations (p. 538)
- ENG - English (p. 541)
- EPS - Educational Leadership and Policy Studies (p. 550)
- ESG - Environmental Science and Geology (p. 551)
- ET - Engineering Technology (p. 555)
- EVE - Electric-drive Vehicle Engineering (p. 557)

F

- FIN - Finance (p. 558)
- FPC - Fine Arts: Interdisciplinary (p. 562)
- FPH - Family Public Health (p. 562)
- FRE - French (p. 564)
- FYS - First Year Seminar (p. 567)

G

- GER - German (p. 567)
- GKA - Greek: Ancient (p. 569)
- GKM - Greek: Modern (p. 570)
- GLS - Global Studies (p. 570)
- GPH - Geography (p. 572)
- GS - Graduate School (p. 573)
- GSC - Global Supply Chain Management (p. 573)
- GSW - Gender, Sexuality and Women's Studies (p. 576)

H

- HA - Health Administration (p. 578)
- HE- Health Education (p. 579)
- HEB - Hebrew (p. 581)
- HIS - History (p. 581)
- HMB - Healthcare MBA (p. 591)
- HON - Honors (p. 591)
- HPE - Health and Physical Education (p. 592)

I

- IBS - Interdisciplinary Biomedical Sciences (p. 593)
- IE - Industrial Engineering (p. 594)
- IM - Immunology and Microbiology (p. 601)
- INF - Information Sciences (p. 602)
- ITA - Italian (p. 606)

J

- JPN - Japanese Studies (p. 608)

K

- KHS - Kinesiology, Health and Sport Studies (p. 609)
- KIN - Kinesiology (p. 610)

L

- LAS - Latino/Latina and Latin American Studies (p. 611)
- LAT - Latin (p. 613)
- LDT - Learning Design and Technology (p. 613)
- LED - Language Education (p. 616)
- LEX - Law (p. 616)
- LFA - Life Fitness Activities (p. 637)
- LGL - Language Learning (p. 638)
- LIN - Linguistics (p. 638)

M

- MAE - Mathematics Education (p. 640)
- MAT - Mathematics (p. 641)
- MCT - Mechanical Engineering Technology (p. 647)
- MD1 - Medical School: Year 1 (p. 648)
- MD2 - Medical School: Year 2 (p. 651)
- MD3 - Medical School: Year 3 (p. 655)
- MD4 - Medical School: Year 4 (p. 656)
- MDR - Medical Research (p. 665)
- ME - Mechanical Engineering (p. 665)
- MED - Music Education (p. 671)
- MGG - Molecular Genetics and Genomics (p. 671)
- MGT - Management (p. 673)
- MIT - Manufacturing and Industrial Engineering Technology (p. 677)
- MKT - Marketing (p. 677)
- MLC - Med-Direct Community Learning (p. 680)
- MLS - Medical Laboratory Science (p. 680)
- MS - Mortuary Science (p. 682)
- MSE - Materials Science and Engineering (p. 686)
- MSL: Master of Studies in Law (p. 683)
- MUA - Music Ensembles and General Courses (p. 687)
- MUH - Music History (p. 691)
- MUP - Music Private Instruction (p. 694)
- MUT - Music Theory (p. 700)

N

- NE - Near Eastern Studies (p. 702)
- NEU - Neuroscience (p. 704)
- NFS - Nutrition and Food Science (p. 705)
- NUR - Nursing (p. 709)

O

- OT - Occupational Therapy (p. 727)

P

- PAA - Pathologists' Assistant (p. 731)
- PAS - Physician Assistant Studies (p. 734)
- PCS - Peace and Conflict Studies (p. 736)
- PH - Public Health (p. 737)
- PHA - Pharmacy (p. 739)
- PHC - Pharmacology (p. 740)
- PHI - Philosophy (p. 743)
- PHY - Physics (p. 747)
- POL - Polish (p. 753)
- PPR - Pharmacy Practice (p. 754)
- PS - Political Science (p. 757)
- PSC - Pharmaceutical Sciences (p. 764)
- PSL - Physiology (p. 767)
- PSY - Psychology (p. 770)
- PT - Physical Therapy (p. 778)
- PTH - Pathology (p. 781)
- PYC - Psychiatry (p. 782)

R

- RDT - Radiologic Technology (p. 783)
- RLL - Reading, Language and Literature Education (p. 785)
- ROC - Radiation Oncology (p. 786)
- RSE - Research, Service and Engagement (p. 788)
- RT - Radiation Therapy Technology (p. 788)
- RUS - Russian (p. 790)

S

- SAM - Sport Administration and Management (p. 791)
- SCE - Science Education (p. 792)
- SED - Special Education (p. 793)
- SEM - Sport and Entertainment Management (p. 794)
- SLA - Slavic (p. 795)
- SLP - Speech and Language Pathology (p. 795)
- SOC - Sociology (p. 797)
- SPA - Spanish (p. 802)
- SSE - Social Studies Education (p. 805)
- STA - Statistics (p. 806)
- STE - Sustainable Engineering (p. 807)
- STS - Study Skills (p. 807)
- SW - Social Work (p. 807)
- SWA - Swahili (p. 816)
- SYE - Systems Engineering (p. 816)

T

- TED - Teacher Education (p. 817)
- THD - Theatre and Dance (p. 824)
- THR - Theatre (p. 825)
- TIS - Technology, Information Systems and Analytics (p. 836)

U

- UGR - Undergraduate Research (p. 840)
- UP - Urban Planning (p. 840)
- US - Urban Studies (p. 842)

W

- WMT - Welding and Metallurgical Engineering Technology (p. 842)

ACC - Accounting

ACC 3010 Introduction to Financial Accounting Cr. 3
Theory and practical applications of financial accounting principles; preparation and evaluation of financial statements and the items that make up these statements using real-world examples. Use of the language of business to communicate financial information about business enterprises. This course satisfies Society of Actuaries Validation by Educational Experience (VEE) in Accounting and Finance when taken with FIN 3290 with a B- or better in each course. Offered Every Term.
Prerequisites: TIS 2300 with a minimum grade of C

ACC 3020 Introduction to Managerial Accounting Cr. 3
Basic terms and concepts used in managerial accounting: cost behavior; cost-volume profit analysis; business planning and accounting controls; and how accounting information in managerial decision making. Offered Every Term.
Prerequisites: ACC 3010 with a minimum grade of C, ECO 2010 with a minimum grade of C, and TIS 2300 with a minimum grade of C

ACC 4500 Business Co-op Assignment Cr. 0
Must be elected by Professional Development Co-operative Program students during work semester. Offered for S and U grades only. No credit toward degree. Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. Offered Every Term.
Restriction(s): Enrollment limited to students in the School of Business.
Equivalent: FIN 4500, MGT 4500, MKT 4500

ACC 5100 Intermediate Financial Accounting I Cr. 3
Accounting principles for preparing complete set of financial statements; how accounting meets the needs of various external users. Theories and practices of external financing of external financial reporting for organizations. Valuation and accounting for assets: cash, receivables, and inventory. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ACC 3010 with a minimum grade of C and ACC 3020 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5110 Intermediate Financial Accounting II Cr. 3
Continuation of ACC 5100. Theories and practices underlying external financial reporting for organizations. Valuation of and accounting for specific items on the balance sheet, including property, plant and equipment, intangible assets, current and long-term liabilities, stockholders' equity, investments, income measurement concepts and issues. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ACC 5100 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5115 Intermediate Financial Accounting III Cr. 3
Continuation of ACC 5110. Complex financial reporting topics, such as securities, earnings per share, income taxes, pensions, leases, changes and errors, disclosure issues. Cases used to integrate concepts studied in managerial, systems, and tax accounting courses in this capstone course. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ACC 5110 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5120 Advanced Accounting Cr. 3
Theories and practical applications of financial accounting: as learned in intermediate accounting courses; focus on accounting of consolidation and combination of business entities; accounting for foreign currency transactions; and interim and segment reporting. Offered for undergraduate credit only. Offered Winter.
Prerequisites: ACC 5110 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5130 Accounting Systems Design and Control Cr. 3
Implementation of accounting systems in a computer-intensive business environment; methods for developing and documenting Accounting Information Systems (AIS); hands-on use of enterprise resource planning software package for accounting functions. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ACC 5100 with a minimum grade of C and ISM 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5160 Managerial Accounting Cr. 3
Focus on management accountant as integral part of the management team. Analyzing, managing, and accounting for costs; relevance of cost management in manufacturing firms and other types of organization; solving homework problems by application of concepts covered in textbook and lectures. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ACC 3020 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5170 Introduction to Taxation: Individuals Cr. 3
Introduction to taxation, tax research, and tax planning. Fundamental elements of individual taxation; how individuals and business owners benefit from an understanding of tax law. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ACC 3010 with a minimum grade of C and ACC 3020 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5180 Governmental and Not-for-Profit Accounting Cr. 3
Theory and practical applications of accounting for governmental and not-for-profit organizations, and how they differ from for-profit entities. Technical accounting issues and management and regulatory issues for both state and local governments and for other governmental and non-governmental not-for-profit entities. Course is preparation for governmental and not-for-profit portion of the CPA examination. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ACC 5110 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5200 ERP Systems: Concepts and Practice Cr. 3
Discusses the role and function of ERP systems within organizations; analyzes the major business processes in their organization and their implementation using ERP software; provides hands-on use of ERP tools for transaction processing and decision support; and describes the use of ERP systems for customer relationship management (CRM), supply chain management (SCM), and electronic commerce. Offered for undergraduate credit only. No credit after former ISM 5200. Offered Winter.
Prerequisites: ACC 3010 with a minimum grade of C, ACC 3020 with a minimum grade of C, and ISM 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $117
Equivalent: TIS 5200

ACC 5210 Blockchain Fundamentals for Accounting and Business Cr. 3
Introduces blockchain, which is a public, transparent, secure, immutable and distributed ledger. Blockchains can be used to record and transfer any digital asset, not just currency. Progressing from a detailed study of how blockchain works in Bitcoin; this course also discusses alternative blockchain platforms; potential uses of blockchain in accounting, other areas of business, and society; and this technology's potential impact on accounting systems, business transactions, financial services, government, and banking management. This course is taught completely online. No credit after former ISM 5210. Offered Spring/Summer.
Prerequisite: ACC 3010 with a minimum grade of C and ACC 3020 with a minimum grade of C
Equivalent: TIS 5210

ACC 5220 Data Analytics and Technologies for Accounting Cr. 3
This course is designed to deepen students' comprehension of information systems' technical aspects and essential analytical skills for accountants. It emphasizes the role of data in various fields, aiding managerial decisions via high-quality analytics. Covering the complete data analytics cycle—from data collection, quality maintenance, to execution, and presentation—students will learn to extract, transform, and load (ETL) data from databases and explore relevant analytics. Hands-on examples and cutting-edge software used in accounting and data science will be employed. Offered Every Term.
Prerequisite: ACC 5110 with a minimum grade of C and ACC 5160 with a minimum grade of C

ACC 5250 Introduction to Internal Auditing Cr. 3
Theory of internal auditing and how it relates to the CPA audit and the audit committee. Offered for undergraduate credit only. Offered Winter.
Prerequisites: ACC 3010 with a minimum grade of C and ACC 3020 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ACC 5270 Introduction to Taxation: Business Entities Cr. 3
Builds on basic U.S. tax concepts learned in ACC 5170. Taxation of corporations, S corporations, partnerships, estates and trusts. Accounting for income taxes on financial statements, taxation of corporate reorganizations and liquidations, basic multi-state and multi-national taxation principles, and transfer taxes and wealth planning. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: ACC 5170 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5890 Internship in Accounting or Tax Practice Cr. 3
Student performs assigned tasks and responsibilities in a professional manner under supervision of host-employer for minimum 160 hours during the semester, abiding by the rules and regulations established by the employer and expected of all employees; student must satisfactorily complete all course requirements outlined in the internship program for the Mike Ilitch School of Business. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 5990 Directed Study in Accounting Cr. 1-3
Research conducted under supervision of full-time faculty member in an area of special interest to student and faculty member. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

ACC 5996 Auditing, Assurance and Attestation Cr. 3
Principles and procedures used by public accountants in examination of financial statements of companies and other organizations; issuing an independent opinion; professional standards and responsibilities of the certified public accountant. Offered Every Term.
Prerequisites: ACC 5115 with a minimum grade of C (may be taken concurrently) and TIS 3400 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

ACC 6000 Introduction to Accounting and Financial Reporting Cr. 3
Introduction to accounting principles and the understanding and analysis of financial statements. Offered for graduate credit only. No credit after former BA 6000. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

ACC 7000 Managerial Accounting Cr. 3
Fundamental principles; preparation and utilization of financial information for internal management purposes. No credit after ACC 6020. No credit for undergraduate accounting majors. No credit after former BA 7000. Offered Every Term.
Prerequisites: ACC 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

ACC 7100 Financial Accounting for Decision Making Cr. 3
This course provides an introduction to the financial reporting environment, incentives of managers issuing financial statements, and analysis and interpretation by users of such disclosures. It begins by viewing the financial accounting system as a language, and familiarizes students with the structure, usage, conventions, and the grammar of accounting as a business language. No credit after ACC 7040 and ACC 7050. Offered Fall, Winter.
Prerequisites: ACC 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7115 Financial Statement Analysis Cr. 3
Development of ability to extract and interpret information reported in financial statements in order to evaluate the operating performance and financial status of a firm. Offered Fall, Winter.
Prerequisites: ACC 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

ACC 7120 Introduction to Taxation: Individuals Cr. 3
Introduction to taxation, tax research, and tax planning. Fundamental elements of individual taxation; how individuals and business owners benefit from an understanding of tax law. No credit after ACC 5170 or undergrad. equiv. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

ACC 7122 Advanced Accounting I Cr. 3
Theory and practical applications of accounting for consolidation and combination of business entities and accounting for foreign currency transactions and interim and segment reporting. No credit after ACC 5120 or other undergrad. equiv. course. Offered Winter.
Prerequisites: ACC 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7130 Intermediate Managerial Accounting Cr. 3
Building on managerial accounting skills mastered in B A 7000, this course examines accounting and control issues and the use of information in the decision-making process from a managerial perspective, through the study of cases. No credit after ACC 5160 or undergrad. equiv. Offered Fall, Winter.
Prerequisites: ACC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7145 Accounting Systems: Design and Controls Cr. 3
Implementation of accounting systems in the computer-intensive business environment; methods for developing and documenting Accounting Information Systems (AIS); evaluation of controls; work with accounting software package. No credit after ACC 5130 or equiv. Offered Every Term.
Prerequisites: ACC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7148 ERP Systems and Business Integration Cr. 3
Enterprise Planning (ERP) systems are the primary software packages for accounting, operational, and managerial activities of organizations. How ERP systems integrate and coordinate business processes and the management of the organization. Extensive hands-on use of popular software packages for key business activities such as sales, procurement, and production. Offered Winter.
Prerequisites: ACC 7000 with a minimum grade of C and ISM 7500 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $117

ACC 7155 Forensic Accounting Cr. 3
Accounting and legal fundamentals of forensic accounting. Topics include tax and financial statement fraud, information security, and forensic accounting applications in such cases as bankruptcy, identity theft, and organized crime and terrorism investigations. Offered Fall, Winter.
Prerequisites: ACC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7165 Internal Audit I Cr. 3
Theory of internal audit; the context within which internal auditing functions; its relation to the external audit and the audit committee. Offered Winter.
Prerequisites: ACC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7170 International Accounting Cr. 3
Issues in international business environment: currency translations; consolidated statements for multinational corporations, inflation accounting; other issues. Offered Fall.
Prerequisites: ACC 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7180 Auditing Cr. 3
Principles and procedures of internal and external auditing; statistical sampling and other modern auditing techniques; professional standards and responsibilities of the auditor. Offered Every Term.
Prerequisites: ACC 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7188 Governmental and Not-for-Profit Accounting Cr. 3
Theory and practical applications of accounting for governmental and not-for-profit organizations, and how they differ from for-profit entities. Technical accounting issues and management and regulatory issues for both state and local governments and for other governmental and non-governmental not-for-profit entities. No credit after ACC 5180 or undergrad equiv. Offered Every Term.
Prerequisites: ACC 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7280 Accounting Data Analytics Cr. 3
Introduces concepts, techniques, and software applications used to analyze accounting and related data to support financial decision-making and planning. These data are generated both within and outside the organization. Offered Winter.
Prerequisites: ACC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7290 Blockchain: An Accounting and Business Perspective Cr. 3
Introduces blockchain: a public, transparent, secure, immutable, and distributed ledger. Blockchains can be used to record and transfer any digital asset, not just currency. The course covers the workings, applications, and potential impact of this revolutionary technology. Offered Fall.
Prerequisites: ACC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7300 Accounting and Tax Research and Professional Communications Cr. 3
Methodology of accounting and tax research, including computer-assisted research and the communication of argument and conclusions. Sources and roles of legislative, executive, judicial and professional bodies in creating, interpreting and enforcing policies and practices. Commonly-used research databases studied through cases. Offered Every Term.
Prerequisites: ACC 7120 with a minimum grade of C (may be taken concurrently) and ACC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7310 Business and Professional Ethics for Managers and Accountants Cr. 3
Laws, regulations and professional codes of conduct as reflection of expectations of corporate stakeholders regarding the ethics of accountants and managers. Significance of integrity, independence, and reputation in light of these rules. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7320 Introduction to Taxation: Business Entities Cr. 3
Builds on basic U.S. tax concepts learned in ACC 5170/ACC 7120. Taxation of corporations, S corporations, partnerships, estates and trusts. Accounting for income taxes on financial statements, taxation of corporate reorganizations and liquidations, basic multi-state and multi-national taxation principles, and transfer taxes and wealth planning. Offered Fall, Winter.
Prerequisites: ACC 7120 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

ACC 7325 Advanced Tax Research and IRS Procedures Cr. 3
Builds on research skills developed in ACC 7300 focusing on tax research methodology, writing and citation; role of legal authorities in taxation; IRS practices and procedures. This course requires one-on-one work with the instructor. Offered Intermittently.
Prerequisites: ACC 7300 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7335 Taxation of Corporations and Shareholders Cr. 3
Advanced taxation issues related to consolidated tax returns; corporate acquisitions, mergers, divestitures, and reorganizations; survival of tax attributes; accounting for uncertainty in income taxes; other advanced tax topics. This course requires one-on-one work with the instructor. Offered Fall.
Prerequisites: ACC 7300 with a minimum grade of C and ACC 7320 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7340 Taxation of Pass-Through Entities Cr. 3
Tax rules governing formation, operation, and dissolution of partnerships, S corporations, and limited liability companies; aggregate and entity theories; distributions, basis adjustments, dispositions, and other related tax issues. This course requires one-on-one work with the instructor. Offered Intermittently.
Prerequisites: ACC 7300 with a minimum grade of C and ACC 7320 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7400 Taxation of International Business and Multinational Transactions Cr. 3
Taxation of U.S. persons investing or doing business outside the United States. Foreign tax credit, sourcing rules, controlled foreign corporation and related tax issues, transfer pricing issues, and overview of tax issues related to non-U.S. persons doing business in the United States. Offered Intermittently.
Prerequisites: ACC 7300 with a minimum grade of C and ACC 7320 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7410 Tax Accounting Methods and Accounting for Income Taxes Cr. 3
Tax accounting issues faced by business entities and their tax advisers, including tax accounting methods and periods, inventory methods, tax accrual workpapers, tax uncertainties and deferred taxes. Offered Intermittently.
Prerequisites: ACC 7050 with a minimum grade of C, ACC 7120 with a minimum grade of C, and ACC 7150 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7450 Taxes and Business Strategy Cr. 3
Effect of taxation on business decisions such as choice of form of organization, international operations, employee and executive compensation strategies, business mergers, acquisitions and divestitures. Business decisions examined by studying tax, accounting, and non-tax considerations from a management perspective. Offered Intermittently.
Prerequisites: ACC 7300 with a minimum grade of C and ACC 7320 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7600 CPA Preparatory Course - Financial Accounting and Reporting Cr. 3
The course familiarizes students with the format of the CPA Exam and prepares students to successfully complete the Financial Accounting and Reporting (FAR) section of the CPA Exam. Student must be eligible to sit for the CPA exam. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ACC 7990 Internship in Accounting or Tax Practice Cr. 1-3
Application and assessment of concepts developed in studies through meaningful real-world experience. Student must obtain internship position and complete internship application form before registering. Student performs assigned tasks in professional manner under supervision of host-employer for minimum 160 hours during semester; abides by rules and regulations established by employer and expected of all employees; and must complete all course requirements outlined by the School for the internship program. Offered Every Term.
Prerequisites: ACC 7100 with a minimum grade of C and ACC 7000 with a minimum grade of C
Restriction(s): Enrollment limited to students in the MS in Accounting or MS in Taxation programs; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ACC 7995 Directed Study in Accounting Cr. 1-3
Opportunity to conduct research under the supervision of a member of the graduate faculty in areas of special interest to student and faculty member. Offered Every Term.
Prerequisites: ACC 7040 with a minimum grade of C, ACC 7050 with a minimum grade of C, and ACC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 3 Credits

ACC 7998 Seminar in Tax and Accounting Policy Cr. 3
Seminar topics include history of accounting and tax policy in the U.S., establishment of accounting and tax rules and standards, professional responsibilities of accounting and tax professionals; relationship and application to recent and current events. Offered Fall, Winter.
Prerequisites: ACC 7050 with a minimum grade of C, ACC 7120 with a minimum grade of C, and ACC 7300 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a MS in Accounting or MS in Taxation degrees; enrollment limited to students in the Law School or School of Business.

ACO - Art: Core

ACO 1200 Surface Studio Cr. 3
Core studio for visual communication in a spectrum of two-dimensional media and color theory. Explorations include elements and principles of design, basic digital technique, basic traditional material handling, creative thinking, critical discussion and problem solving. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $140

ACO 1230 Space Studio Cr. 3
Core studio for visual communication in a spectrum of three-dimensional media and composition in the built environment. Explorations include elements and principles of design, basic digital techniques, material handling, shop experience, and creative problem solving. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $140

ACO 1270 Time Studio Cr. 3
Core studio for visual communication in time-based media composition including elements and principles of design, basic time-based methods for audio/video production, performance, social practice, creative thinking, and critical discussion and problem solving. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $75

ACR - Art: Ceramics

ACR 2550 Introduction to Ceramics Cr. 3
Introduction to the technical processes and conceptual concerns of working with the ceramic material. Students will explore various methods of forming with earthenware to make both functional and expressive works out of clay. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Art History, Art History Honors, Art, Art Honors, 2nd Art, 2nd Design and Merchandising, Design, Design Honors, Design and Merchandising or Design & Merchandising Honors.
Fees: $75

ACR 2560 Introduction to Ceramics for Non-Majors Cr. 3
Introduction to the technical processes and conceptual concerns of working with the ceramic material. Students will explore various methods of forming with earthenware to make both functional and expressive works out of clay. Non-art majors only. Offered Every Term.
Fees: $75

ACR 3550 Intermediate Ceramics Cr. 3
Focuses on the refinement of technical skills with an emphasis on conceptual development related to materiality. Offered Winter.
Prerequisites: ACR 2550 and (ACO 1200, ACO 1230, ACO 1270, or ADR 2550)
Fees: $75

ACR 4000 Ceramic Multiples I Cr. 3
Intermediate ceramics course focusing on an introduction to the technical processes of throwing, prototyping, and mold making. Offered Fall.
Prerequisites: (2 of ACR 2550 and (ADR 1050, ACO 1200, ACO 1230, or ACO 1270) or AID 5330)
Fees: $125

ACR 4550 Advanced Ceramics I Cr. 3
Focuses on conceptual development as it relates the creation of a unified body of work. Topics may include discussions of advanced techniques, professional practices, and contemporary issues in ceramics. Offered Winter.
Prerequisites: ACR 3550
Fees: $90

ACR 5000 Ceramic Multiples II Cr. 3
Advanced ceramics course focusing on the technical processes of throwing, prototyping, mold making, glaze calculation, and firing. Discussions may also include issues of professional practice, marketing, and branding. Offered Fall.
Prerequisites: ACR 4000
Fees: $125
Repeatable for 6 Credits

ACR 5550 Advanced Ceramics II Cr. 3
Continuation of ACR 4550; Advanced ceramics course focusing on conceptual development as it relates the creation of a unified body of work. Topics may include discussions of advanced techniques, professional practices, and contemporary issues in ceramics. Offered Every Term.
Prerequisites: ACR 4000 and ACR 4550
Fees: $90
Repeatable for 12 Credits

ACR 5880 Directed Projects in Ceramics Cr. 1-6
Independent projects and study in consultation with faculty. Offered Every Term.
Fees: $90
Repeatable for 6 Credits

ACR 7550 Graduate Problems in Ceramics Cr. 3
Individual problems in advanced ceramics. Offered Every Term.
Prerequisites: ACR 5550
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $100
Repeatable for 24 Credits

ACR 8880 MFA Studio: Ceramics Cr. 3-9
Extended problems in ceramics; individual research with eighteen to twenty-seven hours of laboratory per week. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $150
Repeatable for 36 Credits

ACS - Art: Special Seminars

ACS 3997 Professional Practices in the Visual Arts I Cr. 3
Foundational seminar on contemporary issues in the visual arts. Topics including studio and professional practices, history, and criticism relevant to art making. This course explores historical and contemporary concerns that influence artists' creative identities, and strategies for effective methods of critiquing and communicating ideas about artistic works. Readings, group discussions, writing activities, and targeted projects will help students generate narratives about how and why they make art, and encourage them to set academic, creative, and professional goals for the future. This is the capstone course for BA in Art students; BA in Art students should take this in their final year. BFA students should take this course in their junior year. Offered Fall, Winter.
Prerequisites: 3 of ACO 1200, ACO 1230, ACO 1270, and ADR 1050
Fees: $60

ACS 5200 Art Gallery Management Cr. 3
Offers a larger sense of the profession gained through readings, opportunities to network within and outside Wayne State University's art galleries, and hands-on experience. The following operational fundamentals are thoroughly examined: exhibition and season design, marketing, budgeting, and standard facility requirements. Offered Winter.
Repeatable for 6 Credits

ACS 5210 Art Gallery Internship Cr. 1-3
Provides students with opportunities to serve as interns at galleries and museums internal and external to the department. Students update the instructor with documentation of significant projects on which they have worked. Offered Every Term.
Repeatable for 6 Credits

ACS 5300 Studio Art Internship Cr. 1-3
The internship will be performed in consultation with faculty. Students enrolled in the course will gain professional and practical experience in order to augment their field of study, preparing them for a career post-graduation. It is geared for studio art students who would like to gain real-world experience in an artist's studio or at a related organization/business. Students must secure a host organization or artist's studio to sponsor their internship prior to admittance into the course. The host organization or artist's studio must provide a plan-of-work outlining the work that will be performed over the course of the 10-week internship. For successful completion of this course, the host organization/artist's studio must sign the plan-of-work at the conclusion of the internship acknowledging that the student's work was completed. While unpaid internship are acceptable, paid internships are preferable. Offered Every Term.
Repeatable for 6 Credits

ACS 5500 Independent Study: Art Cr. 1-2
Independent Study: Art provides an opportunity for students to work independently on a project that is otherwise not addressed within the curriculum of their chosen field of study. Under the supervision of a faculty member, students will clarify the intent of their project and set goals for the semester. Process documentation will be required periodically throughout the semester, and projects will culminate in a portfolio document. Graduate students enrolled in this course are required to complete a thematically relevant research paper in addition to the project documentation and portfolio requirements. Coursework requirements are tailored to align with a student's individual project ideas. Offered Intermittently.
Repeatable for 4 Credits

ACS 5550 Special Topics Cr. 3
Students examine specific issues related to one or more of the department's studio disciplines. Taught on a rotational schedule by faculty from all of the fine art concentrations. Offered Every Term.
Prerequisites: ACO 1230, ACO 1200, and ACO 1270
Fees: $30
Repeatable for 6 Credits

ACS 5650 Museum Culture: Histories, Critiques, Practices Cr. 3
The art museum as a subject of cultural history and criticism, social policy, and art. Includes panel discussions among museum professionals and opinion leaders, designed to explore current issues. Offered Yearly.

ACS 5996 Honors Project Cr. 3
Students complete a substantial creative project reflecting conceptual issues, determined by the student in collaboration with his/her professor. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.

ACS 5997 Professional Practices in the Visual Arts II Cr. 3
Capstone course for BFA students. Interdisciplinary seminar on contemporary issues in the visual arts. Topics include studio and professional practices, history, and criticism related to art making. Emphasis will be placed on best practices regarding exhibition preparation and display. Course will conclude with exhibition of student work. Offered Fall, Winter.
Prerequisites: ACS 3997
Restriction(s): Enrollment is limited to students with a major in Art or Art Honors; enrollment is limited to Undergraduate level students.
Fees: $60

ACS 7999 Master's Essay Direction Cr. 1-3
Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Art or Art Honors; enrollment is limited to Graduate level students.

ACS 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Art History; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ADA - Art: Digital Art

ADA 2210 Introduction to Digital Practices Cr. 3
Introductory survey of digital methods of art production; digital painting and drawing, 3D modeling, and photo manipulation. Offered Fall, Winter.
Fees: $95

ADA 3210 Video Art Cr. 3
Experimental digital video techniques; exploring the workflow from camera to post production and output. Technical tuition supplemented by readings, critiques, discussions and readings of key examples of video art. Offered Fall, Winter.
Prerequisites: ADA 2210 and (ACO 1270 or APH 2400)
Fees: $150

ADA 3220 Interactive Art Cr. 3
Exploration of a variety of art-making strategies that utilize digital technologies and interactive media; emphasis on computer-based and online art practices and web-oriented programming languages. Offered Yearly.
Prerequisites: ADA 2210
Fees: $145

ADA 4220 Experimental 2D Animation Cr. 3
Strategies for creating animation-based artworks by combining traditional techniques with digital technologies. Technical instruction supplemented by readings, critiques, discussions, and screenings of key examples of experimental 2D animation. Offered Yearly.
Prerequisites: ADA 2210, ADA 3210, or ADA 3220
Fees: $125
Repeatable for 6 Credits

ADA 4230 Experimental 3D Animation Cr. 3
3D modeling and animation techniques. Technical instruction supplemented by readings, critiques, discussions and screenings featuring various mainstream and experimental examples of 3D animation. Offered Winter.
Prerequisites: ADA 2210, ADA 3210, or ADA 3220
Fees: $165
Repeatable for 6 Credits

ADA 5210 Tech Justice Cr. 3
A project-based course that explores the role of digital technology and social justice through arts-based research and practice. Special focus on providing research and collaboration experiences for advanced students. Offered Yearly.
Prerequisite: ADA 2210 or ADA 3210 or ADA 3220
Repeatable for 6 Credits

ADA 5240 Interface Cr. 3
A hands on, technically rigorous course on digital electronics, hardware and interface for advanced Digital Arts students. Interface will cover the fundamentals of physical computation, sensors and outputs. Students are expected to have a basic understanding of coding and computation from previous Digital Art classes. Offered Winter.
Prerequisites: ADA 3220

ADA 5250 Advanced Time-Based Media Cr. 3
Research and project oriented studio class for intermediate and advanced students. Discussion, critique, development and refinement of technical and conceptual approaches to the application of digital video technologies within the fine arts. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $165

ADA 5830 Directed Projects in Digital Arts Cr. 1-3
Individual problems in electronic arts. Offered Fall, Winter.
Fees: $165
Repeatable for 6 Credits

ADN - Art: Design

ADN 2410 Textiles Cr. 3
Introduction to fibers, yarns, fabric construction, design and finishes and how they relate to selection, use and care of textile products. Offered Fall, Winter.
Fees: $35

ADN 3100 Design Process Cr. 3
Intended for the student who is entering the design field and requires an understanding of brand identity development, design thinking, and product line development. Offered Every Term.
Repeatable for 6 Credits

ADN 5000 History of Interior Design and Architecture Cr. 3
History of architectural styles and the use of interior space with an emphasis on their application to contemporary interior design. Offered Yearly.

ADN 5200 Ethnographic Research Methods for Designers Cr. 3
Introduction to a set of theoretical and methodological approaches stemming from the field of anthropology. Students utilize these approaches to enrich and inform their design processes from conceptual creation, to ideation and design development, to user testing. Offered Fall, Winter.
Repeatable for 6 Credits

ADN 5430 History of Costume Cr. 3
Survey of historic costumes from prehistoric to present. Emphasis on influence of social factors. Offered Fall.

ADN 5500 Independent Study: Design Cr. 1-2
Independent Study: Design provides an opportunity for students to work independently on a project that is otherwise not addressed within the curriculum of their chosen field of study. Under the supervision of a faculty member, students will clarify the intent of their project and set goals for the semester. Process documentation will be required periodically throughout the semester, and projects will culminate in a portfolio document. Graduate students enrolled in this course are required to complete a thematically relevant research paper in addition to the project documentation and portfolio requirements. Coursework requirements are tailored to align with a student's individual project ideas. Offered Intermittently.
Repeatable for 4 Credits

ADN 6320 History of Modern Design I Cr. 3
Major design trends in America and Europe from mid-nineteenth century to World War I. Covers a broad spectrum of the applied arts. Offered Fall.

ADN 6330 History of Modern Design II Cr. 3
Major design trends in America and Europe from end of World War I through 1950s. Covers a broad spectrum of the applied arts. Offered Winter.

ADR - Art: Drawing

ADR 1050 Drawing I Cr. 3
Introduction to basic drawing skills such as linear perspective, light and shadow, use of dry and wet media; emphasis on composition. Drawing primarily still life subjects. Offered Fall, Winter.
Fees: $30

ADR 1060 Drawing II Cr. 3
Further development of basic drawing skills and concepts. Continued exploration of media. Drawing based on observation and imagination. Offered Fall, Winter.
Prerequisites: ADR 1050
Fees: $30

ADR 2070 Beginning Life Drawing Cr. 3
Initial exploration of human figure using limited drawing media; essential aspects of the figure: proportion, gesture, composition. Offered Fall, Winter.
Prerequisites: ADR 1050
Fees: $90

ADR 2130 Introduction to Alternative Drawing Methods and Materials Cr. 3
Survey of contemporary and traditional materials and methods of paper making, paper casting, paper cutting and paper folding, as well as an introduction to book binding and altered books. Compositions based on observation and imagination. Offered Yearly.
Prerequisites: ACO 1200
Fees: $80
Repeatable for 6 Credits

ADR 3070 Intermediate Life Drawing Cr. 3
Continued systematic study of human figure using broad range of media. Offered Fall, Winter.
Prerequisites: ADR 2070
Fees: $90

ADR 5060 Advanced Concepts in Drawing and Painting Cr. 3-6
Emphasis on individual projects using any appropriate medium. Work is created independently (out of class) with scheduled critiques for faculty guidance; may include lectures, demonstrations, off-campus visits. Offered Yearly.
Prerequisites: ADR 3070 and APA 4000
Fees: $30
Repeatable for 6 Credits

ADR 5070 Advanced Life Drawing Cr. 3
Continued study of human figure based on observation. Composition. Expressive interpretation of the figure through broad range of media. Offered Fall, Winter.
Prerequisites: ADR 3070
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 6 Credits

ADR 5080 Landscape Drawing Cr. 3
Drawing or painting, as appropriate, outdoors at a variety of urban, suburban, and rural sites in the metropolitan Detroit area; students are expected to drive or carpool to locations within an hour of Detroit. Interpretation of landscape subjects through observation and imagination. Offered Spring/Summer.
Prerequisites: ADR 1050
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $30
Repeatable for 6 Credits

ADR 5090 Anatomy Cr. 3
Superficial human anatomy including effects of muscular and skeletal systems. Drawing from both models and skeletons, lectures, demonstrations. Offered Yearly.
Prerequisites: ADR 2070
Fees: $90

ADR 5100 Contexts of Studio Practice Cr. 3
Critical inquiry into art issues, past and present, and contemporary studio practices related to painting. Seminar based on visits to museums, galleries, private collections, artists' studios, and optional trips to major art centers such as New York and Chicago. Offered Yearly.
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Equivalent: APA 5100
Repeatable for 6 Credits

ADR 5160 Advanced Alternative Drawing Methods and Materials Cr. 3
Survey of contemporary and traditional materials and methods of paper making, paper casting, paper cutting and paper folding, as well as an introduction to book binding and altered books. New techniques will be incorporated into a personal body of work. Offered Yearly.
Prerequisites: ADR 2130
Fees: $80
Repeatable for 6 Credits

ADR 5800 Directed Projects: Drawing Cr. 3-6
Individual work supervised by faculty on arranged basis. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Repeatable for 12 Credits

ADR 7060 Graduate Problems in Drawing and Painting Cr. 3-9
Emphasis on self-directed projects with advice from faculty. May include lectures, demonstrations, and visits to off-campus sites. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $30
Repeatable for 24 Credits

ADR 7070 Graduate Life Drawing Cr. 3
Individual projects based upon study of the human figure. Broad range of media encouraged. Offered Fall, Winter.
Prerequisites: ADR 5070
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 9 Credits

ADR 7080 Landscape Drawing Cr. 3
Drawing or painting, as appropriate, outdoors at a variety of urban, suburban and rural sites in the metropolitan Detroit area; students are expected to drive or carpool to locations within an hour of Detroit. Interpretation of landscape subjects through observation and imagination. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $30
Repeatable for 15 Credits

ADR 8800 MFA Studio: Drawing Cr. 3-9
Extended self-directed work in drawing (eighteen to twenty-seven hours per week). Consultation with appropriate graduate faculty on an arranged basis. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Repeatable for 36 Credits

ADX - Art and Design Exposure

ADX 1020 Web Design and Interactive Art for Non-Art/Design Majors Cr. 3
Introductory survey of methods for the production of web-based art and interactive web content for students, who are not majoring in a program within the Department of Art and Art History. Offered Every Term.

ADX 1030 3D Modeling for Non-Art/Design Majors Cr. 3
Introductory survey of methods in 3D Modeling and digital manufacturing techniques for students, who are not majoring in a program within the Department of Art and Art History. Offered Every Term.

ADX 3100 Design Thinking Cr. 3
This course is intended for students from any discipline who require an understanding of design thinking for brand, product, and service development. Students will learn a series of design thinking concepts, methods and techniques that are used to bring about innovation in business and in the social sector. The intent is for students will develop creativity skills, along with the strategy skills needed to identify needs, generate and visualize ideas to meet those needs, and ultimately bring these ideas to market. Lectures, readings, and group discussion will be reinforced through collaborative and individual project-based design thinking activities. Offered Winter.

AED - Art Education

AED 5000 Introduction to Art Education Cr. 3
Design of developmentally appropriate and comprehensive art experiences, teaching strategies, and authentic assessment of student learning in art. History, theories and philosophies of visual arts education; contemporary trends and issues. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $15

AED 5020 Painting: Methods and Materials Cr. 3
Methods, materials and processes suitable for teaching painting in the schools. Subject selection, composition, surface selection and preparation, mixing and application of paint, finishing, and presentation. Students develop basic skills in painting for personal artistic expression. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $15
Repeatable for 9 Credits

AED 5050 Integrating the Arts into the Elementary Classroom Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introductory course: integration of visual arts, music, dance, and theatre into the teaching, learning and curriculum of the elementary classroom. Offered Fall, Winter.
Prerequisites: (2 of (ELE 3300, ELE 6290, ELE 6390, ELE 6500, ELE 6600, ELE 3400, ELE 3500, or ELE 3600) and 1 of (ELE 3320 or ELE 6310)) or TED 5150
Fees: $30

AED 5070 Methods and Materials of Sculptural Expression Cr. 3
Exploration of three-dimensional forms using various media; emphasis on sculptural concepts, materials, tools and techniques related to teaching sculpture on the elementary and secondary level. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $15

AED 5100 Topics in Art Education Cr. 3
AED 5100 provides a comprehensive exploration of topics specific to visual arts education and their application to classroom instruction. There will also be field components such as required visits to museums and community organizations. These activities will be scheduled during class time. Offered Fall.
Prerequisites: AED 5160 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $15

AED 5150 Computer Graphics in the Classroom Cr. 3
Introduction to digital media and the production of computer graphics by using drawing, painting, graphic design, animation, video and web techniques. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.

AED 5160 Theory and Practice in Art Education Cr. 3
Development of instructional strategies and assessment practices in art education; organization and management of art classrooms; adaptation of art lessons for specific groups. Offered Winter.
Prerequisites: AED 5000 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Education.

AED 5230 Ceramics Education I Cr. 3
An overview of handbuilding processes, various firing procedures including blackware and raku, decorating, glazing and equipment maintenance. Emphasis placed on the educational benefits and procedures for working with people of various ages and the management of materials for teaching. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $25

AED 5280 Printmaking: Methods and Materials Cr. 3
Studio exploration of relief, planographic, intaglio, and stencil processes as methods of reproduction for artistic expression. Examination of tools, methods and processes suitable for the classroom. Includes study in lithography, dry point, etching, calligraphy, woodcut, linocut, and photo screen processes. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $15
Repeatable for 9 Credits

AED 5500 2d Methods and Materials Cr. 3
Exploration of 2d media for the PK-12 classroom. Covering techniques, concepts and self-expression via drawing, collage, painting and printmaking. Offered Winter.
Prerequisites: 4 of ADR 1050 with a minimum grade of C, APR 2300 with a minimum grade of C, (APA 2000 with a minimum grade of C or APA 2110 with a minimum grade of C), and AED 5000 with a minimum grade of C
Corequisite: TED 6630
Restriction(s): Enrollment is limited to students with a major in Multi-Age Education.
Fees: $90

AED 5510 3d Methods and Materials Cr. 3
Exploration of 3d media for the pk-12 classroom. Covering techniques, concepts and self-expression via sculpture, clay and assemblage. Offered Fall.
Prerequisites: ACR 2550 with a minimum grade of C, ASL 2150 with a minimum grade of C, AED 5000 with a minimum grade of C, AED 5500 with a minimum grade of C, and TED 6630 with a minimum grade of C
Corequisite: TED 6680
Restriction(s): Enrollment is limited to students with a major in Multi-Age Education.
Fees: $80

AED 5650 Art Teaching Laboratory Cr. 3
Laboratory experience in teaching art to elementary, middle, and high school students. Pre-student teaching experiences under close supervision of an experienced Visual Arts teacher. Offered Fall.
Prerequisites: AED 5100 with a minimum grade of D- (may be taken concurrently) and AED 5160 with a minimum grade of D-
Restriction(s): Enrollment limited to students in the College of Education.

AED 5690 Collage, Assemblage, and Multi-Media: Methods and Materials Cr. 3
History and methods of creating collage, assemblage, and multi-media art works. Integration of developmental issues, use of personal meaning and experience for lesson planning, unit planning, and work assessment strategies. Offered Winter.
Prerequisites: (AH 1110, AH 1120, ADR 1050, and ADR 1060) or (ADR 2070, APA 2100, and ASL 2150)
Fees: $40

AED 5890 The Art of Indigenous Cultures: Inclusion in the K-12 Curriculum Cr. 3
AED 5890 explores art, architecture and, folklore of various indigenous populations from around the world. Collections from the Detroit Institute of Arts are used as sources of student inquiry and exploration. Offered Winter.

AED 6230 Ceramics Education II Cr. 3
Emphasis is placed on throwing procedures, the use of various clay bodies, firing at various temperatures, making and using tools, ceramic history and its use and benefits in a school curriculum. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $35
Repeatable for 9 Credits

AED 6920 Multi-Cultural Issues in Art Education Cr. 3
Provides all visual arts education students with discipline-specific experiences, current theoretical perspectives, and best practices to enhance the effectiveness of their work in diverse and multicultural learning. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.

AED 7100 Graduate Methods and Materials Cr. 6
Continued exploration of 2d and 3d media for the pk-12 classroom. Covering techniques, concepts and self-expression for the MEd student. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

AED 7700 Advanced Graduate Problems Cr. 3-12
Pursuit of specific problems in depth. Laboratory hours coordinated with regularly scheduled classes in the selected area. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $15
Repeatable for 12 Credits

AET - Alternative Energy Technology

AET 5110 Fundamental Fuel Cell Systems Cr. 4
Introduce various types of fuel cells, materials properties of electrodes and polymeric membranes, and electrochemical mechanisms. Reforming of various types of hydrocarbon fuel to hydrogen, and reforming technology. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: CHE 5110, EVE 5130, ME 5110

AET 5120 Fundamentals of Alternative Energy Technology Cr. 3
Provide an overview/review of thermodynamics. Cover advanced thermodynamics topics of energy and chemical reacting systems. Introduce general areas of alternative energy technology, engineering analysis and design of solar angle/time/radiation, solar heating, solar photovoltaic, and wind power. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

AET 5250 Alternative Energy Technology System and Design Cr. 4
Topics such as: batteries, flywheels, capacitors, motors, controllers, power management, heat dissipation, systems containment, manufacturing processes, systems dynamics. Lectures and design projects. Offered Fall.
Prerequisites: AET 5120
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students; enrollment limited to students in the College of Engineering.

AET 5310 Fundamentals of Battery Systems for Electric and Hybrid Vehicles Cr. 4
Fundamental electrochemistry and engineering aspects for electric propulsion batteries, including lead acid, nickel metal hydride, and lithium ion technologies. Offered Intermittently.
Equivalent: CHE 5120, EVE 5120, ME 5215

AET 5410 Energy, Emissions, Environment (E3) Design Cr. 3
Provides students the tools to uncover the relation between energy consumption and energy generation and optimize processes to take most advantage of low emitting energy options. Exposes students to design tools and methodologies from a diverse group of sources including US EPA, DOE, EIA, and the latest in emerging research. Offered Fall.
Equivalent: CE 5410, STE 5410

AET 5600 Integrated Product Development Cr. 3
Product development process: product architectures, concurrent engineering. Integration of marketing, design, and manufacturing functions for product development. How such processes are designed to account for various manufacturing and other business constraints to ensure that customer needs are met. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: EVE 5600, IE 6405

AET 5800 Charging Infrastructures for Electric Vehicles Cr. 3
This course provides the students with technical knowledge into concept development, product design, and manufacturing of charging infrastructures for electric vehicles. Students will also get to explore recent developments and future plans on global EV charging technologies. Offered Spring/Summer.

AET 5810 Power Management for Advanced Energy Storage Systems and its Applications Cr. 4
Operating principles and modeling of energy storage techniques; control and power management, power electronic converters, electric machines, and power systems; power management strategies of hybrid energy systems including HEV and alternative energy systems. Offered Fall, Winter.
Prerequisites: ECE 4470
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: EVE 5810

AET 7990 Directed Study Cr. 1-4
Independent projects on subjects of interest in advanced energy technology. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

AET 7991 Internship in Industry Cr. 1-4
Industrial internship in alternative energy technology. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

AET 8996 Directed Research Cr. 1-4
Independent research projects. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

AET 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

AFA - Art: Design and Merchandising

AFA 2420 Construction Methods I Cr. 3
Introduction to garment construction including seams, seam finishes, and alterations. Offered Fall, Winter.
Fees: $65

AFA 3400 Clothing and Culture Cr. 3
Functions and meanings of dress in diverse cultures and contemporary society with an interdisciplinary approach. Offered Fall.
Fees: $35

AFA 3420 Construction Methods II Cr. 3
Advanced methods of garment construction and fitting techniques. Development of skills in garment fit, shape, and finish techniques. Introduction to flat pattern manipulation to create custom bespoke garments. Offered Fall.
Prerequisites: ADN 2410 and AFA 2420
Fees: $65

AFA 3460 Introduction to Merchandising Cr. 3
Psychological, economic considerations. Terminology and structure of the fashion industry and career opportunities. Offered Fall, Winter.
Fees: $35

AFA 3470 Global Issues in Fashion Merchandising Cr. 3
This course concentrates on industry issues in retail apparel. Discussions focus on product development, manufacturing, promotion, visual merchandising, special events marketing, sustainability, ethics and the general consumer lifestyle. Students understand contemporary issues in fashion and gain the experience and leadership skills necessary to make merchandising and marketing decisions through both competitive classes and guest lectures. Offered Winter.
Fees: $35

AFA 3480 Fashion Marketing Management Cr. 3
This course focuses on the fundamental principles of marketing and management specific to the fashion industry. Offered Fall.
Prerequisites: AFA 3460
Fees: $35

AFA 4430 Fashion Illustration Cr. 3
Basic fashion rendering techniques using a variety of media. Offered Every Other Year.
Prerequisites: ADR 1050
Fees: $80
Repeatable for 6 Credits

AFA 4450 Contemporary Fashion Theory Cr. 3
Theories and approaches relevant to fashion design discourse including body, gender, and environment. This course is designed to develop students' research, reading comprehension, and writing skills, in addition to reinforcing vocabulary and exploring significant contemporary fashion theories in depth. Offered Winter.
Fees: $50

AFA 4660 Fashion Retail Management Cr. 3
Fashion Retail Management focuses on the fundamental principles of retail and management specific to the fashion industry. Offered Winter.
Prerequisites: AFA 3460
Fees: $35

AFA 4990 Directed Study Cr. 2-4
Offered Every Term.
Repeatable for 4 Credits

AFA 5400 Digital Fashion Illustration Cr. 3
This course builds upon techniques introduced in AFA 4430 and emphasizes digital illustration tools. Students will develop their own stylized croquis in-computer and learn to render garments on the body. Adobe Illustrator, Photoshop, and 3D modeling software will be used to accurately produce digital illustrations and render virtual garments. Digital illustration techniques will prioritize effective visual communication of garment designs. Offered Fall.
Prerequisites: AFA 4430
Fees: $65

AFA 5410 Fashion Entrepreneurship Cr. 3
Provides students with the knowledge and skillset required to succeed in new and pivotal business environments. Discussions focus on innovation in the development of business models with specific concern for ethics and sustainability at all stages of a brand's evolution. Upon completion of this course, students will be prepared to construct creative ideas into business ventures and assume leadership positions in entrepreneurial companies. Offered Fall.
Fees: $60

AFA 5422 Fashion Design: Flat Pattern Cr. 3
Original designs from a basic sloper. Offered Yearly.
Prerequisites: ADN 2410
Fees: $65
Repeatable for 9 Credits

AFA 5424 Fashion Design: CAD Cr. 3
Use of computer-aided design software applied to apparel design concepts; garment designing, grading, and marker-making. Offered Fall.
Fees: $65

AFA 5442 Fashion Design: Draping Cr. 3
Creation of original garments by draping on half-scale and standard-size dress forms. Offered Intermittently.
Prerequisites: AFA 2420 and AFA 5422
Fees: $65
Repeatable for 9 Credits

AFA 5460 Merchandising II Cr. 3
Current trends in merchandising. Emphasis on global aspects. Offered Fall.
Prerequisites: AFA 3460
Fees: $60

AFA 5470 Visual Merchandising: Display Cr. 3
Visual merchandising concepts and trends. Relationship of design elements and principles to the tools and structures used in display. Creative experimentation in the various media. Offered Winter.
Prerequisites: ACO 1200 or ACO 1230
Fees: $65

AFA 5472 Special Topics in Fashion Cr. 3
Exploration of concepts and techniques related to fashion design. Topics may include sustainability, ethics, nontraditional materials, and wearable technologies. Offered Intermittently.
Fees: $60
Repeatable for 6 Credits

AFA 5480 Fashion Design: Exhibition Cr. 3
Development and display of a cohesive collection of design work in a culminating exhibition. Event planning and exhibition design including visual display and styling. Offered Yearly.
Fees: $80
Repeatable for 6 Credits

AFA 5490 Retail Math Cr. 3
An overview of the merchandising principles and mathematics needed for retail planning, buying, and selling. Offered Winter.
Prerequisites: AFA 3460
Fees: $35

AFA 5992 Supervised Field Experience Cr. 3
Supervised field experience designed to correlate classroom theory with practical work. Offered Fall.
Fees: $35
Repeatable for 6 Credits

AFA 5997 Seminar Cr. 3
Contemporary issues in fashion design and merchandising including professional practices and portfolio development. Required readings, presentations, discussion, lectures, and visits from industry professionals. Offered for undergraduate credit only. Offered Winter.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $60

AFA 7850 Seminar Cr. 3
Development and practice of the research process and effective writing skills. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Bachelor of Arts, Bachelor of Science or Master of Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.

AFA 7990 Directed Study Cr. 1-4
Individual projects. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Bachelor of Arts, Bachelor of Science or Master of Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Repeatable for 8 Credits

AFI - Art: Fibers

AFI 2650 Fibers: Material Fundamentals Cr. 3
This course is an introduction to technical and conceptual ways of working in fibers/textiles. Students will explore a variety of fiber processes including off loom construction techniques, felting, weaving, and dyeing. Offered Every Term.
Fees: $135

AFI 2660 Introduction to Fabric Printing and Dyeing Cr. 3
Emphasis on color, design, composition. Printing with found objects, stencil, silk screen resist method working with pigment and reactive dye. Offered Every Term.
Fees: $110

AFI 3640 Fibers: Digital Textile Design Cr. 3
Explore textile design by researching current print and pattern trends in the apparel industry, gaining knowledge and inspiration. Develop innovative pattern collections using original artwork in Adobe Photoshop and Illustrator. Access to the most recent version of Adobe Photoshop and Illustrator is required for this class. Offered Every Term.
Fees: $92
Repeatable for 6 Credits

AFI 3650 Fibers: Weaving Cr. 3
This course explores fabric weaving using simple weave patterns with various threading techniques and investigates the interaction between different fibers woven together. Offered Every Term.
Fees: $135

AFI 3660 Fibers: Print and Dye Cr. 3
This class introduces surface design processes on fabric with emphasis on color, design, and composition utilizing both analog and digital processes. A basic knowledge of various dyeing and resist techniques will be covered using synthetic and natural dyes. Offered Every Term.
Fees: $110

AFI 4650 Fibers: Studio I Cr. 3
This course expands students' technical, creative, and critical abilities in Fibers by utilizing traditional techniques with contemporary technology and research. Rotating semester topics include advanced dyeing, screen-printing, layer weaving, Shibori, Ikat, rug tufting, computerized pattern drafting/development, jacquard weaving, crochet, felting, soft sculpture, coiling, and other fiber art techniques. Offered Every Term.
Fees: $120
Repeatable for 6 Credits

AFI 5650 Fibers: Studio II Cr. 3
This course is an individualized exploration of fiber related techniques, materials, and concepts. Conceptual development and independent research are expected. Offered Every Term.
Prerequisites: AFI 4650
Fees: $135
Repeatable for 6 Credits

AFI 5660 Fabric Printing and Dyeing: Senior Project Cr. 3
Extensive project or series of works determined by student; research and written statement. Offered Every Term.
Prerequisites: AFI 3660
Fees: $110
Repeatable for 6 Credits

AFI 5870 Directed Projects: Fibers Cr. 3-6
Individual problems. Offered Fall, Winter.
Repeatable for 12 Credits

AFS - African American Studies

AFS 1010 Introduction to African American Studies Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
An interdisciplinary approach to exploring several broad issues, topics, theories, concepts and perspectives which describe and explain the experiences of persons of African descent in America, the Continent, and the diaspora. Offered Every Term.

AFS 2010 African American Culture Cr. 4
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Examination of the historical, traditional and aesthetic bases of a variety of cultural forms -- language, literature, music -- of the Black experience. Offered Every Term.

AFS 2210 Black Social and Political Thought Cr. 4
Satisfies General Education Requirement: Civic Literacy, Diversity Equity Incl Inquiry, Social Inquiry
Survey of the Black intellectual and political tradition from the United States, the Caribbean and Africa. Offered Every Term.

AFS 2245 Blacks and Sport in the United States Cr. 3
The intersection between race and sport in the United States, examined to better understand the role of sports in our socialization and cultural construction. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: SOC 2245

AFS 2250 AfroLatino/a History and Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Interdisciplinary introduction to the history and culture of AfroLatinos/as in the U.S. from the perspective of the African Diaspora in the Americas. Offered Winter.
Equivalent: LAS 2250

AFS 2350 Black Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Explores the historical, cultural and structural aspects of the Black urban experience in Detroit from the late 19th Century to the present, including the role that racism, urbanization and suburbanization have played in shaping racial, spatial and economic inequality in the Detroit Metropolitan area. Utilizes an interdisciplinary approach: to interrogate the social and cultural history of Black Detroit, to examine the various forms of Black social movement activism used by Black Detroiters in the 20th Century, and to analyze ways the shifting economic and political currents shaped, and reshaped racism, class, space, and resistance in the Detroit metropolitan area. Offered Fall, Winter.
Equivalent: HIS 2350, US 2350

AFS 2390 Introduction to African-American Literature: Writing about Texts Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Intermediate Comp Post-2018
Introduction to major themes and some major writers of African-American literature, emphasizing modern works. Reading and writing about representative poetry, fiction, essays, and plays. Offered Every Term.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100
Equivalent: ENG 2390

AFS 2600 Race and Racism in America Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Examination of the nature and practice of racism in American society from its historical foundations to its contemporary institutional forms. Offered Every Other Year.
Equivalent: SOC 2600

AFS 3140 African American History I: 1400-1865 Cr. 3-4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
African origins of African Americans; transition from freedom to slavery; status of African Americans under slavery. Offered Yearly.
Equivalent: HIS 3140

AFS 3150 African American History II: 1865-1968 Cr. 3-4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
African American history from Reconstruction through the Civil Rights Movement. Offered Yearly.
Equivalent: HIS 3150

AFS 3155 African American History III: 1968 - Present Cr. 3-4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
History of African Americans' struggle against persistent and stubborn racism, efforts to achieve full citizenship, and legal and economic justice after 1968. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: HIS 3155

AFS 3160 Black Urban History Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Historical experience of African Americans in urban areas; impact of their communities on urban development from 1860 to contemporary times. Offered Fall, Winter.
Equivalent: HIS 3160

AFS 3170 Ethnicity and Race in American Life Cr. 3-4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Exploration of complicated relationship between ethnic and racial diversity and the making of America. Using historical, literary, and cultural readings and sources to examine key themes: Who was the ""Other""? What is an ""American""? Offered Yearly.
Equivalent: HIS 3170

AFS 3175 Labor and Racial Capitalism Cr. 3
What is the relationship between racism and capitalism? We begin with that question and follow it from the era of the first Atlantic slave ships to the logistics networks that knit today's global supply chains. The course traces five centuries of linked economic and social change: the fifteenth-century traffic in enslaved Africans and Indigenous labor systems; the rise of plantation and industrial capitalism; colonialism, segregation, and decolonization; and the climate emergencies that now expose and deepen old inequalities. At every stage we foreground the workers—enslaved, indentured, waged, and unwaged—who resisted exploitation and reimagined freedom. Through recent scholarship, historical documents, film, and data visualizations, students will examine how race, class, gender, and empire continuously shape one another and will practice the historical thinking skills needed to connect that past to the conflicts of the present. Offered Yearly.

AFS 3180 Black Social Movements Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Survey of mass or popular Black movements with emphasis on their political and cultural impact, historical continuity and organization. Offered Yearly.
Equivalent: HIS 3180

AFS 3190 Race, Policing, and Warfare Cr. 3
On May 30, 2020, as cities around the U.S. faced major upheaval following George Floyd's killing by Minneapolis police officers, the Minneapolis Department of Public Safety tweeted that law enforcement and National Guard troops were mobilizing against the protesters in order to "address a sophisticated network of urban warfare." While the protests were largely peaceful, the vocabulary of urban warfare signified a relationship between police and war. The deaths of George Floyd and countless other African Americans, the emergent Movement for Black Lives, and the "urban" in urban warfare indicates how race animates militarized policing. This class explores the racial history of policing through the lens of war. Offered Yearly.

AFS 3200 The African-American Film Experience Cr. 4
Satisfies General Education Requirement: Cultural Inquiry
Historical and contemporary portrayals of African American people in narrative and documentary film. Emphasis on filmic approaches to race relations, cinematic elaboration of racial stereotypes, and legitimation functions of film. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: COM 3230

AFS 3250 Politics and Culture in Anglophone Caribbean Cr. 3
Satisfies General Education Requirement: Civic Literacy, Global Learning Inquiry
Survey of political, economic and cultural life of the Caribbean. Relationship of the Caribbean to U.S. and world political and cultural developments. Interdisciplinary approach: historical, comparative, thematic issues. Offered Yearly.

AFS 3300 Black Women Writers Cr. 3
Students will explore the writings of Black women across a broad range of genres, which may include poetry, short stories, drama, essays, and novels. Offered Intermittently.
Equivalent: GSW 3300

AFS 3350 Black Women and Labor from the 'Nadir' to Black Power Cr. 3
This is an interdisciplinary course that examines Black women as a special class of workers between 1920-1970. It does so through theories of triple oppression, triple exploitation, and double/multiple jeopardy. Scholars argued that Black women were exploited as women, as workers, and as Black people. As such, they were situated in the bottom of the labor hierarchy, often being: wholly excluded from industries, included into industrial labor through the very worst jobs, excluded from or subordinated in labor unions; and the "last hired, first fired." Likewise, they often endured the worst labor conditions and job precarity. Given the character of their labor, they were assumed to be "unorganizable" and excluded from or marginalized in labor struggles. Yet, Black women challenged these material conditions to improve their economic and political realities and that of their families, communities, and comrades. Offered Every Other Fall.
Equivalent: ELR 3350, GSW 3350

AFS 3360 Black Workers in American History Cr. 4
Satisfies General Education Requirement: Social Inquiry
Survey course. Slave and free workers during antebellum period; skill trades, sharecropping, menial labor, and coal mining during Reconstruction; labor struggles and job discrimination in the twentieth century. Offered Fall, Winter.
Equivalent: HIS 3360

AFS 3420 Pan Africanism: Politics of the Black Diaspora Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Interplay of Pan Africanism as a cultural and socio-political movement in world politics from its origins as a concept to organizing practice worldwide. Offered Yearly.
Equivalent: PS 3820

AFS 3430 Race, Revolution, and Counterrevolution Cr. 3
This course will examine theories of revolutionary struggle and attempts at counterrevolution with an emphasis on the race question. In doing so, we will endeavor to understand why revolutions transpire when they do, along with exploring the strategies that different movements historically used to achieve revolution. Our class will highlight Black, Indigenous, and Third World liberation struggles and perspectives on revolution. We will begin the term by addressing theories of race, empire, and revolution. This theoretical foundation will allow students to contemplate how racial oppression might factor into the emergence of nationalist resistance. Our class will also explore how states and empires aim to subvert revolutions. By semester's end, students should be able to identify both the theoretical principals that generally apply to revolutionary struggles and the contextual particularities which animated various historical revolutions. Offered Yearly.

AFS 3500 Special Topics: Literacy, Race, and Urban Society Cr. 3
Specialized and topical studies in historical events, personalities and themes. Topics to be announced in the schedule of classes. Offered Intermittently.
Repeatable for 9 Credits

AFS 3610 Interdisciplinary Perspectives on Foreign Culture: The Africans Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Humanistic aspects, history, socio-cultural institutions of African cultures; theory and methods, comparativist perspectives. Offered Yearly.

AFS 3750 African American Art Cr. 3
Historical inquiry of African American art from the eighteenth century to today. Offered Yearly.
Equivalent: AH 3750

AFS 3800 Hip-Hop History and Culture Cr. 3
We will also consider how hip-hop culture arose out of Black and Latinx responses to economic crisis, urban decline, and political repression before the music industry eventually turned artists into laborers and the music into a commodity. We will also consider the intersections between hip hop, local and regional cultures, other genres of music and cultural production, technology, politics, and business. Lastly, and most importantly, this class delves into the internal politics of those who participated in culture, especially regarding issues of gender and sexism, homo- and trans-phobia, and violence. Offered Yearly.

AFS 4100 Research Methods in African American Studies Cr. 4
An introduction to interdisciplinary research methods as they are applied to the study of black communities which examines theoretical and conceptual issues; techniques for identifying existing research; and sources and methods of social research and data collection. Offered Yearly.
Prerequisite: AFS 1010 with a minimum grade of D-

AFS 4240 African Americans in Television Cr. 4
Historical overview of African Americans in radio and television with emphasis on three areas of study: news and documentary; entertainment and advertising; and ownership, employment and access. Offered Yearly.
Equivalent: COM 4240

AFS 5030 African American Politics Cr. 4
Nature and texture of black politics; various perspectives on politics by blacks; the impact of blacks on American politics. Offered Every Other Year.
Equivalent: PS 5030

AFS 5050 Topics in African American Cinema Cr. 4
Analysis of a specific film genre, a director, an actor, or other historical aspect of African American films. Offered Yearly.
Prerequisite: AFS 3200 with a minimum grade of C- or COM 3230 with a minimum grade of C-
Repeatable for 8 Credits

AFS 5110 Black Women in America Cr. 3
Social, cultural, artistic and economic development of Black women in America; topics include: racism, sexism, marriage, motherhood, feminism, and the welfare system. Offered Yearly.
Equivalent: GSW 5110

AFS 5220 Black Dramatic Literature and Performance Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Critical study of significant Black dramatists of the American stage: Willis Richardson, Marita Bonner, Randolph Edmonds, Langston Hughes, Alice Childress, Lorraine Hansberry, Ed Bullins, Amiri Baraka, Ntozake Shange, and August Wilson. Offered Yearly.
Fees: $10
Equivalent: THR 5821

AFS 5310 Special Topics in African American Studies Cr. 3-4
Topics to be announced in Schedule of Classes; topics may include: Caribbean politics, African development, male-female relationships, Negritude. Offered Every Term.
Repeatable for 12 Credits

AFS 5580 Law and the African American Experience Cr. 4
In-depth examination of the African American experience with law in the U.S.; historical development of the U.S. Constitution; legal barriers to equality and the influence of race on the law; use of law as a political instrument; participation of Blacks in the legal process; comparisons with other countries. Offered Every Other Year.
Equivalent: SOC 5580

AFS 5700 The Psychology of African Americans Cr. 4
Methodological approaches to and theories of Black behavior and personality development. Topics include: race and pathology, life-span and psycho-sexual development, personality formation, social and environmental stress and adaptation. Offered Every Term.
Equivalent: PSY 5700

AFS 5991 Field Work in the Black Community Cr. 3-8
Field placement in community-based, human services, and civic organizations and governmental agencies. Offered for undergraduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Africana Studies; enrollment is limited to Undergraduate level students; enrollment limited to students in a Bachelor of Arts degree.

AFS 5993 Writing Intensive Course in African American Studies Cr. 0
Disciplined writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for African American Studies majors. Offered Every Term.
Prerequisite: AFS 3160 (may be taken concurrently) with a minimum grade of C- or AFS 3180 (may be taken concurrently) with a minimum grade of C- or AFS 3200 (may be taken concurrently) with a minimum grade of C- or AFS 3250 (may be taken concurrently) with a minimum grade of C- or AFS 3420 (may be taken concurrently) with a minimum grade of C- or AFS 3610 (may be taken concurrently) with a minimum grade of C- or AFS 5110 (may be taken concurrently) with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in African American Studies; enrollment is limited to Undergraduate level students.

AFS 6990 Directed Study Cr. 3-8
Reading and research projects. Offered Yearly.

AGD - Art: Graphic Design

AGD 2230 Introduction to Typography: Skills and Concepts Cr. 3
Introduction to typography through the use of digital and hand craft skills and conceptual framing for working with letter forms and the layout of text. Assignments and demonstrations to develop thinking and making abilities. Offered Fall, Winter.
Fees: $90

AGD 2240 Introduction to Graphic Design: Skills and Concepts Cr. 3
Introduction to graphic design skills (digital and analog) and concepts necessary for working with images and type. Assignments and demonstrations will develop design thinking and creative abilities. Offered Fall, Winter.
Fees: $90

AGD 2250 Typography Cr. 3
Fundamental understanding of structure, history, technology and application of typography, the visualization of language. Functional and experimental aspects of typography; typographic syntax and hierarchies. Offered Fall, Winter.
Prerequisites: (ACO 1200, ACO 1230, or ACO 1270), AGD 2230, and AGD 2240 (may be taken concurrently)
Fees: $90

AGD 3220 Introduction to Motion Graphics Cr. 3
This course is a basic motion design course aimed at Graphic Design majors. Students will learn different approaches to animation with the goal of refined movement to tell stories and deliver messaging while maintaining a highly designed approach. Students can apply skills learned in this class to other design and animation classes and vice versa. Throughout the semester, students will produce several mini motion projects. Adobe After Effects will be the primary editing software used in the course. Offered Yearly.

AGD 3250 Graphic Design I: Principles and Problem Solving Cr. 3
Visual communication issues and applications: design methodology, problem-solving, relation of form to meaning, type/image relationships. Offered Fall, Winter.
Prerequisites: AGD 2230 (may be taken concurrently), AGD 2240, and (ACO 1200, ACO 1230, or ACO 1270)
Fees: $90

AGD 3260 Introduction to Interactivity in Graphic Arts Cr. 3
Exploration of a variety of art-making strategies that utilize digital technologies and interactive media; emphasis on computer-based and online art practices and web-oriented programming languages. Offered Yearly.
Prerequisites: ACO 1200, ACO 1230, ACO 1270, or APH 2400
Fees: $145
Equivalent: ADA 3220

AGD 3270 Introduction to Illustration Cr. 3
Introduction to the role that illustration plays within graphic design; students will use both traditional and digital media to create illustrations and hand lettering to communicate messages intended for reproduction. Offered Yearly.
Fees: $90

AGD 3700 History of Graphic Design Cr. 3
History of the discipline of graphic design from its early practices to the present, with an emphasis on technological and theoretical advances that took place during the twentieth century. Offered Yearly.
Prerequisites: AGD 2230 and AGD 2240
Fees: $50

AGD 4250 Graphic Design II: Word, Image, and Visual Organization Cr. 3
Students apply knowledge of typography and visual design principles to specific design situations; emphasis on use of grid systems. Offered Yearly.
Prerequisites: AGD 2230, AGD 2240, AGD 2250, AGD 3250, and 2 of (ACO 1200, ACO 1230, or ACO 1270)
Fees: $90

AGD 4260 Professional Practice Cr. 3
Preparation for working professionally as a graphic designer including portfolio and resume development, working with clients, budgets, and schedules. Offered Yearly.
Prerequisites: AGD 2240, AGD 3250, and AGD 4250
Fees: $55

AGD 4270 Intermediate Illustration Cr. 3
Development of illustration skills; students will learn to effectively use both traditional and digital media to create illustrations and hand lettering to communicate messages intended for reproduction. Students engage in problems that demand research, creation and management of numerous visual and informational elements within a given visual product. Offered Yearly.
Prerequisite: AGD 3270
Fees: $90

AGD 5250 Graphic Design III: Complexity and Variety in Design Cr. 3
Complex design situations. Research and methodology. Project may include package design, instruction manuals, book and brochure design, publication design. Offered Fall, Winter.
Prerequisites: AGD 2240, AGD 2250, AGD 3250, and AGD 4250
Fees: $90

AGD 5260 Senior Seminar Cr. 3
Issues affecting the theory, history, and practice of design; impact of design on society and impact of society on design. Required readings, student presentations, class discussion, slide lectures, guest speakers. Satisfies the General Education Writing Intensive Course in the Major requirement. Offered Winter.
Prerequisites: 2 of (ACO 1200, ACO 1230, or ACO 1270), AGD 2230, AGD 2240, AGD 2250, AGD 3250, and AGD 4250
Fees: $50

AGD 5700 Special Topics Cr. 3
Examination of specific issue in design theory, history or practice. Topics may include: corporate identity, globalization of design, exhibition design, design history. Offered Every Term.
Prerequisites: AGD 3250 with a minimum grade of D-
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 15 Credits

AGD 5740 Interactivity Cr. 3
Theory and practice of digital user experience design. Includes prototyping and some programming for the design of websites, apps, and digital media. Builds on foundational interactive, typography and graphic design skills. Offered Yearly.
Prerequisites: AGD 2230, AGD 2240, AGD 2250, AGD 3250, AGD 3260, or AGD 4250
Fees: $90

AGD 5750 Information Design Cr. 3
Theory and practice of user-centered design to help people find, understand, and use information. Includes the visualization of information for such things as instructions, maps, forms, diagrams, and digital media. Offered Yearly.
Prerequisites: AGD 2230, AGD 2240, AGD 2250, AGD 3250, or AGD 4250
Fees: $90

AGD 5890 Directed Projects: Graphic Design Cr. 3-6
Individual problems. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 12 Credits

AGD 5990 Field Study: Internship Cr. 3
Supervised field experience designated to correlate classroom theory with practical work. Offered Every Term.
Prerequisites: AGD 3250 with a minimum grade of D-
Restriction(s): Enrollment limited to students in a Bachelor of Arts or Bachelor of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $30
Repeatable for 6 Credits

AGD 5997 Senior Studio Cr. 3
Extended student projects such as identity systems with various applications, families of package design, series of form design, or poster series. Possible collaborative projects; extensive research. Offered Fall, Winter.
Prerequisites: AGD 2230, AGD 2240, AGD 2250, AGD 3250, AGD 4250, 2 of (ACO 1200, ACO 1230, or ACO 1270), and 2 of (AGD 3000-6999 or AGD 3000-6999)
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90

AGD 6260 Advanced Typography Cr. 3
Advanced and experimental typography; typography as an expressive language in 2-D and 3-D; projects in information design. Offered Intermittently.
Prerequisites: AGD 2250 and AGD 4250
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90

AGD 7250 Graduate Problems in Graphic Design Cr. 3-9
Individual problems in advanced advertising design. Offered Fall, Winter.
Prerequisites: AGD 5250 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree.
Fees: $90
Repeatable for 24 Credits

AH - Art History

AH 1000 Introduction to Art Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
An introductory survey of art and culture designed to equip students to look purposefully, critically, and contextually at images and events, mindful of the ways that meaning is produced and perceived. Offered Every Term.

AH 1110 Survey of Art History: Ancient through Medieval Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
Survey of traditions and major developments in visual expression in the West, prehistory through Medieval period. Art studied in context of its cultures; techniques of visual analysis. Offered for four credits only to Honors students. Offered Every Term.

AH 1120 Survey of Art History: Renaissance through Modern Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
Traditions and developments in visual expression in the West, Renaissance through twentieth century. Art in context of its cultures; techniques of visual analysis. Offered for four credits only to Honors students. Offered Every Term.

AH 1130 Encounters with the Arts of Global Africa Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Introductory survey of the arts of Africa and the African Diaspora, focusing on the visual culture of cross-cultural contact within Africa and beyond. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

AH 3150 The Arts of Africa: Local and Global Visions Cr. 3
Traditional, modern and contemporary arts of Africa, as well as the impact of African culture on the Americas. Emphasis on global politics of intercultural contact between Africa and the West. Offered Fall.
Prerequisites: AH 1110 and AH 1120
Restriction(s): Enrollment is limited to Undergraduate level students.

AH 3470 Islamic Art and Architecture Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Survey of art and architecture of Islam from its origins in the seventh century to the Ottoman Empire. Offered Intermittently.

AH 3560 Special Topics Cr. 3
Students examine specific issues related to art history. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 12 Credits

AH 3650 Nineteenth-Century European Art and Architecture Cr. 3
Introduction to European art and architecture from 1780 to 1900; survey of major developments in 19th century painting, sculpture, printmaking and photography. Offered Fall, Winter.

AH 3700 Contemporary Art Cr. 3
Introduction for studio art majors: ideas and styles of modern art. The gap between those who make art and those who write about it. Access to the discipline of art history through tracing the origins of a variety of contemporary art practices. Offered Yearly.
Prerequisites: AH 1000-1999

AH 3750 African American Art Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Historical inquiry of African American art from the eighteenth century to today. Offered Yearly.
Equivalent: AFS 3750

AH 3760 Art of the African Diaspora Cr. 3
Examines art of the African Diaspora and how this history of dissemination affected art making in various geographical, cultural, and sociopolitical paradigms. Offered Fall.

AH 5210 Hellenistic Art Cr. 3
Sculpture, painting and architecture of the Greek world from Alexander the Great to Cleopatra. Offered Intermittently.
Prerequisites: AH 1110 and AH 1120

AH 5250 Ancient Rome Cr. 3
Development of Rome into an imperial capital. Design, function and political significance of public monuments in the city. Offered Intermittently.
Prerequisites: AH 1110 and AH 1120

AH 5260 Classical Greek Art Cr. 3
Greek painting, sculpture and architecture of the fifth and fourth centuries B.C. Emphasis on decorative programs of temples and cult statues. Offered Intermittently.
Prerequisites: AH 1110 and AH 1120

AH 5270 Roman Painting and Sculpture Cr. 3
Painting and sculpture of the Roman Republic and Empire, and their cultural context. Offered Yearly.
Prerequisites: AH 1110 and AH 1120

AH 5310 The Ancient City of Athens Cr. 3
The history of Athens as an urban center in antiquity. Public monuments, buildings and landscape as reflecting the city's aspirations and fortunes. Offered Intermittently.
Prerequisites: AH 1110 and AH 1120

AH 5450 Art and Architecture in the High Middle Ages Cr. 3
Art and architecture in western Europe, 1050-1250. Development of Romanesque and Gothic styles in architecture, painting, and sculpture. Offered Intermittently.
Prerequisites: AH 1110 and AH 1120

AH 5490 Persian Painting (1250-Present) Cr. 3
This course focuses on the history of Persian painting from the Mongol invasions (ca. 1250) to the modern day. Developments in key genres of painting dictate the scope and organization of this course with a focus on functional and stylistic developments over the centuries. Offered Intermittently.
Prerequisites: AH 1120 or AH 3470

AH 5500 Early Renaissance in Italy Cr. 3
Art and architecture from Giotto to Botticelli; transformation of late medieval art prior to Black Death, classical revival in Florence; North Italian artists such as the Bellinis and Mantegna. Offered Every Other Year.
Prerequisites: AH 1110 and AH 1120

AH 5510 High Renaissance and Mannerism in Italy Cr. 3
The art of Leonardo, Raphael, Michelangelo, Titian, and their contemporaries. Offered Intermittently.
Prerequisites: AH 1110 and AH 1120

AH 5520 Art of Renaissance Venice Cr. 3
Art of fifteenth and sixteenth century Venice considered in its socio-political milieu. Offered Every Other Year.
Prerequisites: AH 1110 and AH 1120

AH 5540 Art and Design of the 1960s Cr. 3
This course examines the art and design created by artists of color who were typically marginalized by the American art world during this historical moment. First, we will consider the artistic tendencies of the mainstream artworld, and then delve into the creative and political pursuits of non-white artists of this time period. One of the principle aims of this course is to consider the political, social, and cultural context that impacted the creation of their art as well as the ways in which the creative endeavors of these artists of color intersected with the goals of movements like the Black Power Movement, the Chicano Movement, and the Women's Liberation Movement. Offered Every Other Year.
Prerequisites: AH 3700, AH 3750, or AH 3760

AH 5545 Black Women in Contemporary Art Cr. 3
This course will explore contemporary visual and performance art created by women of the Black Diaspora. Critical race, gender, sexuality and multiculturalism theory will be utilized to strengthen the visual analysis of artworks. For the duration of the semester, students will examine artists who defined art of the 1960s and 1970s, as well as art reflective of the multiculturalism and identity politics of the 1980s and the early 1990s and will then consider the audacious yet ambitious art of the post-black era. This course embraces the subjectivities of cisgendered and transgendered people of the feminine experience, femmes, and nonbinary people. Keeping intersectionality in mind, this course also considers Black women artists who confront gender inequality, classism, homophobia, transphobia, and systemic racism. Offered Fall.
Prerequisites: AH 3700

AH 5560 Special Topics Cr. 3
Students examine specific issues related to art history. Offered for undergraduate credit only. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 12 Credits

AH 5570 Performance Art of the Americas Cr. 3
Explores Performance Art created in North, Central, and South America, as well as in the Caribbean. Performance Art is a Western visual art movement in which the artist's body is the primary medium of expression, and this art form's evolution will be examined from the late nineteenth to the twenty-first centuries. Offered Fall.

AH 5695 Art of Revolutionary Europe Cr. 3
This course explores European paintings, prints, photography, fashion, architecture and interior design from 1789-1851, including the art of David, Delacroix, Turner, Friedrich, Goya, and Courbet and the styles of Neoclassicism, Romanticism, the Regency, Napoleon, and Realism. Offered Every Other Year.

AH 5705 Impressionism and Post-Impressionism Cr. 3
This course explores French Impressionism and Post-Impressionism in the context of social and technological change, fashion, the growth of Paris, the birth of the suburbs, and questions of gender, race, sexuality, and the environment. Artists include Manet, Monet, Cassatt, Cézanne, Van Gogh, and many others. Offered Intermittently.

AH 5710 Trends in Nineteenth Century Art Cr. 3
Topics to be announced in Schedule of Classes. Offered Every Other Year.
Prerequisites: AH 1110 and AH 1120

AH 5715 Modernism: Nineteenth and Twentieth Centuries Cr. 3
Origins of Modernism in the mid-nineteenth century; avant-garde art in Europe and the U.S. from 1850 to 1950; theories of Modernism in the visual arts. Offered Every Other Year.
Prerequisites: AH 1110 and AH 1120

AH 5720 Twentieth Century Art Cr. 3
European and American paintings, sculpture, and new media surveyed from 1900 to present. Offered Every Other Year.
Prerequisites: AH 1110 and AH 1120

AH 5735 Art 1900-1945 Cr. 3
European and American avant-garde art, Dada and Surrealism, the interwar period, and Abstract Expressionism. Offered Every Other Year.
Prerequisites: AH 1110 and AH 1120

AH 5755 Gender and Race in Visual Culture Cr. 3
This course will interrogate the ways in which gendered and racialized bodies are epitomized in the myriad of form that comprise visual culture. Offered Fall.

AH 5780 Topics in Twentieth-Century Art Cr. 3
Topics to be announced in Schedule of Classes. Offered Yearly.
Prerequisites: AH 1110 and AH 1120
Repeatable for 12 Credits

AH 5855 Museum Practicum Cr. 3
Cooperative arrangement between the art history program and the Detroit Institute of Arts, in which the student applies art historical training to a current project or exhibition in the museum. Offered Every Other Year.
Prerequisites: AH 1110 and AH 1120

AH 5990 Directed Study Cr. 1-3
Supervised advanced reading and research in the history of art. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in a Bachelor of Arts or Master of Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Repeatable for 6 Credits

AH 5997 Seminar Cr. 3
Readings, discussion, and research paper on special topics in art history; topics to be announced in Schedule of Classes. Graduate students undertake research paper in addition to other assignments. Offered Yearly.
Prerequisites: AH 1110 and AH 1120
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Repeatable for 9 Credits

AH 5998 Honors Thesis Cr. 3
Students write a substantial research paper on subject determined by the student in collaboration with his/her professor. Offered for undergraduate credit only. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Art History Honors; enrollment is limited to Undergraduate level students.

AH 7500 Seminar in Renaissance Art Cr. 3-6
Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Art History; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree.
Repeatable for 9 Credits

AH 7700 Seminar in Modern Art Cr. 3
Topics to be announced in Schedule of Classes . Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Repeatable for 6 Credits

AH 7999 Master's Essay Direction Cr. 1-3
Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Art History; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree.

AH 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Art History; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree.
Repeatable for 8 Credits

AHS - Applied Health Sciences

AHS 2010 Introduction to Applied Health Sciences Cr. 3
Introduction to Applied Health Sciences is designed to familiarize students with the various careers in the medical professions. Students will learn skills necessary for their healthcare career pathway including working with others, communication skills, legal and ethical responsibilities, cultural considerations in the healthcare industry, problem solving, decision making, accepting personal responsibility and self-management. Offered Fall.

AHS 2020 Applied Health Sciences Communication Cr. 3
The purpose of Applied Health Sciences Communication is to provide the student with an overview of health and science communication in research, industry, and practice. Each student will have an opportunity to explore and better understand the role communication plays in health care delivery, health promotion, disease prevention, environmental and risk communication, media and mass communication, and technology. Offered Fall.
Prerequisite: COM 1010 with a minimum grade of C and ENG 1020 with a minimum grade of C and MLS 3330 with a minimum grade of C

AHS 2030 Advanced Statistics for Applied Health Sciences Cr. 4
This advanced statistics course equips students pursuing healthcare professions with essential statistical tools widely applied in health sciences. The curriculum covers descriptive statistics, probability, inferential statistics, and linear regression, integrating human health examples to highlight the relevance of statistical methods to health and disease. Students will also explore experimental methods, measurement techniques, central tendency, variability, distribution, correlation, confidence intervals, and hypothesis testing. By the end of the course, students will be prepared to produce, evaluate, and interpret data within scientific discourse and apply scientific reasoning in problem-solving. Offered Fall.
Prerequisite: STA 1020 with a minimum grade of C

AHS 3000 Medical Terminology for Applied Health Sciences Cr. 1
The purpose of Medical terminology for Applied Health Sciences is to study medical terms in relation to healthcare professions. Emphasis will be placed on comprehension and composition of medical terms in a professional context. Offered Every Term.

AHS 3010 Advanced Applied Health Sciences Professions Cr. 3
The purpose of Advanced Applied Health Sciences Professions is to assist students who are considering a career in a graduate health sciences profession. Students will examine the roles of a health sciences professional in clinical, academic, and research settings, expectations of professional behavior within the profession, and professional development. The current practice of the health sciences profession in various settings will be explored. Students will need to select the appropriate course section for their preferred health sciences profession. Offered Winter.
Prerequisite: AHS 2010 with a minimum grade of C

AHS 3020 Multicultural Approaches to Health Care Cr. 3
The multicultural approaches to health care course aims to explore the complex social, cultural, and structural influences that shape health care access, equity, and patient experiences. Students will investigate how individual backgrounds, social identities, and lived experiences affect health beliefs and outcomes. Emphasis is placed on developing cultural awareness, examining variations in health perceptions, and understanding the value of culturally responsive care. Through discussions and skill-building activities, students will also strengthen their ability to communicate effectively and professionally in both oral and written formats within health care settings. Offered Fall.
Prerequisite: ENG 1020 with a minimum grade of C

AHS 3025 Human Anatomy and Physiology for Applied Health Sciences Cr. 5
The purpose of Human Anatomy and Physiology for Applied Health Sciences is to examine the structure and function of the human body. Emphasis will be placed on anatomical structures and landmarks and the clinical correlations important for health care providers. Prosected human cadavers, specimens, anatomical models, and computerized software/imaging will be used as instructional methods. Offered Winter.
Prerequisites: BIO 1510 with a minimum grade of C and BIO 1511 with a minimum grade of C
Fees: $150

AHS 3030 Human Physiology for Applied Health Sciences Cr. 3
The purpose of Human Physiology for Applied Health Sciences is the study the functioning of human tissues and organ and organ systems. Emphasis will be given to the physical, chemical and mechanistic baes of normal physiology and the integrated functions of the human body. The course also introduces pathophysiological changes associated with some human diseases. Offered Fall.
Prerequisite: BIO 2870 with a minimum grade of C or AHS 3025 with a minimum grade of C

AHS 4010 Interprofessional Education in Applied Health Sciences Cr. 3
The purpose of Interprofessional Education in Applied Health Sciences is to introduce students to interprofessional health care delivery in multiple practice settings. Best practices are emphasized for team formation, effective communication strategies, and patient care processes. Ethical issues related to team management in health care are discussed. Offered Winter.
Prerequisite: AHS 3010 with a minimum grade of C

AHS 4020 Pathophysiology for Applied Health Sciences Cr. 3
The course Pathophysiology for Applied Health Sciences will focus on advanced pathophysiologic concepts affecting the adult human using a research-based, system-focused approach, including etiology, pathogenesis and clinical manifestations of commonly found/seen altered health states. Offered Winter.
Prerequisite: AHS 3030 with a minimum grade of C

AHS 4090 Capstone in Applied Health Sciences Cr. 3
The purpose of Capstone in Applied Health Sciences is to provide culminating curricular experiences for students enrolled in the Bachelor of Science degree with a major in applied health sciences. Students will participate in several projects which demonstrate a synthesis of learning accumulated in the major, including broadly comprehensive knowledge of the discipline and its methodologies. With faculty approval, students will complete a capstone project that aligns with their career goals. Offered Winter.
Prerequisites: AHS 2010 with a minimum grade of C, AHS 2020 with a minimum grade of C, AHS 2030 with a minimum grade of C, AHS 3010 with a minimum grade of C, AHS 3020 with a minimum grade of C, AHS 3030 with a minimum grade of C, AHS 4010 with a minimum grade of C (may be taken concurrently), and AHS 4020 with a minimum grade of C (may be taken concurrently)

AIA - Art: Interior Design

AIA 1610 Architectural Drafting and Perspective Drawing Cr. 3
Introduction to architectural drafting, perspective drawing and presentation. Offered Winter.
Fees: $45

AIA 2600 Interior Design: CAD I Cr. 3
Continuation of computer-aided design. Plans, elevations, sections, details, dimensioning and description. System furniture space planning; Windows-based auto CAD. Offered Fall.
Prerequisites: AIA 1610
Fees: $45

AIA 2610 Interior Design Studio I Cr. 3
Single family residential/small-scale office. Presentation techniques; introduction to media and methods used in the preparation of presentation boards: layout, selection, rendering, plan, elevation, lettering and verbal presentation. Offered Fall.
Prerequisites: AIA 1610
Fees: $45

AIA 3610 Interior Design Studio II Cr. 3
Hospitality/restaurant/health care. Continuation of graphic and presentation skill development incorporating plan, elevation, section, detailing, perspective, hand and CAD drawings. Experimentation with lighting, media, board, and verbal presentation. Offered Winter.
Prerequisites: AIA 2610
Fees: $45

AIA 3620 Interior Design: CAD II Cr. 3
Intermediate-level CAD. Development and creation of construction documents, space planning of interior spaces, and systems layout, using autoCAD drafting techniques in two- and three-dimensional modes. Offered Winter.
Prerequisites: AIA 1610, AIA 2600, and AIA 2610
Fees: $50
Repeatable for 12 Credits

AIA 4610 Interior Design Studio III Cr. 3
Retail/contract open-office system, medium to large scale, new or adaptive reuse projects. Advanced hand and CAD graphic, presentation skill development, incorporating building and barrier-free codes, HVAC and lighting principles, furniture and equipment specification. Offered Fall.
Prerequisites: AIA 2600 and AIA 3610
Fees: $40

AIA 4620 Interior Perspective and Illustration Cr. 3
Introduction to architectural and interior design presentation techniques. Offered Fall.
Fees: $45

AIA 4990 Directed Study Cr. 2-4
Offered Fall, Winter.
Fees: $45
Repeatable for 6 Credits

AIA 5010 Furniture/Product Workshop Cr. 3
History, ergonomic and design development of furniture and product design. Projects evolve from hand and CAD drawings to scaled models of furniture and product designs. Offered Fall.
Prerequisites: AIA 1610, AIA 2610, and AIA 5610
Fees: $55
Repeatable for 9 Credits

AIA 5020 Special Topics in Interior Design Cr. 3
Exploration of concepts and techniques related to the field of Interior Design. Offered Yearly.
Prerequisite: AIA 1610
Repeatable for 9 Credits

AIA 5610 Interior Materials and Systems Cr. 3
Estimating, specifying, and the techniques used in the application of materials and systems used in interior design. Lectures, guest speakers, and field trips. Offered Winter.
Fees: $40

AIA 5620 Building Construction Systems in Architecture I Cr. 3
Residential and commercial construction systems incorporating governmental and building codes; site and foundation to roof systems; small-scale hand and CAD documentation of architectural details. Offered Fall.
Prerequisites: AIA 2610 and AIA 3610
Fees: $45

AIA 5630 Interior Lighting Design and Application Cr. 3
Lighting sources, fixtures, manufacturer's lighting system and application to interior spaces. Basic lighting footcandle calculations; layouts and psychology of lighting description to be applied in a final project. Offered Winter.
Prerequisites: AIA 3610 and AIA 4610
Fees: $40

AIA 5640 Building Construction Systems in Architecture II Cr. 3
Development of architectural construction documents: working drawings and written specifications of commercial interior space; plan, elevation, section, details and perspective through hand and CAD documentation. Offered Winter.
Prerequisites: AIA 2600, AIA 4600, AIA 4610, and AIA 5620
Fees: $60

AIA 5660 Supervised Field Experience Cr. 3
Supervised field study experience designed to correlate classroom theory with professional practice. Offered Every Term.
Fees: $35
Repeatable for 6 Credits

AIA 5991 Directed Projects: Interior Design Cr. 3-6
Individual problems. Offered Fall, Winter.
Fees: $60
Repeatable for 9 Credits

AIA 5997 Senior Seminar Cr. 3
In this course, students will develop their distinct visual brand identity, professional portfolio and online presence. Students will gain greater competency in the contemporary design industry while developing skills in standard forms of professional communication. Offered Fall, Winter.
Prerequisite: AIA 3610 or AID 5300
Fees: $60

AIA 6610 Interior Design Studio IV Cr. 3
Large-scale new or adaptive re-use: office, hospitality, health-care or retail interior spaces. Professional hand and CAD graphic and skill development. Integration of codes, ADA, human factors, HVAC and lighting principles, furniture and equipment specification related to specific environment. Offered Winter.
Prerequisites: AIA 4610 and AIA 5640
Fees: $60

AIA 6650 Business Practicum Cr. 2
Examination of different types of business formations and their characteristics; professional practices and procedures, professional ethics, contemporary topics in interior design practice. Offered Fall.
Prerequisites: AIA 4610
Fees: $60

AID - Art: Industrial Design

AID 3300 Introduction to Industrial Design Cr. 3
Introduction to fundamental skills necessary for the practice of industrial design. Two-dimensional presentation techniques are developed in first half of semester; second portion consists of exercises in problem-solving methodology. Offered Fall, Winter.
Fees: $20
Repeatable for 6 Credits

AID 3310 Presentation Cr. 3
Two-dimensional visualization, monochromatic and polychromatic sketch techniques using a variety of traditional media. Offered Fall, Winter.
Prerequisites: ACO 1200 and ADR 1050
Repeatable for 9 Credits

AID 5300 Advanced Studio/Product Cr. 3
Advanced techniques in presentation of design solutions. Students build upon their ability to communicate two-dimensionally; introduction of digital manipulation and creation software. Offered Fall, Winter.
Prerequisites: AID 3300
Fees: $20
Repeatable for 15 Credits

AID 5302 Advanced Studio/Batch Production Cr. 3
In this studio class students will learn about techniques of batch limited production of design objects and aspects of entrepreneurship. Students will design, produce, package, and market a simple consumer object. Offered Fall, Winter.
Prerequisites: AID 3300
Fees: $20
Repeatable for 6 Credits

AID 5310 Advanced Presentation Cr. 3
Advanced techniques in the presentation of design solutions. Students build on their ability to communicate two-dimensionally, with introduction of digital manipulation and creation software. Offered Fall.
Prerequisites: AID 3310
Fees: $100
Repeatable for 9 Credits

AID 5330 3-D Modeling Cr. 3
Principles of three-dimensional modeling. Surface development, rendering, and creation of virtual environments. Offered Fall.
Prerequisites: AID 3300
Fees: $100
Repeatable for 9 Credits

AID 5997 Senior Seminar Cr. 3
Seminar on contemporary issues in industrial design including professional concerns in transportation and product design, presentation, and production. Offered Every Other Year.

AID 6300 Advanced Studio: Transportation Cr. 3
Form and proportion studies. Development of sketch techniques for communicating the complex form of the automotive body. Taught by professional automotive designers. Offered Fall, Winter.
Prerequisites: AID 3300
Fees: $20
Repeatable for 9 Credits

AID 6301 Design for Urban Mobility Cr. 3
Considers broad questions of mobility and how design can enable and support mobility through urban space. Students will engage in projects that address these questions in different ways including products, spaces, experiences, and other forms of design interventions. Offered Fall, Winter.
Prerequisites: AID 3300
Fees: $20
Repeatable for 6 Credits

AID 6310 Advanced Studio/Exhibit Cr. 3
Advanced design concepts in exhibit design. Project planning, ideas of brand imaging, phenomenological notions of the spatial experience. Offered Fall.
Prerequisites: AID 5300
Fees: $20
Repeatable for 9 Credits

AID 7300 Graduate Industrial Design Cr. 3-9
Individual problems in industrial design. Offered Fall, Winter.
Prerequisites: AID 5300 or AID 6300
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree.
Fees: $20
Repeatable for 24 Credits

AME - Art: Metalsmithing

AME 2600 Introduction to Jewelry and Metalsmithing Cr. 3
Basic skills: sawing, filing, drilling, sanding, polishing, creating textures on metal, riveting, soldering, and bezel setting of stones. Creation of jewelry and small functional objects. Offered Every Term.
Fees: $75

AME 2650 Blacksmithing I Cr. 3
This course is an introduction to blacksmithing skills and techniques. The history of blacksmithing and its contemporary practices will be covered as a way to understand different time periods and varying cultural approaches. Hands on applications and material usage will be covered to create objects, tools and artworks dependent on forging. Offered Every Other Year.
Fees: $75

AME 3600 Intermediate Jewelry I Cr. 3
Lost-wax casting and mold-making. Creating, preparing and casting into metal of wax models. Vulcanized rubber mold-making. Commercial jewelry techniques. Offered Every Term.
Prerequisites: AME 2600
Fees: $90

AME 3601 Intermediate Jewelry II Cr. 3
Advanced metal fabrication and surface treatment. Topics include: digital fabrication, laser welding, induction casting, stone setting techniques, acid etching, granulation, keum boo, patination, hinge mechanisms and more complex soldering techniques. Offered Fall, Winter.
Prerequisites: AME 3600
Fees: $90

AME 3650 Blacksmithing II Cr. 3
This course is intended for students who have already acquired basic blacksmithing skills for ferrous and non-ferrous metals. Using complex hand-skill techniques and applications of mechanical tooling to achieve predictable results, students will develop stronger visual literacy of blacksmithing of both its contemporary extensions of utility and conceptual work. Through exploring innovation in culture and its material usage for ornamentation, an ethos will be stressed. Tool creation and use through hot forging, forge welding, layering material, riveting and basic joinery will be emphasized. Offered Every Other Fall.
Prerequisite: AME 2650
Fees: $90
Repeatable for 6 Credits

AME 4600 Metalsmithing I Cr. 3
Utilizing plastic qualities of metal to generate high relief forms. Techniques include: raising and sinking, anticlastic and synclastic raising, nonferrous and ferrous forging. How metals may be stretched to create forms with a high degree of volume. Offered Fall, Winter.
Prerequisites: AME 2600
Fees: $90
Repeatable for 6 Credits

AME 4601 Metalsmithing II Cr. 3
Utilizing plastic qualities of metal to generate high relief forms. Techniques include: raising and sinking, anticlastic and synclastic raising, nonferrous and ferrous forging. How metals may be stretched to create forms with a high degree of volume. Offered Fall, Winter.
Prerequisites: AME 4600
Fees: $90
Repeatable for 6 Credits

AME 4650 Blacksmithing III Cr. 3
Builds upon technical and conceptual extensions of blacksmithing for commission work, art installations, decorative ornamentation and creative forms using ferrous and non-ferrous metals. Advanced blacksmithing processes will be emphasized through the use of a diverse cross-section of skills ranging from hand work, machine production and the use of digital applications. Processes and equipment learned include: CNC plasma cutter, laser cutters for creation of dies, milling machines, lathes, CNC milling, use of dies for hot forming with a hydraulic press and power hammer. Offered Every Other Winter.
Prerequisite: AME 2600 and AME 2650
Fees: $90
Repeatable for 9 Credits

AME 5600 Advanced Jewelry and Metalsmithing Cr. 3
Intellectual and conceptual nature of student's artwork; discussion and analysis. Methods of criticism. Offered Fall, Winter.
Prerequisites: AME 3601
Fees: $90
Repeatable for 6 Credits

AME 5860 Directed Projects: Metalsmithing Cr. 3-6
Individual problems. Offered Fall, Winter.
Repeatable for 21 Credits

AME 7600 Graduate Study in Metal Arts Cr. 3
Individual problems. Directed study and project development in metal arts. Offered Fall, Winter.
Prerequisites: AME 5600
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 9 Credits

AME 8860 MFA Studio: Metal Arts Cr. 6-9
Extended problems in metalsmithing; individual research with eighteen to twenty-seven hours of laboratory per week. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Repeatable for 36 Credits

AN - Anesthesia

AN 3000 Introduction to Nurse Anesthesia Cr. 2
This course will introduce students to the field of nurse anesthesia, including leadership positions in the field and the purpose and history of our state and national organizations. Furthermore, the course will prepare students for application to a Doctorate of Nurse Anesthesia Program by reviewing topics critical to success in a program, as well as allow students to shadow a Certified Registered Nurse Anesthetist (CRNA) and experience the Wayne State Nurse Anesthesia Program simulation lab. Offered Spring/Summer.

AN 7010 Advanced Health Assessment and Clinical Diagnosis Cr. 4
This course will provide the registered nurse anesthesia student with the knowledge and advanced systematic focus on various body systems while completing a comprehensive health assessment for patients across the lifespan, including but not limited to adult, pediatric, geriatric, and obstetric patients. Students utilize critical thinking as well as diagnostic procedure results to interpret, analyze and provide differential diagnosis of common patient problems, while utilizing common assessment techniques for each body system. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10
Equivalent: PHC 7021

AN 7020 Practicum and Simulation I Cr. 2
This course provides the registered nurse anesthesia student with the opportunity to demonstrate clinical applications of AN 7010 in a simulated environment. There is special focus on practicing the induction, maintenance, and emergence phases of anesthesia, along with crisis management. This course also includes clinical orientation. Offered Winter.
Prerequisites: AN 7010 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

AN 7030 Advanced Clinical Practicum II Cr. 2
Clinical experiential with guided, supervised instruction in the management of patients receiving anesthesia, emphasizing patient safety, basic and advanced monitoring modalities, and implementation of anesthesia management plans. This course provides an avenue for students to apply knowledge obtained in the anesthesia and science courses in a clinical setting. Simulation experiences are designed to reinforce topics covered in AN 7010 and AN 7150. Offered Spring/Summer.
Prerequisites: AN 7020 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

AN 7040 Clinical Anesthesia Practicum III Cr. 2
This course builds upon the knowledge and skills obtained from previous clinical practicums. This course provides supervised instruction in the perioperative management of patients receiving all types of anesthesia in a variety of clinical settings. Increasingly complex cases will be assigned. Simulation experiences are designed to reinforce topics covered in AN 7010, AN 7150 and AN 7160. Offered Fall.
Prerequisites: AN 7030 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

AN 7050 Clinical Anesthesia Practicum IV Cr. 2
This course builds upon the knowledge and skills obtained from previous clinical practicums. This course provides supervised instruction in the perioperative management of patients receiving all types of anesthesia in a variety of clinical settings. Development of advance skills with an emphasis on specialty areas such as cardiovascular, neurosurgical, trauma, obstetrics, and pediatrics. Simulation experiences are designed to reinforce topics covered in AN 7010, AN 7150, AN 7160, AN 7170 and AN 7600. Offered Winter.
Prerequisites: AN 7040 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

AN 7060 Clinical Anesthesia Practicum V Cr. 3
This course builds upon the knowledge and skills obtained from previous clinical practicums. This course provides supervised instruction in the perioperative management of patients undergoing all types of surgery with various anesthetic techniques in diverse clinical settings. Continued development of advance skills with an emphasis on specialty areas such as cardiovascular, neurosurgical, trauma, obstetrics, and pediatrics. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

AN 7070 Clinical Anesthesia Practicum VI Cr. 3
This course builds upon the knowledge and skills obtained from previous clinical practicums. This course provides supervised instruction in the perioperative management of patients undergoing all types of surgery with various anesthetic techniques in diverse clinical settings. Continued development of advance skills with an emphasis on specialty areas such as cardiovascular, neurosurgical, trauma, obstetrics, and pediatrics. Offered Fall.
Prerequisites: AN 7060 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

AN 7080 Clinical Anesthesia Practicum VII Cr. 3
This course builds upon the knowledge and skills obtained from previous clinical practicums. This course provides supervised instruction in the perioperative management of patients undergoing all types of surgery with various anesthetic techniques in diverse clinical settings. Simulation experiences are designed to reinforce topics covered in AN 7010, AN 7150, AN 7160, AN 7170, AN 7600 and 7181. Offered Winter.
Prerequisites: AN 7070 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

AN 7090 Clinical Anesthesia Practicum VIII Cr. 3
This course builds upon the knowledge and skills obtained from previous clinical practicums. This course provides supervised instruction in the perioperative management of patients undergoing all types of surgery with various anesthetic techniques in diverse clinical settings. Offered Spring/Summer.
Prerequisites: AN 7080 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

AN 7100 Advanced Pharmacology I Cr. 3
Discuss the chemistry, pharmacokinetics and pharmacodynamics of medications as pertaining to nurse anesthesia. Major drug categories pertaining to anesthesia practice, as well as drug therapies and classes pertinent to acute and chronic responses to anesthesia; indications, mechanisms, effects. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PHC 7031

AN 7110 Advanced Pharmacology II Cr. 3
Discuss the chemistry, pharmacokinetics and pharmacodynamics of medications as pertaining to nurse anesthesia. Major drug categories covered include drug therapies and classes pertinent to acute and chronic responses to anesthesia, including indications, mechanisms, and effects. Also discuss effects of anesthetics in specialized populations such as geriatrics, obesity, obstetric, substance abuse and pediatric populations. Offered Winter.
Prerequisites: AN 7100 with a minimum grade of B or PHC 7031 with a minimum grade of B
Restriction(s): Enrollment limited to students in the Doctor of Nur Anesthesia Pract program; enrollment is limited to Graduate level students.
Equivalent: PHC 7032

AN 7150 Principles of Anesthesia I Cr. 3
This course provides the registered nurse anesthesia student with introductory principles of clinical anesthesia including technology, anatomy, pathophysiologic implications, and anesthetic techniques for various surgical procedures. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7160 Principles of Anesthesia II Cr. 3
This course begins an in-depth study of the principles of anesthesia for the care of the anesthetized patient. Emphasis will be on the pathophysiology of frequently encountered disease processes for the adult surgical patient. Risk factors, pathophysiological changes, presenting signs and symptoms and anesthetic considerations will be discussed and applied to individual patient care. Offered Spring/Summer.
Prerequisite: AN 7150 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7170 Principles of Anesthesia III Cr. 3
Study of the subspecialities in anesthesia and the knowledge required to manage anesthesia for the patient. In-depth knowledge regarding anesthesia for neurosurgery, pediatrics, obstetrics, and cardiovascular patients. Offered Fall.
Prerequisite: AN 7160 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7181 Advanced Principles of Anesthesia IV Cr. 4
Designed to provide specific knowledge in the use of advanced diagnostic tools and concepts in the management of complex patients. This course finishes an in-depth study of the principles of anesthesia for the care of the anesthetized patient. The focus is on complex management of the patient. Emphasis will be on the pathophysiology of frequently encountered disease processes for the adult surgical patient and diagnostic interpretation. Risk factors, pathophysiological changes, presenting signs and symptoms and anesthetic considerations will be discussed and applied to individual patient care. Offered Winter.
Prerequisite: AN 7170 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7220 Advanced Physiology I Cr. 3
Discuss aspects of anatomy and physiology that are relevant to the science and practice of anesthesia. Topics are covered from cellular, tissue, organ, and systems perspective, and related to issues of advance nurse anesthesia practice. The focus of this course is to impart concepts of advanced physiology which are elemental to the safe practice of anesthesia. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Nur Anesthesia Pract program; enrollment is limited to Graduate level students.
Equivalent: PHC 7221

AN 7240 Advanced Physiology II Cr. 3
Continuation of AN7240. Discuss further aspects of anatomy and physiology that are relevant to the science and practice of anesthesia, as well as pathologic processes. Topics are covered from cellular, tissue, organ, and systems perspective, and related to issues of advance nurse anesthesia practice. The focus of this course is to impart concepts of advanced physiology and pathophysiology which are elemental to the safe practice of anesthesia. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PHC 7241

AN 7241 Pathophysiology Cr. 3
Discuss the pathophysiologic changes associated with various disease processes. The focus of this course is to impart concepts of pathophysiology in the framework of the various body systems and disruptions in normal body functioning for individuals across the lifespan. Offered Winter.
Prerequisite: AN 7240 with a minimum grade of B
Restriction(s): Enrollment limited to students in the Doctor of Nur Anesthesia Pract program; enrollment is limited to Graduate level students.
Equivalent: PHC 7242

AN 7500 Physics, Equipment, and Safety for Anesthesia Cr. 2
Introduction to the basic principles of physics and their application to anesthesia. Focus on processes that ensure safe anesthesia practice. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Nur Anesthesia Pract program; enrollment is limited to Graduate level students.
Equivalent: PHC 7501

AN 7600 Regional Anesthesia Cr. 4
This course discusses key components related to regional anesthesia practice and their application in the clinical arena which includes acute and chronic pain therapies. Spinal/epidural anesthesia, upper and lower extremity nerve blocks, truncal blocks are covered with special emphasis on anatomy, physiology, drugs and equipment. Ultrasound physics and its application in regional anesthesia is covered and applied in the Anesthesia Sim Lab environment. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $96
Equivalent: PHC 7601

AN 7640 Research and Statistics Cr. 3
This course will provide the nurse anesthesia student with the knowledge, skills, and abilities to perform extensive literature searches, critically appraise the available research evidence, synthesize information from diverse formats and sources, and cogently express understanding of complex concepts in both verbal and written forms. This course will also involve discussion, review and interpretation of basic and clinical biostatistics. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PHC 7641

AN 7780 Professional Dimensions Cr. 2
The history of the profession, scope of practice, standards of practice, professional ethics, regulatory controls, interprofessional collaboration, cultural competence, and unconscious bias are explored. Students will develop an understanding and appreciation of our professional organizations, the American Association of Nurse Anesthetist (AANA). In addition, the importance of a life-long learner will be explored and the significance of maintaining health and well-being will be emphasized. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7880 Anesthesia Seminar Cr. 1
This course allows students to gain experience in critical reading of scholarly articles and case reports, including data analysis and interpretation and translation of research findings into evidence based practices. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PHC 7880
Repeatable for 4 Credits

AN 7890 DNAP Project Proposal Cr. 1
Begin fundamental strategies for research development toward applicable clinical doctoral studies. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7891 Advanced Clinical Application I Cr. 2
Part 1 of a 2-part course, this course builds on previously acquired knowledge to provide a comprehensive overview of clinical practice. This course will use theoretical concepts and advanced clinical principles to develop the art and science of practice with emphasis on individualizing care, crisis management scenarios in anesthesia will also be offered in simulation. Offered Winter.
Prerequisite: AN 7181 with a minimum grade of B and AN 7241 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7892 Advanced Clinical Application II Cr. 3
Part 2 of a 2-part course, this course builds on previously acquired knowledge to provide a comprehensive overview of clinical practice. This course will use theoretical concepts and advanced clinical principles to develop the art and science of practice with emphasis on individualizing care, applying theoretical and scientific processes to test questions, in preparation for the SEE examination and NCE. Offered Spring/Summer.
Prerequisite: AN 7891 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7900 Advanced Pediatric Topics Cr. 2
Detailed advanced lectures in specific pediatric topics. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

AN 7901 Leadership in Nurse Anesthesia Practice Cr. 3
This course will provide the nurse anesthesia student with the knowledge, skills, and abilities to serve as effective members of healthcare teams. The course will introduce foundational concepts necessary to manage and lead. Students will be exposed to organizational styles, conflict management theories, cultural assessment, and methods of driving creativity and innovation. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7902 Ethics and Health Care Cr. 3
This course serves as an advanced introduction to health care ethics, designed specifically for nurse anesthesia students. Ethical principles and personal values that shape professional practice and influence decision making will be expounded upon in the discussion of contemporary issues in health care. Offered Fall.
Prerequisite: AN 7901 with a minimum grade of B
Restriction(s): Enrollment limited to students in the Doctor of Nur Anesthesia Pract program; enrollment is limited to Graduate level students.
Equivalent: PHC 7902

AN 7903 Health Care Policy Cr. 3
This course presents an introduction to health policy, i.e., the various ways in which the government plays a role in health and in the provision of health care, how it influences nurse anesthesia, and the role advocacy plays. Health policies can have a profound effect on quality of life. Accessibility, cost, quality of health care; safety of food, water, and environment; the right to make decisions about our health; these issues are vitally tied to health policies. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 7910 Special Topics in Pediatric Anesthesia Cr. 2
Common pediatric problems; in-depth knowledge on neonatal anesthesia. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

AN 7920 Case Presentations Cr. 2
Anatomy and physiology of various diseases including principles of anesthetic management. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

AN 7990 Nurse Anesthesia Studies Directed Study Remediation Cr. 1
This course serves to help students remediate for deficient academic competencies in the Nurse Anesthesia Studies Program. It is student-driven with guidance and definitive expectations determined by the instructor. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

AN 8000 DNAP Project I Cr. 1
This course is a continuation of AN 7890. The course will culminate in the nurse anesthesia student demonstrating the knowledge, skills, and abilities needed to write a research scholarly paper of publishable quality. The focus of this course is on refining the DNAP Project Proposal and submission of IRB if applicable. This course will facilitate the student's implementation of a scholarly project. Offered Winter.
Prerequisite: AN 7890 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 8001 DNAP Project II Cr. 1
This course is a continuation of AN 8000. The course will culminate in the nurse anesthesia student demonstrating the knowledge, skills, and abilities needed to write a research scholarly paper of publishable quality. The focus of this course is IRB submission (if not completed in AN 8000) and implementation of a DNAP research project. Offered Spring/Summer.
Prerequisite: AN 8000 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 8002 DNAP Project III Cr. 1
Continue development of appropriate protocol for timely research, including data collection and analysis. Offered Fall.
Prerequisite: AN 8001 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 8003 DNAP Project IV Cr. 2
Complete final research dissemination products, including presentation of research to public. Offered Winter.
Prerequisite: AN 8002 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.

AN 8004 DNAP Project Completion Cr. 2
This course is a continuation of AN 8003. The course will culminate in the nurse anesthesia student demonstrating the knowledge skills and abilities to translate research findings into practice. In addition, the nurse anesthesia student will have demonstrated throughout AN 7640, 7890, 8000-8004 scholarship skills including but are not limited to the ability to perform extensive literature searches, critically appraise the available research evidence, synthesize information from diverse formats and sources, and cogently express understanding of complex concepts in both verbal and written forms, all while demonstrating high professional, personal, and intellectual integrity. Offered Spring/Summer.
Prerequisite: AN 8003 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Nurse Anesthesia Practice; enrollment is limited to Graduate level students.
Fees: $20

ANA - Anatomy and Cell Biology

ANA 6050 Biology of the Eye Cr. 3
Introduction to biology of eye structure/function, and to causes and clinical treatments of eye-related disorders and diseases. Offered for undergraduate credit only. Offered Fall.
Prerequisites: BIO 3200 with a minimum grade of C- and (BIO 3100 with a minimum grade of C- or CHM 5600 with a minimum grade of C-)
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $25
Equivalent: BIO 6055, PYC 6050

ANA 7010 Human Gross Anatomy Cr. 8
Lectures and dissection of limbs, back, thorax, abdomen, head and neck, pelvis and perineum. Written and practical examinations. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.

ANA 7030 Human Microscopic Anatomy Cr. 4
The microscopic structure of tissues and organs. Lectures and laboratory study. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology or Pathology; enrollment is limited to Graduate level students.

ANA 7055 Biology of the Eye Cr. 3
Integrated introduction to basic biological structure/function of the eye; causes and clinical treatments of eye-related disorders and diseases. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 7055

ANA 7065 Mechanisms of Ocular Disease I Cr. 2
Lectures and readings on mechanisms and current treatments for diseases of the anterior segment of the eye. Offered Winter.
Prerequisite: ANA 7055 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ANA 7075 Mechanisms of Ocular Disease II Cr. 2
Lectures and readings on mechanisms and current treatments for diseases of the posterior segment of the eye. Offered Fall.
Prerequisite: ANA 7055 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ANA 7130 Neuroanatomy Cr. 4
Lecture and laboratory study of the nervous system. Offered Winter, Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.

ANA 7260 Special Dissection Cr. 2-10
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.
Repeatable for 20 Credits

ANA 7270 Special Projects in Anatomy Cr. 2-10
Research rotations leading to selection of permanent advisor. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.

ANA 7890 Seminar Cr. 1
Biweekly departmental seminar. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.
Repeatable for 4 Credits

ANA 7996 Research Cr. 15
Research under direction of permanent advisor. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.
Repeatable for 30 Credits

ANA 8999 Master's Thesis Research and Direction Cr. 1-8
Original research leading to M.S. degree under Plan A. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Anatomy & Cell Biology; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ANA 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ANA 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Doctoral Candidate; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ANA 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: ANA 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

ANA 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

ANT - Anthropology

ANT 1100 Introduction to Anthropology Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
Study of humanity, past and present: cultural diversity and change, human evolution, biological variability, archaeology, ethnography, language, and contemporary uses of anthropology. Offered Every Term.

ANT 1110 Work and Democracy: An Introduction Cr. 3
Satisfies General Education Requirement: Civic Literacy
The course explores the role that labor and the labor movement have played in shaping democracy in the United States over the past two centuries and the limits of democracy in the workplace. It covers key political achievements of labor and workers' organizations and the contemporary challenges they face today. Key themes include labor and citizenship, industrial democracy, the role of the state in mediating labor relations, gender, race, sexuality and labor, the labor movement as a social movement, and power and politics in the workplace. Offered Every Term.
Equivalent: ELR 1110, HIS 1110, PS 1110

ANT 2020 Global Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Detroit has been a meeting place for people from around the world for centuries. This course explores the global movements of peoples, ideas, and money that made the city what it is today. It will draw upon the tools and methods of anthropology to examine periods when the city's multicultural character has been viewed as a source of strength, and at other times when diversity has been perceived as source of discord and social problems. Students will be expected to participate in fieldtrips and other off campus activities. Offered Yearly.

ANT 2050 Anthropology of Business Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Differences between American culture/business practice and the culture/business practice of other countries: cultural assumptions, world views, family structure, social organizations, and language. Offered Every Term.

ANT 2110 Introduction to Biological Anthropology Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
Role of hereditary and environmental factors, human genetics, meaning of "race" and racial classifications, fossil records, non-human primate behavior and evolution. Offered Every Term.

ANT 2130 Introduction to Forensic Anthropology and Human Rights Cr. 3
Introduction to forensic anthropology and its intersections with human rights issues and investigations in criminology, law, anthropology, and related fields. Forensic anthropology is a subfield of biological anthropology, but interdisciplinary cultural theories in justice, violence, and human rights influence how forensic anthropology is practiced in the US and abroad. The course introduces the basic scientific methodologies used by forensic anthropologists to analyze biological and material remains. It then applies forensic anthropological casework to the examination of human rights investigations and humanitarian concerns to understand how culture influences forensic science and vice versa. Offered Yearly.
Equivalent: CRJ 2130

ANT 2200 Lost Cities and Ancient Civilizations Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Introductory archaeology course that uses comparative perspective to study how and why early civilizations and cities developed, functioned, and collapsed in different parts of the world. Focus on the role archaeology plays in understanding the past and present. Geared toward the non-major. Offered Every Term.

ANT 2300 Material Culture and Meaning in East Asia Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
This course explores the role of material culture and its meaning within the past and present-day cultures and societies of East Asia, including China, Korea, and Japan. Topics and case studies focus on notable cultural innovations and interactions within and between East Asian countries, and between East Asia and other parts of the world. Offered Winter.

ANT 2400 Food and Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Uses food and foodways as a lens to understand social, cultural, political, and economic issues around the world. Lectures draw from the interdisciplinary field of food studies that includes anthropological and historical texts and films. Topics include commensality, globalization, nationalism, food taboos, power, memory, etiquettes, food justice, and food and health. Includes field trips to local food places in Metro Detroit. Offered Intermittently.

ANT 2500 Archaeology of the Great Lakes Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
This course is designed for students interested in learning more about the cultural heritage of the Great Lakes region. Students will be introduced to the Native cultures and archaeology of Michigan and the Great Lakes. basin. The class will cover the time period from the beginnings of human occupation of the area through early historic times. Starting with the paleo-Indians and continuing through European contact, we will explore the richness of the prehistoric Native cultures of the region as revealed through the archaeological record and ethnohistoric sources. Offered Intermittently.

ANT 3020 Introduction to Archaeology Cr. 3
Introduction to the basic principles and science of archaeology. Case studies from all time periods and regions worldwide. Examination of the intersection of archaeology with other disciplines (history, geology, criminal justice, chemistry). Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.

ANT 3030 History of Anthropology Cr. 3
Required for majors. History of ideas and explanatory theories in anthropology; continuities and disjunctures in British, French, American, German, Belgian, Russian, and Third World anthropologies. Offered Fall.
Prerequisite: ANT 1100 with a minimum grade of D-

ANT 3061 Oral History in Middle Eastern Tradition Cr. 3
Methodologies, techniques and applications of oral history used as tools to investigate modern social history of Middle Eastern societies. Offered Every Other Year.
Equivalent: NE 3061

ANT 3100 World Cultures Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Human societies exhibit tremendous diversity. How and why do we differ? What do these differences mean in today's world? Explore, contrast, compare, and understand the differences between and within societies such as those of Amazon rain forest, China, Japan, Alaska, India, the United States, and France. Special attention will be focused on how anthropologists think about and represent cultural differences through ethnographic writing, film, and other media. Offered Fall.

ANT 3111 Digital Storytelling and Ethnic Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Students will learn about the ethnic, racial, and cultural history of Detroit and how to document elements of that history. This course introduces students to both theoretical and practical concepts around digital storytelling, drawing on extensive theoretical scholarship about placemaking, experiencing place, and the social production of heritage that spans the disciplines of anthropology, historical archaeology, heritage studies, historic preservation, media studies, and mobilities. Students will learn the practical steps involved in creating digital stories and will be introduced to best practices in multimedia development as discussed in the literature in the field of instructional technology. They will also explore the cultural, ethical and technological considerations involved in creating and disseminating digital stories. They will then create their own short digital story, which they will be able to share with the website Ethnic Layers of Detroit. Offered Yearly.
Equivalent: GLS 3111, POL 3111, RUS 3111

ANT 3220 The Inca and their Ancestors Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Focuses on the archaeology, landscapes, and art of ancient South America as an introduction to the diversity and achievements of pre-Columbian civilizations. Beginning with the Inca and working backwards, we explore the richness of ancient Andean and Amazonian cultures as revealed through the archaeological record, ethnohistoric sources, and the use of ethnographic analogy. Topics include: ecological diversity and human adaptation; migration; the domestication of plants and animals; monumental architecture; great art styles; the rise of social hierarchies; and ancient cosmological understandings. Using the methods of archaeology, visual analysis, analogical reasoning, and anthropological insights, we look at what the long temporal perspective on ancient South American cultures can tell us about modern political issues and ecological sustainability. Offered Intermittently.

ANT 3310 Language and Culture Cr. 3
An introduction to linguistic anthropology. Using comparative approaches to language and culture across time and space, explore variation and change, cognitive dimensions of language, language evolution, linguistic myths, and the use of language in social practice. Offered Fall.
Prerequisites: ANT 2100 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or ANT 1100 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: LIN 3310

ANT 3333 Introduction to Sociocultural Anthropology Cr. 3
Sociocultural anthropologists use ethnography to understand human experience in settings that vary from ancient rituals to multiplayer online games. This course provides an in-depth study of the various approaches to ethnographic research used by anthropologists in the present as well as the past. Offered Yearly.

ANT 3400 Introduction to Medical Anthropology Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
Introduction to Medical Anthropology uses a biosocial, cross-cultural approach to explore the complexities of health and medicine today – in the United States and elsewhere. It pays special attention to health disparities and how they are experienced by various social groups. This course will expose students to a number of cultural systems of health and illness from around the world and, describe the behaviors, practices, institutions, and/or systems that define them. In keeping with an anthropological approach, it will treat western biomedicine as one of many cultural systems of explaining and addressing illness. Offered Intermittently.

ANT 3410 Global Health Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Introduces students to problems of disease and disorder worldwide and looks at various efforts to define and address these problems through a social science perspective. Offered Every Term.
Equivalent: GLS 3410, PH 3410

ANT 3520 Understanding Africa: Past, Present and Future Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
In-depth knowledge of Africa through the study of its physiography, prehistory and history, social institutions, and social changes within a global context. Offered Intermittently.
Equivalent: PS 3760

ANT 3530 Native Americans Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Examines the way that academic disciplines and individual scholars have examined American Indian and Native cultures, traditions and histories. The course focuses on migration, colonization, warfare, Native sovereignty and the contemporary experience to learn about the distinctive perspectives of the indigenous peoples of North America. Examines (scientific and indigenous) accounts of the origin of Native American cultures, their interaction in pre-Contact times, survival and persistence during European conquest and colonization and the continuing struggle within dominant North American society for equity, justice and inclusion. Offered Intermittently.

ANT 3540 Cultures and Societies of Latin America Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Latin American social structures and cultural variation, history, and relationship to the United States. Themes include class, race, ethnicity, gender, religion, globalization, and immigration to the United States. Offered Intermittently.
Equivalent: LAS 3540

ANT 3550 Arab Society in Transition Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Distinctive social and cultural institutions and processes of change in the Arab Middle East. Regional variations: background and discussion of current political and economic systems and their relationship to international systems. Offered Intermittently.
Equivalent: NE 3550

ANT 3560 World's Religions Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Explores the nature, dynamism, similarities and differences of religions in an anthropological and cross-cultural perspective. Offered Intermittently.

ANT 3600 Topics in Anthropology Cr. 3
Selected topics or emerging fields in any of the four anthropology subfields (cultural; physical; archaeology; linguistics). Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 3700 Globalization: Theories, Practices, Implications Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Students develop analytical tools for appraising processes of globalization; acquire a familiarity with the current topical concerns of global studies; and examine economic, political, and cultural approaches to globalization. Offered Winter.
Equivalent: GLS 3700

ANT 3990 Directed Study Cr. 2-6
Offered Every Term.
Prerequisites: ANT 1000-6XXX with a minimum grade of B
Repeatable for 6 Credits

ANT 4999 Honors Research and Thesis Cr. 3-6
Research and thesis to be completed under the direction of a faculty member whose expertise includes the student's area of interest. Advisor and a second reader will read the completed thesis. Offered Every Term.

ANT 5060 Urban Anthropology Cr. 3
Social-cultural effects of urbanization from a cross-cultural perspective with emphasis on the developing area of the world. The process of urbanization; the anthropological approach in the area of urban studies. Offered Yearly.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 5140 Biology and Culture Cr. 3
Interrelationships between the cultural and biological aspects of humans; human genetic variability, human physiological plasticity and culture as associated mechanisms by which humans adapt to environmental stress. Offered Fall.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 2110 with a minimum grade of D-

ANT 5165 Shop 'Til You Drop: Consumer Society and Culture Cr. 3
Why do we want things that we don't need? Are we bound to consumerism in the global age? This course offers an overview of consumer society and examines consumption practices cross-culturally from an anthropological perspective. Offered Every Other Year.

ANT 5170 Political Anthropology Cr. 3
Ethnographic and comparative study of power, politics, and political organizations in non-state and state societies and in the colonial encounter; evolutionary, functionalist, practice-oriented, Marxist, feminist, and Foucauldian approaches to the study of power. Offered Intermittently.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 5180 Forensic Anthropology Cr. 3
Advanced survey of forensic applications in the natural, medical, legal, and behavioral sciences. Topics may include: toxicology, forensic pathology, fingerprints, ballistics, analysis of the human skeleton, body fluid identification. Lab component included. Offered Intermittently.
Prerequisites: CRJ 1010 with a minimum grade of D-, ANT 2110 with a minimum grade of D-, ANT 2130 with a minimum grade of D-, or CRJ 2130 with a minimum grade of D-

ANT 5210 Anthropological Methods Cr. 4
Intensive introduction to research methods, techniques and issues in anthropology. Students engage in a research experience supervised by the instructor, write a field journal, and complete a final exam. Exercises focus on data collection, data management, and data analysis. Techniques include participant observation, fieldnotes, and interviewing. Students learn how to use software packages employed by anthropological researchers in the computer lab. Offered Fall, Winter.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 5240 Cross Cultural Study of Gender Cr. 3
Evolutionary and cultural bases of gender roles using a world sample; division of labor, marriage and sexual behavior, power and ideology. Offered Intermittently.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 5270 Concepts and Techniques in Archaeology Cr. 3
Intensive introduction to archaeological interpretation, theory, and methods geared towards anthropology graduate students and advanced students from related fields. Examines intellectual history of archaeological ideas since mid-20th century and evaluates theoretical frameworks and techniques used to understand the archaeological record, material culture, past environments, social practices, political and economic organizations, and long term culture change. Also considers archaeology's relationships with anthropology and the world beyond academia. Offered Winter.
Prerequisites: 3 of (ANT 1100 with a minimum grade of C or ANT 2100 with a minimum grade of C), ANT 3020 with a minimum grade of C, and ANT 3200 with a minimum grade of C

ANT 5280 Field Work in Archaeology of the Americas Cr. 4
Introduction to the practice and process of archaeological fieldwork. Students participate in survey and/or excavation of an archaeological site to learn the methods of archaeological recovery and analysis. This class can be counted as a field school. Offered Every Other Fall.
Fees: $50

ANT 5320 Language and Societies Cr. 3
For graduate students and advanced undergraduates with a background in linguistic anthropology. Students read classic and contemporary works of linguistic anthropology to expand knowledge of human language and sociality; conduct a major original research project. Offered Winter.
Prerequisites: ANT 3310 with a minimum grade of D- or LIN 3310 with a minimum grade of D-
Equivalent: LIN 5320

ANT 5370 Magic, Religion and Science Cr. 3
The nature and variety of religious belief and practice; theoretical interpretations. Offered Every Other Year.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 5400 Anthropology of Health and Illness Cr. 3
Concepts and theory in medical anthropology from cultural and biological perspectives. Topics include: cross-cultural aspects of sex and gender in health and illness, life course, sexuality, birth and death, biocultural approaches to healing and treatment, international health and epidemiology. Offered Every Other Year.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 5410 Anthropology of Age Cr. 3
Cultural construction of the life course; age categories such as childhood and old age examined from cross-cultural, historical, political and economic perspectives. Special attention to women's aging; role of biology and ethnicity in aging and death and dying. Offered Every Other Year.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 5420 Anthropology Practicum Cr. 3
Field placement in a service agency or other organization. Students provide volunteer assistance to an agency while conducting participant observation research exercises. Utilization of field experience to learn about a variety of research issues and methodologies. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

ANT 5450 Kinship and Social Relations Cr. 3
How are kinship relations created, transformed, reshaped, and unmade? How do people experience kinship, and what does it mean to be related? How do these processes, experiences, and imaginations vary across space and time? What is the role of kinship studies in anthropology, and how has this changed over the history of the discipline? This course explores these questions through a rigorous analysis of contemporary and historical readings in the anthropological study of kinship and social relations. This course will draw on case studies from the Americas, Europe, Africa, the Middle East, Asia (Central, East, Southeast), and Melanesia. Offered Intermittently.

ANT 5500 Historical Archaeology Cr. 3
Historical archaeology studies the emergence and transformations of the Modern World (post-1500 AD) through the convergence of material remains (artifacts), documentary sources, and oral histories left behind by past societies. Case studies focus on the period between the16th-20th centuries and are drawn from local and global examples on major topics, such as capitalism, colonialism, race, inequality, gender, sexuality, age, politics, and heritage. Offered Every Other Year.

ANT 5510 Pre-Columbian and Mesoamerican Civilization Cr. 3
Survey of the history and characteristics of cultures in Mesoamerica prior to and after colonization, from the Olmec and Maya to the Aztec and their descendants. Offered Every Other Year.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-

ANT 5565 Urban Archaeology Cr. 3
Urban archaeology in the modern and contemporary eras is introduced as an area of social and political engagement with the material remains of the past (ca. 1750 - present). Urban archaeology is entwined with issues of historic preservation, heritage management, city planning, and urban ecology. Class covers a variety of urban archaeology topics in modern and post-industrial Western societies, and involves interactions with Detroit's archaeological and heritage sites, digital humanities techniques, and other approaches that connect urban archaeology with the anthropology of the city. Offered Every Other Year.

ANT 5600 Museum Studies Cr. 3
Introduction to basics of museums, museum work, and museum theory. Topics include: collections management, data bases, interpretive exhibit methods, current issues in museum studies, legal concerns, role of museums as educational institutions. Offered Every Other Year.

ANT 5700 Applied Anthropology Cr. 3
The application of anthropological concepts and methods to contemporary issues of public concern in the United States and abroad. Offered Fall.
Prerequisites: ANT 2100 with a minimum grade of D-, ANT 1100 with a minimum grade of D-, or ANT 7005 with a minimum grade of D-

ANT 5900 Culture, Language and Cognition Cr. 3
Systematic investigation of the relationships among, language, cognition and culture, including issues relating to human universals, cross-cultural concept formation, metaphor, classification and the evolution of cognition and language. Offered Every Other Winter.
Prerequisites: ANT 3310 with a minimum grade of D-, ANT 5320 with a minimum grade of D-, LIN 3310 with a minimum grade of D-, LIN 5320 with a minimum grade of D-, LIN 3080 with a minimum grade of D-, or PSY 3080 with a minimum grade of D-
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.
Equivalent: LIN 5900, PSY 5900

ANT 5993 Writing Intensive Course in Anthropology Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a course designated as a corequisite. See section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing-Intensive Course in the Major requirement. Within first three weeks of enrollment in corequisite course, student must notify instructor of enrollment in ANT 5993. Required for all majors. Offered Winter.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and (ANT 5310 (may be taken concurrently) or ANT 5996 (may be taken concurrently))
Restriction(s): Enrollment is limited to Undergraduate level students.

ANT 5996 Capstone Seminar in Anthropology Cr. 3
Required for majors. Review and integrate central practices and theories in anthropology through discussion of the four major subfields and applied areas of anthropology. Special attention will be given to new developments in the different fields. Recommended for new graduate students without extensive background in anthropology; also open to those outside anthropology who desire a thorough view of research areas and theoretical perspectives in anthropology. Offered Winter.

ANT 6290 Culture Area Studies Cr. 3
Culture and social changes. Origins and functional relationships, regional variation in population, settlement, culture contact, religion, migration, social institutions. Topics to be announced in Schedule of Classes . Offered Intermittently.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-
Repeatable for 9 Credits

ANT 6510 The Inca and their Ancestors Cr. 3
Study of pre-Columbian cultures of South America. Archaeological and ethnohistorical data beginning with the Inca; foundations of Inca civilization; major cultures from different regions and periods in South American prehistory. Offered Every Other Year.
Prerequisites: 3 of (ANT 1100 with a minimum grade of C or ANT 2100 with a minimum grade of C), ANT 3020 with a minimum grade of C, and ANT 3200 with a minimum grade of C

ANT 6555 Cultural Resource Management and Public Archaeology Cr. 3
Practicum focuses on historical development of cultural resource management (CRM) in the U.S.; contemporary regulatory framework of CRM; practical experience in project planning, proposal writing, archival research, project management and the reporting process. Offered Every Other Year.
Prerequisites: ANT 5270 with a minimum grade of C or ANT 5280 with a minimum grade of C

ANT 6570 Archaeological Laboratory Analysis Cr. 4
Introduction to conventional and innovative laboratory methods used for the analysis of archaeological artifacts from both prehistoric and historic periods. Intensive hands-on class for advanced students using the collections of the Grosscup Museum of Anthropology. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 6680 Studies in Cultural Anthropology Cr. 2-4
Selected topics in cultural anthropology. Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: ANT 2100 with a minimum grade of D- or ANT 1100 with a minimum grade of D-
Repeatable for 12 Credits

ANT 7005 Proseminar in Anthropology I Cr. 3
Introduction to anthropological theory including key figures and issues across the discipline. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7010 Proseminar in Anthropology II Cr. 3
Examination of some major debates in anthropology in contemporary perspective; continuities and breakthroughs. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7030 Debates in Anthropology Cr. 3
Advanced seminar on enduring questions and key debates in anthropological thought over its history, including different subfields and allied social sciences. Offered Winter.
Prerequisites: ANT 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Anthropology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.

ANT 7200 Qualitative Modes of Inquiry and Methods Cr. 4
Qualitative modes of inquiry, methods techniques and research design. Students conduct independent field research and learn data collection methods. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7420 Anthropology Practicum Cr. 3
Conduct applied anthropological field research as a team for an organization or institution; provide deliverables to the client. Practice research subject recruitment; anthropological methods (participant observation, interviews, focus groups etc.); qualitative data processing and analysis. Discuss research issues including ethics and obligations of involvement in fieldwork situations and prepare for career development using anthropological skills. Offered Yearly.
Restriction(s): Enrollment limited to students in a Master of Arts degree.

ANT 7422 Museum Practicum Cr. 3
The Museum Practicum course provides students with the opportunity to gain hands-on experience in a museum or cultural institution of their choice. With guidance from the coordinator of the Graduate Certificate in Museum Practice, each student will obtain a placement at an institution and undertake a project in a specific area of museum work under direction of an institutional site supervisor. Over the course of the semester practicum students will experience and reflect upon the working environment, challenges, and opportunities within the museum industry. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7450 Kinship and Social Relations Cr. 3
How are kinship relations created, transformed, reshaped, and unmade? How do people experience kinship, and what does it mean to be related? How do these processes, experiences, and imaginations vary across space and time? What is the role of kinship studies in anthropology, and how has this changed over the history of the discipline? This course explores these questions through a rigorous analysis of contemporary and historical readings in the anthropological study of kinship and social relations. This course will draw on case studies from the Americas, Europe, Africa, the Middle East, Asia (Central, East, Southeast), and Melanesia. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7620 Seminar in Anthropology Cr. 3
Special topics seminar focused on central concepts and theories in anthropology. Exploration of current developments, problems and contemporary research orientations. Topics and sub-field orientation(s) to be announced in Schedule of Classes. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 15 Credits

ANT 7625 Material Culture and the Social Meaning of Things Cr. 3
Our relationship with objects, and various ways of looking at material culture as part of our social world. Understanding and appreciation of the materiality of our lives and the lives of peoples of different cultures. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7630 Seminar in Problems and Concepts in Cultural Anthropology Cr. 2-3
Central concepts and theories. Current developments, problems and contemporary research orientations. Topics to be announced in Schedule of Classes . Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ANT 7635 Globalization and Culture Cr. 3
Focuses on the discourse, debates, and practices of globalization from an anthropological perspective. Fast-paced seminar course for graduate students. Topics include: globalization, localization, and anti-globalization; citizenship and belonging; modernity; transnationalism; migration and diaspora; global food systems; consumption and production; popular culture; religion; development; methodological issues in studying global phenomena. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7680 Medical Anthropology Cr. 3
Core concepts and theoretical approaches, including: aging, life course, childhood, old age, disability, chronic illness, infectious disease, international health, organization of health care institutions, health policy, political economy of health, women's health, reproduction, technology, the body, bioethics, culture and cognition, death and dying, race and ethnicity, violence, sex and sexuality. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ANT 7780 Research Design and Proposal Writing Cr. 3
Basic concepts, practices, and skills needed to develop and design a research project and present a grant proposal for funding. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7900 Synthesis Cr. 3
Integrative, holistic, and comparative examination of anthropology as the synthesis of diverse analytic perspectives and methodologies. Offered Winter.
Prerequisites: ANT 7005 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ANT 7995 Directed Study Cr. 1-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ANT 7998 Field Problem Cr. 1-9
A research problem which requires field work or intensive and systematic reading of original technical literature. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ANT 7999 Master's Essay Direction Cr. 3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

ANT 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ANT 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ANT 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ANT 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: ANT 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

ANT 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ANT 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ANT 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ANT 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ANT 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

APA - Art: Painting

APA 2000 Introduction to Oil Painting Cr. 3
Traditional materials and methods of oil painting as a means of visual expression. Previous painting experience is not required. Painting from direct observation and imagination. Offered Every Term.
Prerequisites: ADR 1050 or ACO 1200
Fees: $30

APA 2110 Watercolor Painting I Cr. 3
Methods and materials of transparent watercolor painting. Previous experience with watercolor painting is not required. Compositions based on observation and imagination. Offered Fall, Winter.
Prerequisites: APA 2000
Fees: $30

APA 2130 Introduction to Alternative Painting Media Cr. 3
Survey of materials and methods of acrylic painting, encaustic painting, pastel painting, as well as collage and mixed media painting. Previous painting experience is not required. Compositions based on observation and imagination. Offered Yearly.
Prerequisites: ACO 1200
Fees: $80

APA 2200 Introduction to Mural Painting Cr. 3
Introduction to the methods and materials of traditional Buon Fresco painting as well as methods and materials for contemporary mural painting in the community arts context. Offered Fall.
Prerequisite: ACO 1200
Fees: $65

APA 3000 Intermediate Painting and Drawing Cr. 3
Continued emphasis on structure of painting and drawing. Individual development of pictorial, emotional and conceptual aspects of image-making. Offered Every Term.
Prerequisites: APA 2000 with a minimum grade of D- and ADR 2070 with a minimum grade of D-
Fees: $30

APA 3110 Watercolor Painting II Cr. 3
Continued experience with watermedia compositions based on observation and/or imagination. Offered Fall, Winter.
Prerequisites: APA 2110
Fees: $30

APA 3130 Figure Painting: Water Media Cr. 3
Spontaneous and sustained paintings from direct observation of the human figure. Inquiry into the effects of scale, space and emotional responses are encouraged. Offered Yearly.
Prerequisites: APA 2110
Fees: $90

APA 3140 Figure Painting: Oil and Other Media Cr. 3
Sustained and gestural studies of human figure. Individual responses to scale, space, emotional content. Offered Every Term.
Prerequisites: APA 3000
Fees: $90

APA 4000 Advanced Painting and Drawing I Cr. 3
Individual development of personal painting and/or drawing ideas through assigned projects and/or student initiative in consultation with instructor. Continued emphasis on formal and expressive aspects of painting and/or drawing. Offered Every Term.
Prerequisites: APA 3000 with a minimum grade of D- and ADR 3070 with a minimum grade of D-
Fees: $30

APA 5000 Advanced Painting and Drawing II Cr. 3
Individual development in painting and/or drawing. Offered Every Term.
Prerequisites: ADR 5070 with a minimum grade of C- or APA 4000 with a minimum grade of D-
Fees: $30
Repeatable for 6 Credits

APA 5060 Advanced Concepts in Drawing and Painting Cr. 3-6
Emphasis on individual projects using any appropriate medium. Students select subjects and approaches under faculty guidance; may include lectures, demonstrations, off-campus visits. Offered Yearly.
Prerequisites: ADR 3070 or APA 4000
Fees: $30
Equivalent: APA 7060
Repeatable for 6 Credits

APA 5080 Landscape Painting Cr. 3
Painting or drawing, as appropriate, outdoors at various urban, suburban and rural sites in metropolitan Detroit area. Students are expected to drive or carpool to locations within an hour of Detroit. Interpretation of landscape subjects through observation and imagination. Offered for undergraduate credit only. Offered Spring/Summer.
Prerequisites: APA 2000
Fees: $30
Repeatable for 6 Credits

APA 5100 Contexts of Studio Practice Cr. 3
Critical inquiry into art issues, past and present, and contemporary studio practices related to painting. Seminar based on visits to museums, galleries, private collections, artists' studios, and optional trips to major art centers such as New York and Chicago. Offered Yearly.
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Equivalent: ADR 5100
Repeatable for 6 Credits

APA 5110 Watercolor Painting III Cr. 3
Individual work in transparent and/or opaque water-based media. Offered Fall, Winter.
Prerequisites: APA 3110
Fees: $30
Repeatable for 6 Credits

APA 5130 Figure Painting Advanced: Water Media Cr. 3
Individual development in water media based on observation of human figure. Offered Yearly.
Prerequisites: APA 3130
Fees: $90
Repeatable for 6 Credits

APA 5140 Figure Painting Advanced: Oil and Other Media Cr. 3
Individual development based on the human figure using any appropriate medium. Offered Yearly.
Prerequisites: APA 3140
Fees: $90
Repeatable for 6 Credits

APA 5160 Advanced Alternative Painting Media Cr. 3
Individual work in the materials and methods of acrylic painting, encaustic painting, pastel painting, as well as collage and mixed media painting. Offered Fall, Winter.
Prerequisite: APA 2130 with a minimum grade of C-
Fees: $80
Repeatable for 6 Credits

APA 5200 Advanced Mural Painting Cr. 3
Individual work in the materials and methods of Buon Fresco painting and modern mural painting. Offered Fall.
Prerequisite: ACO 1200

APA 5810 Directed Projects: Painting Cr. 3-6
Self-directed work in consultation with graduate faculty on an arranged basis. Offered Fall, Winter.
Repeatable for 15 Credits

APA 7000 Graduate Oil Painting Cr. 3
Individual work in oil painting, or other material as appropriate. Offered Every Term.
Prerequisite: APA 5000 with a minimum grade of C
Restriction(s): Enrollment limited to students in the MA in Fine Arts or Master of Fine Arts programs; enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $30
Repeatable for 9 Credits

APA 7060 Graduate Problems in Drawing and Painting Cr. 3-9
Emphasis on individual projects using any appropriate medium. Students select subjects and approaches under faculty guidance; may include lectures, demonstrations, off-campus visits. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $30
Repeatable for 15 Credits

APA 7080 Landscape Painting Cr. 3
Painting or drawing, as appropriate, outdoors at various urban, suburban and rural sites in metropolitan Detroit area. Interpretation of landscape subjects through observation and imagination. Students are expected to drive or carpool to locations within an hour of Detroit. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $30
Repeatable for 15 Credits

APA 7110 Graduate Watercolor Painting Cr. 3
Individual work in transparent and/or opaque water-based media. Offered Fall, Winter.
Prerequisite: APA 5110 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $30
Repeatable for 9 Credits

APA 7130 Graduate Problems in Figure Painting: Water Media Cr. 3
Individual development of images based on the human figure. Offered Yearly.
Prerequisite: APA 5130 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 6 Credits

APA 7140 Graduate Problems in Figure Painting: Oil Media Cr. 3
Individual development of images based on the human figure. Offered Yearly.
Prerequisite: APA 5140 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 9 Credits

APA 8810 MFA Studio: Painting Cr. 3-9
Extended self-directed work in painting (eighteen to twenty-seven hours per week). Consultation with appropriate graduate faculty on an arranged basis. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Repeatable for 36 Credits

APH - Art: Photography

APH 2400 Introduction to Photography Cr. 3
This course explores essential technical, conceptual, and artistic problems associated with photography. Through this class, students will investigate how photography operates as a visual language and will gain a thorough understanding of how to employ camera functions as a tool for personal expression. The course will encompass lectures, demonstrations, readings, and projects involving basic photographic techniques and image construction using a digital camera. Offered Every Term.
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.

APH 2405 Introduction to Photography for Non-Majors Cr. 3
This course explores essential technical, conceptual, and artistic problems associated with photography. Through this class, students will explore how photography functions as a visual language and gain a comprehensive understanding of how to utilize camera functions as a tool for personal expression. The course will encompass lectures, demonstrations, readings, and projects involving basic photographic techniques and image construction using a digital camera. Offered Every Term.

APH 3410 Darkroom Photography Cr. 3
This course is an introduction to darkroom practices, including: black and white analog film processing, printing and presentation. Offered Every Term.
Prerequisites: APH 2400
Fees: $180

APH 3420 Digital Photography Cr. 3
Introduces students to the underlying principles, languages and tools of electronic media in relationship to photographic imaging. Students will learn key concepts in digital imaging such as modes of data capture, file management, processing workflow, color management, resolution, non-destructive image processing, film scanning and inkjet printing. A digital camera that shoots RAW images and has access to manual controls is required for this course. Offered Fall, Winter.
Prerequisites: APH 2400
Fees: $180

APH 4410 Advanced Camera Cr. 3
In this course, students will learn advanced photographic techniques through the use of large format cameras, sheet film processing, and darkroom and digital printing. Offered Fall.
Prerequisites: APH 3410
Restriction(s): Enrollment limited to students in a Bachelor of Arts or Bachelor of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $180
Repeatable for 6 Credits

APH 4420 Advanced Printing Cr. 3
In this course, students will learn advanced photographic printing techniques through the use of large format cameras - including darkroom, digital, and alternative printing skills. Offered Winter.
Prerequisites: APH 3410 or APH 3420
Restriction(s): Enrollment limited to students in a Bachelor of Arts or Bachelor of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $180

APH 5410 Photographic Histories and Processes Cr. 3
This course introduces students to the history of photography and historic photographic processes. It will familiarize the student with the key figures in photographic history and artistic movements throughout its history while giving them hands on experience with antique photographic techniques. Offered Fall.
Prerequisites: APH 2400
Fees: $185

APH 5440 Experimental Photography Cr. 3-6
Work in non-traditional processes including image and emulsion transfer, hand-applied emulsions, laser copy and xerographic transfer. Offered Every Other Year.
Prerequisites: APH 3410
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $180
Repeatable for 9 Credits

APH 5450 Selected Topics in Photography Cr. 3
Topics to be announced in Schedule of Classes. Offered Yearly.
Prerequisites: APH 4410
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $180
Repeatable for 6 Credits

APH 5470 Photography Portfolio and Contemporary Practices Cr. 3
This course is for upper level photo concentrators in order to bring together advanced skills and ideas about image making. Students are expected to work independently on individual projects with the expectation of it culminating in a body of work. Through group and individual critiques with faculty and visiting artists, readings, discussions, and field trips, students will refine their skills as photographers and learn how to verbally articulate issues in their own work as well as the work of others. Offered Winter.
Prerequisites: APH 4410 or APH 4420
Fees: $180

APH 5850 Directed Projects: Photography Cr. 3-9
Individual problems. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $180
Repeatable for 15 Credits

APH 7400 Graduate Photography Cr. 3-9
Individual problems in advanced photography. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Bachelor of Arts, Bachelor of Fine Arts, Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $180
Repeatable for 24 Credits

APH 8850 MFA Studio: Photography Cr. 3-9
Extended problems in photography; individual research with eighteen to twenty-seven hours of laboratory per week. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $180
Repeatable for 36 Credits

APR - Art: Printmaking

APR 2300 Printmaking Cr. 3
Introduction to a variety of printmaking processes may include the following: lithography, etching, monotype, screenprint, and, relief. Offered Yearly.
Prerequisite: ADR 1050 or ACO 1200
Fees: $90

APR 3470 Photo-Processes for Printmaking I Cr. 3
Light sensitive printmaking processes are explored, and may include photo-lithography, photo-etching, photo-screen printing, and cyanotypes. Students may create prints utilizing traditional or digital drawing, analog or digital photography, and hybrid techniques. Offered Winter.
Prerequisite: ADR 1050 or AGD 2240 or ADA 2220 or APH 2410
Fees: $115

APR 3480 Intaglio I Cr. 3
Basic metal plate printing techniques: etching, aquatint, drypoint, soft ground, and lift ground. Offered Fall, Winter.
Prerequisite: ADR 1050 or ACO 1200
Fees: $110

APR 3490 Lithography I Cr. 3
Fundamentals of stone and plate lithography applying traditional and contemporary techniques of crayon, tusche, and photolithography. Offered Spring/Summer.
Prerequisite: ADR 1050 or ACO 1200
Fees: $110

APR 3500 Screen Printing I Cr. 3
Introduction to basic techniques of screen printing. Offered Yearly.
Prerequisite: ADR 1050 or ACO 1200
Fees: $110

APR 3510 Relief and Experimental Printmaking I Cr. 3
Traditional and contemporary methods of relief printmaking including woodcut and linoleum. Collograph, monoprint, monotype, and experimental methods may be included. Offered Every Term.
Prerequisites: ADR 1050 or ACO 1200
Fees: $90

APR 5470 Photo-Processes for Printmaking II Cr. 3
Light sensitive printmaking processes are explored, and may include photo-lithography, photo-etching, photo-screen printing, and cyanotypes. Students may create prints utilizing traditional or digital drawing, analog or digital photography, and hybrid techniques. Emphasis on creating a conceptually focused body of work. Offered Winter.
Prerequisites: APR 3470
Fees: $115
Repeatable for 9 Credits

APR 5480 Intaglio II Cr. 3
Further development of intaglio printmaking skills including: range of techniques, color methods, and printing. Emphasis on creating a conceptually focused body of work. Offered Fall, Winter.
Prerequisites: APR 3480
Fees: $110
Repeatable for 9 Credits

APR 5490 Lithography II Cr. 3
Advanced problems in lithography. Black and white, multicolor, transfer methods. Offered Fall, Winter.
Prerequisites: APR 3490
Fees: $110
Repeatable for 9 Credits

APR 5500 Screen Printing II Cr. 3
Further development of screen-printing techniques and printing. Emphasis on creating a conceptually focused body of work. Offered Yearly.
Prerequisites: APR 3500
Fees: $110
Repeatable for 9 Credits

APR 5510 Relief and Experimental Printmaking II Cr. 3
Emphasis on creating a conceptually focused body of work and increased relief technical skills through the practice of multiple block/plate printing, color, large format, unique format, and hybrid techniques. Offered Spring/Summer.
Prerequisites: APR 3510
Fees: $90
Repeatable for 9 Credits

APR 7470 Graduate Photo Processes for Printmaking Cr. 3
Exploration of non-traditional formats and print surfaces. Editioning optional. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $115
Repeatable for 9 Credits

APR 7480 Graduate Intaglio Cr. 3
Advanced problems in intaglio. Multiplate and rollup color printing. Photo intaglio techniques, experimental media. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $110
Repeatable for 9 Credits

APR 7490 Graduate Lithography Cr. 3
Advanced work in lithography. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $110
Repeatable for 6 Credits

APR 7500 Graduate Serigraphy Cr. 3
Advanced work in serigraphy. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $110

APR 7510 Graduate Relief and Experimental Printmaking Cr. 3
Traditional relief methods: woodcut, wood engraving, linocut; also monoprint and monotype, constructed prints, other experimental approaches. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 15 Credits

APR 8840 MFA Studio: Printmaking Cr. 3-9
Extended problems in printmaking; individual research with eighteen to twenty-seven hours of laboratory per week. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $100
Repeatable for 36 Credits

ARB - Arabic

ARB 1010 Elementary Arabic I Cr. 4
Vocabulary, forms, syntax, graded readings. Offered Every Term.
Fees: $5

ARB 1020 Elementary Arabic II Cr. 4
Continuation of ARB 1010. Offered Every Term.
Prerequisites: ARB 1010 with a minimum grade of D-
Fees: $5

ARB 2010 Intermediate Arabic I Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Continuation of grammar, readings in classical and modern prose. Offered Every Term.
Prerequisites: ARB 1020 with a minimum grade of D-
Fees: $5

ARB 2020 Intermediate Arabic II Cr. 4
Continuation of ARB 2010. Offered Winter.
Prerequisites: ARB 2010 with a minimum grade of D-
Fees: $5

ARB 3010 Business Arabic Cr. 3
Introduces learners of Arabic to language functions associated with business and travel. Communication for immediate use; emphasis on educated spoken Arabic. Situational dialogues built around units to address topics related to business such as job interview, airplane ticket purchase, and the like. Offered Winter.
Prerequisites: ARB 2010 with a minimum grade of D-

ARB 3110 Advanced Arabic I Cr. 3
Third year Arabic language course: advanced Arabic grammar, complexities of sentence construction in various styles (literary, political, and scientific texts; written media; business correspondence). Offered Fall, Winter.
Prerequisites: ARB 2020 with a minimum grade of D-

ARB 3120 Advanced Arabic II Cr. 3
Completion of ARB 3110; variations between classical Arabic and modern standard Arabic. Offered Fall, Winter.
Prerequisites: ARB 3110 with a minimum grade of D-

ARB 3210 Spoken Arabic Cr. 3
Introduction to authentic spoken Arabic. Language of everyday life; phonology and script. Communication for immediate use. Offered Fall.
Prerequisites: ARB 1020 with a minimum grade of D-
Repeatable for 9 Credits

ARB 3300 Conversation and Composition Cr. 3
Functional usage of language and communication in context. Critical essays written about topics discussed in class to improve writing skills. Offered Fall, Winter.
Prerequisites: ARB 2010 with a minimum grade of D-

ARB 3990 Directed Study Cr. 3-6
Readings, periodic reports and consultations. Offered Every Term.
Repeatable for 9 Credits

ARB 5010 Medieval Arabic Texts Cr. 3
Reading and translation of Arabic Medieval texts. Literature, language, religion and biography. Offered Yearly.
Prerequisites: ARB 2010 with a minimum grade of D-

ARB 5020 Media Arabic Cr. 3
Language pertinent to media communications: written, visual and audio material. Background in origin and development of journalism in the Arab world. Current major newspapers and magazines used as basic reading materials. Offered Winter.
Prerequisites: ARB 2020 with a minimum grade of D-

ARB 5100 Teaching of Arabic as a Foreign/Second Language (TAFL) Cr. 3
Theoretical and conceptual framework of second language learning. Proper training in pedagogy as related to learning Arabic as a foreign/second language. Offered Yearly.
Equivalent: NE 5100

ARB 5130 Classical Arabic Literature in Translation Cr. 3
From pre-Islamic period (Jahiliya) to the downfall of the Umayad dynasty in Andalusia (1492). Offered Every Other Year.

ARB 5140 Modern Arabic Literature in Arabic and English Cr. 3
Literature and culture of Arab Nahda period (Renaissance beginning in nineteenth century), down to the present. Fiction, drama, biography, poetry. Course is offered in both Arabic and English. Offered Yearly.

ARB 5210 Arabic Sociolinguistics Cr. 3
Arabic dialectology; Arabic as a minority language in contact. Theories and techniques developed outside Arabic, and their applicability to Arabic situations. Offered Fall.
Equivalent: LIN 5210, NE 5210

ARB 5230 Structure of Arabic Cr. 3
Survey of historical constitution and theoretical structure of Arabic. Offered Yearly.
Equivalent: LIN 5230, NE 5230

ARB 5240 Quranic Arabic Cr. 3
Structures and functions of the language of the Quran. It introduces linguistic, textual, cultural, and aesthetic aspects of this language from the perspective of medieval and modern scholars of Arabic. Offered Fall.
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.

ARB 5300 Arabic Grammar in Practice Cr. 3
This course is a capstone of the language training in the Arabic program. It is an advanced, hands on and in-depth grammatical and textual analysis of Arabic oral and written text production across genres, modes and historical periods. Students will be trained on recognizing and analyzing texts grammatically from the different periods and genres of Arabic and from different written, audio and new media. They will also practice reproducing these structures by means of drills, exercises and sound clips. Offered Every Other Year.

ARB 5700 Arabic for Healthcare Professions Cr. 3
General review of pertinent grammar and specific vocabulary groups relating to specific tasks in the health care professions. Discussions leading to cultural competencies. Exploration of cultural and social factors for communicating with Arabic-speaking patients. Offered Winter.
Prerequisites: ARB 2010 with a minimum grade of D-

ARB 5990 Directed Study Cr. 1-3
Readings; periodic consultations and reports. Offered Every Term.
Repeatable for 9 Credits

ARB 6700 History of Arabic Cr. 3
History of the evolution of Arabic. Data from phonetics/phonology and morpho-syntax will form the basis of study. Offered Fall.
Equivalent: LIN 6700

ARB 7100 Introduction to Translation Studies Cr. 3
Introduction to Translation Studies presents the essential theories as tools to deal with the significant practical problems and issues that may confront the practitioner in specialized translation. The class will focus on the following points: 1) acquisition of the basics of translation theory in order to facilitate the comprehension of translation's multidisciplinary processes and be aware of the variety of theoretical approaches, 2) the study and evaluation of primary methods of research to enhance future research and practices, 3) the acquisition of necessary metalanguage, which allows the textual analysis of the translation process, the solution driven mind of a translator, the approach to tackle recurring translation problems, and the evaluation of translated texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CLA 7100, FRE 7100, GER 7110, ITA 7100

ARM - Armenian

ARM 3410 New Soil, Old Roots: The Immigrant Experience Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American life. Offered Fall.
Equivalent: GER 3410, POL 3410, RUS 3410, SLA 3410

ART - Art Courses

ART 0890 MFA Progress Review Cr. 0
Students present to their MFA committee members the culmination of all work created over the course of the semester, including any written material/research projects. Visiting artist or critic is invited for this review. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Art; enrollment is limited to Graduate level students.
Repeatable for 0 Credits

ART 0892 MFA Assessment Review Cr. 0
Students formally present to their MFA committee members the culmination of all work created over the course of the semester, including any written material/research projects. A 500-word#artist statement is required and must be submitted to committee members 1 week prior to reviews. (Visiting artist or critic invited for this review). Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Art; enrollment is limited to Graduate level students.
Repeatable for 0 Credits

ART 8990 Graduate Seminar Cr. 3
Graduate Seminar is a topical lecture course. This course rotates thematically: Professional Practice, Art Theory and Critical Practice, and Creative Practice. MFA students must successfully complete 3 seminar courses, covering each topic. This course may be taken as an elective for MA students. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Art; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree.
Repeatable for 9 Credits

ART 8992 Graduate Studio Cr. 3
This interdisciplinary studio course focuses the production and critique of visual art. It is an ongoing discussion of individual work with special reference to current issues, theories, and concerns in contemporary art as applied to students visual artwork. Students will be required to produce work and writing, and present and discuss that work in an interdisciplinary context. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Art; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ART 8994 Graduate Hours Cr. 1-3
An intensive studio course focusing on independent projects and self-directed research in consultation with chosen faculty member. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Art; enrollment is limited to Graduate level students.
Repeatable for 20 Credits

ART 8996 MFA Thesis Cr. 1-4
MFA Thesis is a capstone course to be taken in the final two semesters of an MFA student's degree program. Students will create a body of work to be shown in a culminating solo exhibition in the Art Department Gallery or other appropriate venue. To accompany the exhibition, students must produce a written thesis document and submit an image portfolio. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Art; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ASE - American Sign Language

ASE 2050 Deaf Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
This course is to introduce students to the most important aspects of the American Deaf experience with history, contributions, and contemporary lives of Deaf people. This course will address topics such as the diversity of Deaf people, Deaf cultural norms, controversial issues, Deaf arts, and Deaf international communities. Offered Fall.

ASE 3000 American Sign Language I Cr. 3
This course is an introduction to American Sign Language (ASL). ASL will be taught through four categories: cultural awareness, grammatical features, vocabulary development and conversational skills. Students will develop mastery of targeted vocabulary, conversational facilitating behaviors, and conversational regulating behaviors. Offered Every Term.

ASE 3020 American Sign Language II Cr. 3
This is the second in a series of courses designed to further the development of comprehension and production abilities in American Sign Language (ASL). Lessons are designed around recognition and demonstration of more sophisticated grammatical features of ASL with focus on increasing fluency and accuracy. Cultural awareness of the Deaf communities of the world are also instilled. Offered Every Term.
Prerequisite: ASE 3000 with a minimum grade of C-

ASE 3030 American Sign Language III Cr. 3
This is the third in a series of courses designed to further develop comprehension and production abilities in American Sign Language (ASL). Lessons are designed around recognition and demonstration of more sophisticated grammatical features of ASL with focus on increasing fluency and accuracy. Cultural awareness of the Deaf communities of the world are also instilled. Offered Fall.
Prerequisite: ASE 3000 with a minimum grade of C- and ASE 3020 with a minimum grade of C-

ASE 3040 American Sign Language IV Cr. 3
This is the fourth in a series of courses designed to further development of comprehension and production abilities in American Sign Language (ASL). Lessons are designed around recognition and demonstration of more sophisticated grammatical features of ASL with focus on increasing fluency and accuracy. Cultural awareness of the Deaf communities of the world are also instilled. Offered Winter.
Prerequisite: ASE 3030 with a minimum grade of C-

ASE 5050 Deaf Culture Cr. 3
This course is to introduce students to the most important aspects of the American Deaf experience with history, contributions, and contemporary lives of Deaf people. This course will address topics such as the diversity of Deaf people, Deaf cultural norms, controversial issues, Deaf arts, and Deaf international communities. Offered Yearly.

ASE 5060 Fingerspelling and Numbers Cr. 3
This course is to provide an overview of American Sign Language fingerspelling techniques and numbering skills, focusing on improving students' receptive and expressive skills. Students that take this course will be able to communicate with speed, dexterity and clarity. Offered Yearly.
Prerequisites: ASE 3000 with a minimum grade of C-

ASE 5070 Non-Manual Grammatical Features of American Sign Language Cr. 3
This course focuses on specific facial manipulations that are crucial grammatical component of American Sign Language (ASL) such as lexical, morphological, and syntactical non-manual signals construction by the mouth, cheeks, eyes, brows, head, and shoulders. Offered Fall.
Prerequisites: ASE 3020 with a minimum grade of C-

ASE 5080 Deaf Bilingual Teaching Methods Cr. 3
Methodological understanding of teaching and assessing constructs of all subject content appropriate for deaf and hard of hearing students. Offered Fall.
Prerequisites: ASE 3040 with a minimum grade of D-
Corequisite: TED 6640

ASL - Art: Sculpture

ASL 2150 Beginning Sculpture Cr. 3
Instruction in traditional techniques and concepts of sculpture including modeling the figure from observation using clay, moldmaking, carving, construction, and casting. Lectures, demonstrations, critiques. Offered Every Term.
Fees: $115

ASL 3150 Intermediate Sculpture Cr. 3
Contemporary concerns in sculpture. Idea, scale, site, light, movement, and serial forms. Offered Every Term.
Prerequisites: ASL 2150 and (ADR 1050, ACO 1200, ACO 1230, or ACO 1270)
Fees: $90

ASL 3170 Figurative Sculpture I Cr. 3
Instruction in traditional, representational, figurative sculpture. Historical examples, concepts and techniques. Basic anatomy, observation, modeling, gesture, proportion, plane, volume, mass, texture, portraiture; use of calipers, armatures, and moldmaking. Carving, construction, and casting are optional. Offered Fall.
Prerequisites: ADR 1050, ACO 1200, ACO 1230, or ACO 1270
Fees: $90

ASL 3190 Sculpture Foundry I Cr. 3
Creation of sculpture using metal. Bonded-sand and investment casting using bronze and aluminum; chasing and patinas; oxy-acetylene, stick, mig, and tig welding; plasma cutting. Offered Yearly.
Prerequisites: ASL 2150 and (ADR 1050, ACO 1200, ACO 1230, or ACO 1270)
Fees: $115

ASL 3200 Wood Shop Practice I Cr. 3
This course explores the tools, machinery, and commonly used materials common to the wood shop environment. Processes suitable for studio art, craft, and design practices are introduced. Problem solving ability and technical skill range are built through exercises introducing ordered sequences of tool use and material handling. Offered Every Other Year.
Prerequisites: ACO 1200, ACO 1230, ACO 1270, or ADR 1050
Fees: $150

ASL 3300 Moldmaking I Cr. 3
This course examines moldmaking and casting materials and processes suitable for studio art, craft, and design scaled practice. Problem solving ability and technical skill range are built through exercises introducing various moldmaking techniques and materials. Offered Every Other Year.
Prerequisites: ADR 1050, ACO 1200, ACO 1230, or ACO 1270
Fees: $175

ASL 5150 Advanced Sculpture Cr. 3
Development of personal and professional body of work. Discussions, lectures, assignments. Offered Every Term.
Prerequisites: ASL 3150
Fees: $90
Repeatable for 9 Credits

ASL 5170 Figurative Sculpture II Cr. 3
Emphasis on advanced and self-directed problems in figurative sculpture. Offered Yearly.
Prerequisites: ASL 3170
Fees: $90
Repeatable for 9 Credits

ASL 5180 Sculpture: Advanced Technology Cr. 3-6
One major project, which explores the application of non-traditional materials and technologies: research, industrial liaisons, equipment. Offered Intermittently.
Prerequisites: ASL 5170
Fees: $200
Repeatable for 12 Credits

ASL 5190 Sculpture Foundry II Cr. 3
Development of ideas and skills using either casting or fabrication or both. Offered Yearly.
Prerequisites: ASL 3190
Fees: $115
Repeatable for 9 Credits

ASL 5200 Wood Shop Practice II Cr. 3
This course explores the tools, machinery, and commonly used materials common to the wood shop environment. Processes suitable for studio art, craft, and design practices are examined. Problem-solving ability and technical skill range are expanded through exercises introducing advanced ordered sequences of tool use and material handling. Offered Every Other Year.
Prerequisites: ASL 3200
Fees: $150
Repeatable for 9 Credits

ASL 5300 Moldmaking II Cr. 3
This course examines advanced studio moldmaking practices suitable for studio art, craft, and design scaled practice. Problem solving ability and technical skills are enhanced through the application of various moldmaking techniques and materials to advanced moldmaking problems. Offered Every Other Year.
Prerequisites: ASL 3300
Fees: $175
Repeatable for 9 Credits

ASL 5810 Special Topics in Sculpture Cr. 3
Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: ADR 1050, ACO 1200, ACO 1230, or ACO 1270
Fees: $90
Repeatable for 9 Credits

ASL 5820 Directed Projects Cr. 3-6
Independent projects done in consultation with instructor. Offered Fall, Winter.
Fees: $90
Repeatable for 9 Credits

ASL 7150 Graduate Sculpture Cr. 3
Graduate-level problems. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts or Master of Fine Arts degrees; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 9 Credits

ASL 8820 MFA Studio: Sculpture Cr. 3-9
Extended problems in sculpture; individual research with eighteen to twenty-seven hours of laboratory per week. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Art, Art History, and Design.
Fees: $90
Repeatable for 36 Credits

ASN - Asian Studies

ASN 1700 East Asia to the 1700s Cr. 3
Satisfies General Education Requirement: Social Inquiry
From antiquity to the 1700s; emphasis on political, economic, social, and cultural developments in China, Japan, and Korea, and the nature and impact of their interactions. Offered Intermittently.
Equivalent: HIS 1700

ASN 1710 History of Modern East Asia Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
From beginning of nineteenth century to the present; emphasis on political, social and economic developments in China, Japan and Korea. Offered Yearly.
Equivalent: HIS 1710

ASN 2500 Introduction to Asian American Studies Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
This course will provide an overview of the historical and contemporary experiences of Asian Americans and Asian migrants in the United States. We will examine major themes, including race and racism, exclusion and assimilation, ethnic and pan-ethnic identities and communities, intersectionality and comparative racialization, as well as activism and social movements. We will analyze these themes within the broad dynamics of empires, wars, globalizations, migrations, and the making of the U.S. as a nation-state and a global power. Offered Yearly.
Equivalent: TED 2500

ASN 2800 Culture Studies in Japan (Homestay and Study Abroad Tour) Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Survey of Japanese culture taught in English. Introduction of family and group organization, customs, pop culture (fashion/music/films), aspects of daily lives (thought/religion/arts/society), and a brief modern history. Also, survival language practice. Offered Spring/Summer.
Prerequisites: JPN 1010 with a minimum grade of D-
Equivalent: JPN 2800

ASN 3870 History of Japanese Pop Culture Cr. 3
Explores the history of Japanese pop culture and its global spread, with both an emphasis on historical influences, intended messages, and appeal in Japan and around the world, and examination of manga, anime, video games, sports, fashion, literature, music, film, and food. Offered Every Other Year.
Equivalent: HIS 3870

ASN 3995 Special Topics in East Asian Studies Cr. 3
Special topics in Asian Studies language, literature, or culture. Offered Yearly.
Repeatable for 6 Credits

ASN 5000 Space and Everyday Life in Chinese Literature and Film Cr. 3
This course explores spaces and everyday practices within these spaces represented in Chinese literature, film, as well as art. We will primarily focus on everyday life from early modern China through modern times, discussing the interactions among spaces, practices of daily life, and literary as well as cinematic representations. A knowledge of modern Chinese is not required. Offered Every Other Year.
Equivalent: CHI 5000

ASN 5855 Pre-Modern Japan Cr. 4
Japanese history from its mythical origins to early nineteenth century; political, economic, social, cultural developments. Offered Every Other Year.
Equivalent: HIS 5855

ASN 5865 Modern Japan Cr. 4
Japanese history from the early nineteenth century to the present; emphasis on political, economic, and social developments. Offered Yearly.
Equivalent: HIS 5865

ASN 5875 Gender in Modern East Asia Cr. 4
History of gender in China, Japan, and Korea, with topics to include Confucianism, the state's role in gender construction, nationalism, imperialism, marriage, family, labor, sexuality, and feminism. Offered Every Other Year.
Equivalent: GSW 5875, HIS 5875

ASN 5993 Writing Intensive Course in Asian Studies Cr. 0
Disciplined writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated corequisite. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.

AST - Astronomy

AST 1010 Discovering the Universe Cr. 1
This is a first-year astronomy laboratory course designed to introduce and explore the field of astronomy. We will discuss current hot topics throughout astronomy, and explore data from observatories including Wayne State's robotic Zowada Observatory, as well as NASA missions. It is intended for astronomy majors and minors or those considering an astronomy major or minor. Offered Yearly.

AST 2010 Descriptive Astronomy Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry
Lecture course that introduces the concepts and methods of modern astronomy, the solar system, stars, galaxies, and cosmology; recent discoveries about planets, moons, the sun, pulsars, quasars, and black holes. Meets General Education Laboratory requirement only when taken with Coreq: AST 2011. Offered Every Term.

AST 2011 Descriptive Astronomy Laboratory Cr. 1
Laboratory exercises and observations; includes two late evening viewing sessions. Satisfies General Education Laboratory requirement when taken concurrently with AST 2010. Offered Every Term.
Prerequisites: AST 2010 with a minimum grade of C (may be taken concurrently), AST 5010 with a minimum grade of C (may be taken concurrently), or PHY 5010 with a minimum grade of C (may be taken concurrently)
Fees: $25

AST 2030 Life in the Universe Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry, Quantitative Experience Comp
Are we alone in the Universe? In the last three decades astronomers have discovered thousands of planets around stars other than our own Sun. Which of those planets might have the right conditions to harbor life? In this course we will discuss the emerging field of astrobiology. We will explore the conditions needed for life, where in the Universe might have those conditions, and how scientists are searching for planets and signs of life elsewhere in the Universe. Offered Fall, Winter.

AST 4100 Astronomical Techniques Cr. 3
Techniques of modern astrophysics. Detectors used in astronomy for optical and infrared photons, radio and microwaves, X- and gamma rays, and neutrinos. Techniques in imaging, photometry, spectroscopy, astrometry, polarimetry, and for analyzing public data available on the web. Offered Fall.
Prerequisites: PHY 2180 with a minimum grade of C- and PHY 2181 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

AST 4200 Astronomical Laboratory Cr. 2
Introduction to laboratory techniques of modern astrophysics. Optical astronomy, including measurement of the quantum efficiency of a CCD-based astronomical digital camera; measurement of the throughput as a function of wavelength of a set of standard astronomical filters; measurement of the HR diagram of a star cluster using the calibrated camera and filters. Offered Fall.
Prerequisites: AST 4100 with a minimum grade of D- (may be taken concurrently)
Fees: $25

AST 4300 Planetary Astronomy and Space Science Cr. 3
Formation and evolution of the solar system: planetary surfaces, interiors, atmospheres, and magnetospheres; asteroids, comets, planetary satellites, and ring systems. Emphasis on using basic physics to understand observed properties of the solar system. Offered Winter.
Prerequisites: PHY 2180 with a minimum grade of C- and PHY 2181 with a minimum grade of C-

AST 5010 Astrophysics and Stellar Astronomy Cr. 3
Electromagnetic radiation and matter; solar characteristics; stellar distances; magnitudes; spectral classification; celestial mechanics; binary stars; stellar motions, structure and evolution; compact and variable stars; Milky Way Galaxy and interstellar medium; galaxies and clusters of galaxies; quasars; Hubble's Law; cosmology. Offered Every Other Winter.
Prerequisites: (PHY 2140 with a minimum grade of C- or PHY 2180 with a minimum grade of C-) and MAT 2010-6XXX with a minimum grade of C-
Equivalent: PHY 5010

AST 5100 Galaxies and the Universe Cr. 3
Exploration of the world of galaxies, starting with the Milky Way and moving outward to larger scales. Basic properties of galaxies: galaxy classification, structure, evolution, observations of Active Galactic Nuclei (AGN), Quasar, and Seyfert galaxies. Discovery of dark matter and black holes. Cosmology: origins of the universe in a hot big bang; its expansion history including recent evidence that the cosmic expansion is accelerating; the cosmic microwave background, and the ultimate fate of the universe. Capstone course for astronomy majors. Offered Winter.
Prerequisites: PHY 3300 with a minimum grade of C-

AST 6080 Survey of Astrophysics Cr. 3
This course provides an introduction to high-energy astrophysics with a focus on X-ray astronomy. We will cover the physics of X-ray emission and absorption in an astrophysical context, as well as discussing observational techniques used to detect X-rays. Bright X-ray emitting objects are some of the most extreme in the universe, and we will discuss objects including neutron stars, black holes, cataclysmic variables, supernovae and supernovae remnants, and galaxy clusters. Offered Every Other Year.
Prerequisites: PHY 3330 with a minimum grade of C-
Equivalent: PHY 6080

AT - Art Therapy

AT 6300 Explorations in Art Therapy Cr. 3
Provides an introduction to art therapy, its history and development, and major approaches. Offered Yearly.

AT 6320 Art Therapy: Introduction and Ethics Cr. 3
Introduction to and ethics of art therapy practice. For graduate students enrolled in the Art Therapy Program. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

AT 6340 Theory of Art Therapy Cr. 3
Slide lectures, studio experiences, assigned readings, discussions, and critical evaluations in the history and literature of art therapy and closely-related fields. Offered Yearly.

AT 6360 Aspects of Art Therapy Cr. 1
Aspects of the use of art therapy chosen to develop students' breadth or depth in art therapy practice with various groups and settings. Offered Yearly.
Repeatable for 12 Credits

AT 7000 Research in Art Therapy Cr. 3
Skill development in the three primary areas: information access through the variety of resources available in a university library; comprehension and evaluation of technical literature; employment of APA style in technical writing. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

AT 7300 Studio Art Therapy Cr. 3
This studio experience will explore a holistic, arts-based approach to the therapeutic process. Because art therapy begins with the art therapist, a focus is placed on actively developing personal and professional identity through one's own artwork. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

AT 7310 Art Therapy with Groups Cr. 3
Therapeutic factors of groups; facilitation of art therapy groups. Offered Winter.
Prerequisites: AT 6320 with a minimum grade of C and AT 6340 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

AT 7330 Art Therapy with Children and Adolescents: Assessment and Practice Cr. 3
Slides, lectures and studio experiences relating to the research, theory and practices of art therapy with children. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

AT 7340 Art Therapy with Adults and Families: Assessment and Practice Cr. 3
This course offers an in-depth presentation of theory, practice, and assessment with adults and families. Emphasis is on the student developing knowledge of art therapy assessment techniques. The student will also begin to develop treatment skills to be used with clinical adult populations, including families, addictions and trauma. Areas to be covered include use of appropriate art assessments with adults, families and groups; types of assessment techniques available to art therapists; interpretation of the art produced during the assessment; and use of this knowledge in treatment. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

AT 7380 Art Therapy Practicum Cr. 3
Art Therapy practicum experience with children, adults, groups, individuals. Includes: assessment, treatment planning, session facilitation, written case summary and case study presentation. Offered Yearly.
Prerequisite: AT 6320 with a minimum grade of C and AT 6340 with a minimum grade of C and AT 7310 with a minimum grade of C and AT 7340 with a minimum grade of C and AT 7500 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

AT 7500 Cultural and Social Diversity in Art Therapy Cr. 3
The course provides art therapy and counseling students with discipline-specific experiences, current theoretical perspectives, and best practices to develop culturally appropriate, collaborative, and productive therapeutic relationships with clients and enhance the effectiveness of their work in diverse and multicultural therapeutic environments. Students will recognize the impact of oppression, prejudice, discrimination, and privilege on access to mental health care and develop responsive practices that include empowerment, advocacy, and social justice action. Additionally, students will integrate new knowledge of cultural diversity, micro#aggressions, long#term effects of historical oppression, and common cultural beliefs and practices into students' daily and professional interactions with others, enabling effective professional practice within our multicultural society, classrooms, and therapeutic settings. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Education.

AT 7890 Art Therapy Internship Cr. 1-6
Supervised internship in the practice of art therapy with individuals, groups and/or families. Students complete internship hours at predetermined site(s) off campus, and participate in on-campus seminars and individual supervision. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

AT 7999 Art Therapy Master's Project and Specialization Cr. 3
This course provides students with the opportunity to integrate knowledge in their field using art-based and other established research methods, innovative methods of inquiry, clinical practice, or a synthesis of these methods. An original culminating research project produced in this course offers an opportunity for specialization and furthers students' professional goals. Offered Yearly.
Prerequisite: AT 7000 with a minimum grade of C or EER 7640 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

ATR - Athletic Training

ATR 5110 Pathophysiology of Sports Injuries Cr. 3
Explores musculoskeletal sports injury from a pathophysiological and pathomechanical perspective. The effects of acute trauma and repetitive stress on the musculoskeletal system are examined. Additionally, the pathophysiology of sports related concussion is explored. Cumulative emphasis is placed on the evaluation process contributing to the foundational level of differential diagnosis. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Athletic Training.

ATR 5115 Acute Care of Athletic Injuries Cr. 3
Students will develop an understanding of fundamental clinical practice concepts utilized by athletic trainers in the prevention, recognition, treatment and disposition of acute athletics-related illnesses and injuries. Emphasis is placed on the implementation of the emergency action plan and on-field/on-site assessment. Students will cultivate practical skills necessary for emergent care while developing the foundational level of differential diagnosis for acute injury/and illness. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Athletic Training.
Fees: $30

ATR 5125 Orthopedic Assessment Cr. 3
Addresses assessment of musculoskeletal and orthopedic related impairments and injury. Focuses on the evaluation process and diagnostic procedures associated with clinical reasoning and the development of differential diagnosis for clinical application. Offered Fall.
Prerequisite: ATR 5110 with a minimum grade of C and ATR 5115 with a minimum grade of C

ATR 5130 Therapeutic Interventions I Cr. 3
A lecture and lab experience, focused on the principles and procedures for the selection and application of physical agents and mechanical techniques, essential for the management of musculoskeletal injury and/or dysfunction. Evidence-based practice (EBP) will be integrated throughout the course to enhance the development of treatment plans and clinical application. Offered Fall.

ATR 5135 Evidence-Based Practice in Athletic Training Cr. 3
Introduces the concepts of evidence-based medicine and provides the student with information on how evidence-based medicine can affect the clinical practice of athletic training and enhance the care given to patients. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Athletic Training.

ATR 5140 Clinical Gross Anatomy Cr. 3
Comprehensive review of human anatomy as it pertains to athletic training clinical practice. Students will develop an understanding of human anatomy and its relationship to etiology, evaluation, diagnosis, treatment, and rehabilitation of various medical conditions. Course content will emphasize, but is not limited to, the muscular, skeletal, nervous, and vascular systems. Prosected human cadavers, plastinated specimens, anatomical models, and computerized software/imaging will be used as instructional methods. Offered Winter.
Fees: $220

ATR 5145 Therapeutic Interventions II Cr. 3
Provides conceptual and practical application of therapeutic interventions addressing musculoskeletal and orthopedic related conditions. Students will determine therapeutic intervention care plans consistent with patient-centered functional outcomes. Specific emphasis will be placed on therapeutic and corrective exercise. Offered Winter.

ATR 5149 Pre-Season Integrative Experience I Cr. 1
Provides a clinical experience designed to satisfy the clinical education requirements for professional athletic training program. As a part of this experience, students will be supervised by a preceptor at an approved clinical site. Specific emphasis will be placed on taping, wrapping, pathology recognition, first aide, and acute injury management. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Athletic Training.
Fees: $50

ATR 5150 Integrative Experience in Athletic Training I Cr. 4
Provides a clinical experience designed to satisfy the clinical education requirements for a professional level AT curricular program. As a part of this experience, students will be supervised by a preceptor at an approved clinical site. Specific emphasis will be placed on taping and bracing techniques, acute care of athletic injuries and the injury evaluation process. Clinical skill integration and competency completion appropriate for current level of didactic coursework and clinical integration will be assessed. Offered Fall.
Prerequisite: ATR 5149 with a minimum grade of C
Fees: $50

ATR 5151 Integrative Experience in Athletic Training II Cr. 4
Provides a clinical experience designed to satisfy the clinical education requirements for a professional level AT curricular program. As a part of this experience, students will be supervised by a preceptor at an approved clinical site. Specific emphasis will be placed on orthopedic evaluation, the clinical diagnosis process and the clinical application of therapeutic modalities. Clinical skill integration and competency completion will be assessed. Offered Winter.
Fees: $50

ATR 5159 Pre-Season Integrative Experience II Cr. 1
Students will engage in a second-year clinical experience, participating in a pre-season training camp. The experience will be designed to increase clinical competence concurrent with didactic material. This course provides a clinical field experience emphasizing progressive athletic training skills and procedures. As part of this experience, students will be assigned to a preceptor at an appropriate clinical site. Students will be assigned to intercollegiate, interscholastic, or professional sports organizations, rehabilitation facilities, or other health care facilities. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Athletic Training.
Fees: $50

ATR 5215 Medical and Pharmacologic Interventions Cr. 3
This course will explore a systems approach to clinical medicine, to include pathology and pharmacology management of injury and illness commonly encountered in athletic training professional practice. Knowledge of medical examination, patient monitoring, and standard techniques and procedures as applied to clinical decision making and risk-reduction will be advanced. Offered Spring/Summer.
Prerequisite: ATR 5130 with a minimum grade of C and ATR 5145 with a minimum grade of C

ATR 5225 Organization and Administration in Athletic Training Cr. 3
Students will be acquainted with the proper organization and management techniques utilized by certified athletic trainers in health care administration of athletic training programs. Offered Fall.
Prerequisite: ATR 5140 with a minimum grade of C and ATR 5145 with a minimum grade of C and ATR 5215 with a minimum grade of C

ATR 5230 Transition to Practice Cr. 3
Students will engage in a comprehensive review of the athletic training curriculum in preparation for the national credentialing examination required for professional practice. Emphasis will be placed on effective strategies and preparation for transitioning to employment as an athletic trainer. Additionally, students will gain exposure to the history, rationale, and clinical implementation for a variety of contemporary interventions practiced in the professional setting. Offered Winter.
Prerequisite: ATR 5151 with a minimum grade of C
Corequisite: ATR 5252

ATR 5250 Interprofessional Practice Experience Cr. 2
Students will be exposed to clinical experiences within various health care settings and areas of medicine (e.g., emergency rooms, surgery, primary care/general medicine, dermatology, etc.). In addition, the clinical experiences will foster interprofessional practice by including interactions and collaborations with other health care professions. As part of this experience, students will be supervised by a preceptor at an approved clinical site. Specific emphasis will be placed on interprofessional practice, patient practitioner interactions, and communication. Offered Spring/Summer.
Prerequisite: ATR 5151 with a minimum grade of C
Corequisite: ATR 5215

ATR 5251 Integrative Experience in Athletic Training III Cr. 4
Provides a clinical experience designed to satisfy the clinical education requirements for a professional level AT curricular program. As a part of this experience, students will be supervised by a preceptor at an approved clinical site. Specific emphasis will be placed on the clinical application of therapeutic rehabilitation/exercise, manual therapies, treatment and management of dislocations, general medical conditions/evaluation/diagnosis/treatment, concussion evaluation/diagnosis/management, and sport performance and injury prevention. In addition, simulations will be used as an instructional strategy to advance clinical skill acquisition, expose students to various pathologies and conditions, and assess competence. Clinical skill integration and competency completion will be assessed. Offered Fall.
Prerequisite: ATR 5140 with a minimum grade of C and ATR 5145 with a minimum grade of C and ATR 5215 with a minimum grade of C
Fees: $50

ATR 5252 Clinical Immersion in Athletic Training Cr. 6
Provides a clinical experience designed to satisfy the clinical education requirements for an accredited professional level AT curricular program. In particular, the course will be associated with a 12-week clinical immersion where the student is assigned to a preceptor at an approved clinical site. The purpose of the clinical immersion is to provide students with a real-world depiction of athletic training to prepare them for employment. In addition, simulation examinations will be used as an instructional strategy to advance clinical skill acquisition, expose students to various pathologies and conditions, and assess competence. Offered Winter.
Fees: $50

AUD - Audiology

AUD 5400 Introduction to Audiology Cr. 3
Introduction to physics of sound, anatomy of the hearing mechanism, audiometry, hearing aids, habilitation and rehabilitation of the hearing handicapped. Offered Fall, Winter.

AUD 5420 Introduction to Aural Rehabilitation Cr. 3
Principles and practices of aural rehabilitation including hearing aids. Offered Winter, Spring/Summer.
Prerequisites: AUD 5400 with a minimum grade of D-

AUD 6000 Electrophysiological Procedures Cr. 4
Two distinct electrophysiological procedures, auditory evoked potentials and otoacoustic emissions, are presented. Both procedures consist of several sub-tests used to assess the auditory system from the middle ear to the cortex, in normal and disordered ears. Offered for graduate credit only. Offered Spring/Summer.
Prerequisite: AUD 5400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

AUD 6030 Instrumentation in Audiology Cr. 3
Operation, hook-up, scientific notation, systems of measurement, calibration and repair of instruments and software used in clinical audiology. Offered for graduate credit only. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

AUD 6040 Auditory and Vestibular Pathologies Cr. 4
Disorders of the auditory and vestibular systems. Etiology, pathological characteristics, medical and non-medical therapies.. Offered for graduate credit only. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

AUD 6310 Audiology Clinical Practicum Series Cr. 3
Progression of knowledge and skill level, from introductory basic clinical skills through advanced clinical protocols for difficult to manage patients. Offered for graduate credit only. Offered Every Term.
Prerequisite: AUD 6410 with a minimum grade of C and AUD 6411 with a minimum grade of C and AUD 6412 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10
Repeatable for 9 Credits

AUD 6400 Anatomy, Physiology, and Psychophysiology of Audition Cr. 4
Structure and function of the human auditory system. Psychophysical theories of hearing. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Audiology or Speech-Language Pathology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy, Master of Arts or Master of Science degrees.

AUD 6410 Basic Audiologic Evaluation Cr. 3
Principles and application of pure-tone and speech audiometry, clinical masking, and impedance/immittance testing. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

AUD 6411 Audiology Clinical Laboratory I Cr. 2
Development of basic competencies related to clinical procedures and methods for evaluation and treatment of clients; maintenance and use of technology in the university audiology clinic. Student will observe and begin to perform evaluations under faculty supervision. Offered for graduate credit only. Offered Fall.
Prerequisite: AUD 6410 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $135

AUD 6412 Audiology Clinical Laboratory II Cr. 2
Continuation of basic competency development related to clinical procedures and methods for evaluation and treatment of clients, maintenance and use of technology in an audiology clinical practice. Students perform evaluations under faculty supervision. Offered for graduate credit only. Offered Winter.
Prerequisite: AUD 6040 with a minimum grade of C and AUD 6411 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $135

AUD 6413 Audiology Clinical Laboratory III Cr. 2
Continuation of competency development related to clinical procedures and methods for evaluation and treatment of clients, including advanced testing procedures. Course includes a rotating placement at a local health system. Offered for graduate credit only. Offered Spring/Summer.
Prerequisites: AUD 6411 with a minimum grade of B- and AUD 6412 with a minimum grade of B-
Restriction(s): Enrollment is limited to students with a major in Audiology; enrollment limited to students in the Doctor of Audiology or Doctor of Audiology programs; enrollment is limited to Graduate level students.
Fees: $135

AUD 6430 Principles of Amplification I Cr. 3
Electroacoustic and clinical aspects of acoustic amplifiers and developmental history of hearing aids. Offered for graduate credit only. Offered Winter.
Prerequisite: AUD 6410 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

AUD 6530 Principles of Amplification II Cr. 3
Fundamentals of digital technology, compression, channeling and programming, and applications to various hearing impairment parameters. Offered for graduate credit only. Offered Fall.
Prerequisite: AUD 6430 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

AUD 7300 Clinical Internship Cr. 3
Supervised observation, training and practice in audiological procedures. Placements in local audiology settings as assigned by clinical rotation coordinator. Offered Every Term.
Prerequisite: AUD 5400 with a minimum grade of C and AUD 6410 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

AUD 7320 Issues, Ethics and Scope of Practice in Audiology Cr. 2
Code of Ethics and Scope of Practice as published by the professional organizations for audiology. Issues and case studies in ethical practice, malpractice, legal responsibilities, best practice, and counseling. Offered Spring/Summer.
Prerequisite: AUD 6000 with a minimum grade of C and AUD 6430 with a minimum grade of C and AUD 8430 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

AUD 7350 Contemporary Issues in Audiology Cr. 1-4
Integrated seminar; topics announced in Schedule of Classes. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 16 Credits

AUD 7420 Hearing Loss Prevention Programs Cr. 3
Assessment of damage risk criteria for noise-induced hearing loss. Implementation and management of hearing loss prevention programs in industry, schools, and community settings. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

AUD 7430 Pediatric Audiology Cr. 3
Introduction to embryology, tests, test procedures, and counseling of parents with hearing-handicapped children. Offered Spring/Summer.
Prerequisite: AUD 6410 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

AUD 7500 Aural Rehabilitation Cr. 3
Treatment procedures, measurement and electrophysiological instrumentation, ethical dilemmas. Offered Spring/Summer.
Prerequisite: AUD 5420 with a minimum grade of C and AUD 6430 with a minimum grade of C and AUD 6530 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

AUD 7520 Counseling in Audiology Cr. 1
Basic counseling principles and techniques applied to patients and their family members during evaluation and treatment of auditory and balance disorders. Offered Spring/Summer.
Prerequisite: AUD 6410 with a minimum grade of C and AUD 6411 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Communication Sci & Disorders.

AUD 7540 Genetic Auditory Disorders Cr. 3
Medical genetics and its application to hearing loss and craniofacial disorders; genetic etiology, diagnosis, therapeutic implications. Ethical, legal and social issues: cloning, gene therapy, and prevention. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Audiology, Communication Sci & Disorders, Comm Sci & Disorders Honors or Speech-Language Pathology; enrollment is limited to Graduate level students.

AUD 7550 Intra-operative Neurophysiologic Monitoring Cr. 2
Presentation of the techniques used to monitor neurological centers during head/neck surgery. Operating room observations required. Offered Spring/Summer.
Prerequisite: AUD 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Audiology, Communication Disorders&Sci or Commun Disorders&Sci Hon; enrollment is limited to Graduate level students.

AUD 7630 Neuroscience of Communication Disorders Cr. 3
Neuroscience, neurophysiology, neuropsychology, neuroimaging, normal aging processes and neurodevelopment in communication sciences and disorders. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: SLP 7630

AUD 7990 Directed Study Cr. 1-3
Literature review of an approved topic in audiology under supervision of the graduate faculty. Course may include an experimental investigation. Comprehensive written report is required. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

AUD 8300 Audiology Fellowship Cr. 8
Advanced supervised clinical practice in an off-campus setting over the final three semesters of professional study. Offered Every Term.
Prerequisite: AUD 7300
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 24 Credits

AUD 8350 Research Seminar Cr. 3
Topics announced in Schedule of Classes. Emphasis on clinical research methods. Offered Yearly.
Prerequisite: SLP 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 15 Credits

AUD 8430 Equilibrium/Vestibular System Evaluation Cr. 4
Anatomy, physiology and functional assessment of the vestibular system including instrumentation, procedures, and interpretation of ENG, dynamic posturography, and rotational velocity testing recordings. Hands-on laboratory exercises included. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

AUD 8440 Medical Issues: Tinnitus, Central Auditory Processing and Auditory Neuropathy Cr. 3
Role of the audiologist in the medical setting; advanced clinical skills and knowledge; health care issues and professional interaction in the medical setting. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

AUD 8450 Advanced Auditory/Vestibular Electrodiagnosis for Balance Assessment and Treatment Cr. 4
Advanced evaluation of dizzy/balance patients; traditional test battery use with complex balance patients; recently developed electrophysiological techniques and computerized assessments; expansion of clinical and technical skills; walking and gait analysis. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

AUD 8460 Cochlear Implants and Other Auditory Prostheses Cr. 3
New developments in assisted listening devices and cochlear implant protocols. Offered Winter.
Prerequisite: AUD 6530 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

BA - Business Administration

BA 5800 Business Virtual Global Internship Cr. 1-6
The Internship allows students to apply the knowledge they have acquired through the virtual internship opportunity to gain practical experience in their professional areas of interest. Podium Education will be the main course used for this virtual global internship. This internship course also allows students to explore areas where they want to pursue a career. You will have the opportunity to reflect on your work experience with an intercultural lens, document your experience, and articulate the essential skills you develop from the virtual global internship course. Students earning a minimum B- grade will receive a badge for their LinkedIn site. Offered Every Term.

BA 8050 Seminar in Marketing Theory Cr. 3
Reading seminar; approaches to marketing and consumer behavior theory from historical and philosophy of science perspectives. Contributions from disciplines such as international business, economics, psychology, sociology, anthropology, operations research, and psychometrics. Publishable paper expected of students. Offered Every Other Year.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 8054 Seminar in Marketing Strategy Cr. 3
Seminar focuses on strategic marketing issues, including marketing strategy theory; innovation theory; corporate, business, and marketing strategy; new product development strategy; industry structure, competition, and competitive advantage; market orientation; alliances and inter-organizational relationships; knowledge management and organizational learning; customer relationship management; and marketing organization. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

BA 8056 Special Topics Seminar in Marketing Cr. 3
Seminar focuses on the product/branding and the distribution/supply chain functions, as well as the public policy issues in marketing and international business theory and the theory of the multinational enterprise. Its topical coverage will change from one cohort to another in light of faculty interest, department and School staffing needs, and dissertation topic interests of the students in the cohort. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

BA 8058 Advanced Topics in Consumer Behavior Cr. 3
Role of consumer in global economy; integrated marketing issues (IMC), movement toward relationship marketing (RM) across the value added chain to the development of consumer analysis. Conditions, issues, and practices; dimensions of strategic advertising. Offered Yearly.
Prerequisites: BA 8050 with a minimum grade of C
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 8120 Theory of Finance Cr. 3
Modern corporate finance theory for finance doctoral students. Offered Yearly.
Prerequisites: FIN 7220 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

BA 8121 Seminar in Corporate Finance Cr. 3
Theoretical and empirical studies in corporate finance for finance doctoral students. Offered Yearly.
Prerequisites: BA 8120 with a minimum grade of C
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 8122 Empirical Methods in Finance Cr. 3
Fundamental asset pricing theories and empirical methods used in modern financial economics for finance doctoral students. Offered Yearly.
Prerequisites: BA 8120 with a minimum grade of C
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 8123 Seminar in Corporate Governance Cr. 3
Theories and empirical studies in corporate finance for finance doctoral students. Offered Yearly.
Prerequisites: BA 8120 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

BA 8124 Seminar in Asset Pricing Cr. 3
This doctoral seminar examines a variety (and non-exhaustive list) of topics in Asset Pricing. The seminar is driven by student presentations on three or four papers every week. All students are expected to engage in the discussion of the papers at hand. Students will produce two paper replications, each one covering a different topic. Students will advance their knowledge across the general asset pricing discipline and learn to participate in the academic process (i.e., publishing, reviewing, etc.) in finance. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

BA 8129 Development of an Effective Research Program in Finance Cr. 3
The primary purpose of this doctoral research seminar is to facilitate the development of doctoral students' research ideas. One of these ideas should be developed into a full paper with the aim of submitting it to a peer-reviewed journal. Other aims of this seminar include: socializing students to the practices of the academy in the U.S., familiarizing students with major streams of research, preparing students for the dissertation process, and helping students to develop presentation skills. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

BA 8220 Seminar in Organizational Behavior Cr. 3
Areas such as motivation, reward systems, leadership, organizational culture and performance, job design, groups and teams, and decision making. Concepts, theories and fundamentals of organizational behavior (OB); areas of current research, application in global business environment. Offered Yearly.
Prerequisites: MGT 7040 with a minimum grade of C or MGT 7640 with a minimum grade of C
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 8221 Seminar in Strategic Management Cr. 3
Theories and concepts in the strategic management literature including contemporary concepts that apply to the international context. Offered Yearly.
Prerequisites: BA 8220 with a minimum grade of C
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 8420 Seminar in Organizational Theory Cr. 3
Theories of organization for doctoral students. Offered Yearly.
Prerequisites: BA 8220 with a minimum grade of C
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 8777 Professional Development Seminar for Business Doctoral Students Cr. 1-3
Exposure to professional development areas in preparation for productive academic careers; teaching, research writing, and academic culture. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 3 Credits

BA 8900 Development of Effective Research Programs in Business Cr. 3
For doctoral students with a major cognate in finance, management, or marketing. Development, design and execution of effective research projects. Offered Yearly.
Prerequisites: BA 8058 with a minimum grade of C, BA 8122 with a minimum grade of C, and BA 8420 with a minimum grade of C
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 8995 Special Research Topics in Business Cr. 1-3
Advanced research topics for business administration Ph.D. students. Offered Every Term.
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

BA 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.
Repeatable for 12 Credits

BA 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Dissertation research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Doctoral Candidate; enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

BA 9992 Dissertation II Cr. 1-18
Dissertation research. Offered Every Term.
Prerequisite: BA 9991 with a minimum grade of S
Restriction(s): Enrollment limited to students with a class of Doctoral Candidate; enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.
Repeatable for 18 Credits

BA 9993 Dissertation III Cr. 7.5
Dissertation research. Offered Every Term.
Prerequisite: BA 9992 with a minimum grade of S
Restriction(s): Enrollment limited to students with a class of Doctoral Candidate; enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Dissertation research. Offered Every Term.
Prerequisite: BA 9993 with a minimum grade of S
Restriction(s): Enrollment limited to students with a class of Doctoral Candidate; enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BA 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Prerequisite: BA 9994 with a minimum grade of B
Restriction(s): Enrollment limited to students with a class of Doctoral Candidate; enrollment limited to students in the PhD in Business Administration program; enrollment is limited to Graduate level students.

BBE - Bilingual/Bicultural Education

BBE 1005 Multicultural Education in Urban America Cr. 2
Cultural, social, political and economic realities of our complex, pluralistic society in relation to our education system. Development of analytical and evaluative abilities of teachers to deal with racism, sexism, value clarification and the parity of power. Strategies for multicultural education. Offered Every Term.
Equivalent: TED 2210

BBE 5000 Multicultural Education in Urban America Cr. 2
Cultural, social, political and economic realities of our complex, pluralistic society in relation to our education system. Development of analytical and evaluative abilities of teachers to deal with racism, sexism, value clarification and the parity of power. Strategies for multicultural education. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

BBE 5500 Foundations of Bilingual/Bicultural Education Cr. 3
This course examines the history of language education in the United States and the impact of policies on the education of multilingual learners. Through course readings, discussions and assignments, students will develop an understanding of the theoretical foundation and rationale for bilingual and ESL education in the United States. The local implementation of bilingual and ESL programs will also be examined. Offered Fall.

BBE 6510 Topics in Bilingual Education: Language Acquisition and Learning Cr. 3
This course offers a comprehensive exploration of applied sociolinguistics, psycholinguistics, and language acquisition research with a specific focus on the teaching of grammar in PK-12 education. Students will delve into major models of Applied English Linguistics, contrasting linguistic approaches, particularly addressing the comparison between English and linguistically underrepresented communities, prioritizing a culturally responsive approach aiming to enhance effective language instruction in all educational settings. Offered Yearly.

BBE 6520 Culturally Sustaining Lang Teaching: Reflective Practice to Promote Integ of Content & Lang Learning Cr. 3
This course addresses culturally sustaining practices for teaching language learners that builds on current research and language acquisition theories. National and state standards will be examined and applied to lesson design with a focus on the domains of listening and speaking. Offered Yearly.

BBE 6560 Home Language Use and Learning in Bilingual Bicultural Education Cr. 3
Exploration of theories, methods, and curricula for teaching bi/multilingual learners in PreK-12 bilingual programs. Identification of instructional approaches for language development, biliteracy and content learning. Examination of specific ways current research and materials inform curriculum design for multilingual learners. Offered Intermittently.

BBE 6590 Culture and Language in Bilingual/Bicultural Education Cr. 1-3
Research and application of multicultural activities for designing processes to bring language and culture, and instruction in English, into the classroom. Offered Yearly.
Repeatable for 3 Credits

BBE 6850 Applied Linguistics: Issues in Bilingual Education Cr. 3
Current major models of applied English linguistics, contrasting linguistics with special reference to the comparison of English and linguistic minority languages. Offered Yearly.

BE - Basic Engineering

BE 1050 Career Readiness for Engineering Students Cr. 1
The design of the Career Readiness for Engineering Students series is set to help you identify and apply the steps necessary to reaching your goals related to your career and professional development. The materials & activities provided throughout the course will help you define your career goals, build your personal career materials, identify and apply the skills that are most sought after by employers to prepare you for success at your co-op and throughout your career. Offered Fall.

BE 1060 Building a Foundation for College Success Cr. 1
Satisfies General Education Requirement: Wayne Experience
This course is designed to expose students to the Wayne State University undergraduate experience. Students will gain an understanding of campus resources, institutional values, and the merits of a liberal arts education from an urban research one university. This course will aid in the development of critical and analytical thinking skills necessary for college success while determining one's academic and professional goals. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Freshman.
Equivalent: FPC 1020, RSE 1010

BE 1101 Introduction to Officership Cr. 1
Classroom introduction to leadership, and the experiential examination of leadership, followership, decision-making, and group accomplishment of tasks. Offered Every Other Year.

BE 1102 Introduction to Leadership Cr. 1
Continuation of B E 1101; focus on communications, leadership, and problem-solving. The light infantry platoon and the troop leading process. Offered Every Other Year.
Prerequisite: BE 1101 with a minimum grade of C-

BE 1200 Basic Engineering I: Design in Engineering Cr. 3
Core principles of engineering practice: design, teamwork, professional ethics. Offered Fall, Winter.
Prerequisites: MAT 1050 with a minimum grade of C (may be taken concurrently), MAT 1070 with a minimum grade of C (may be taken concurrently), MAT 1800 with a minimum grade of C (may be taken concurrently), MAT 2010 with a minimum grade of C- (may be taken concurrently), MAT 2020 with a minimum grade of C- (may be taken concurrently), or MAT 2030 with a minimum grade of C- (may be taken concurrently)
Fees: $50

BE 1300 Basic Engineering II: Materials Science for Engineering Applications Cr. 3
Fundamentals of materials science; emphasis on how material properties and behavior affect engineering applications. Offered Every Term.
Prerequisites: (CHM 1125 with a minimum grade of C- or CHM 1100 with a minimum grade of C-), CHM 1130 with a minimum grade of C-, BE 1200 with a minimum grade of C- (may be taken concurrently), (PHY 2170 with a minimum grade of C- (may be taken concurrently) or PHY 2175 with a minimum grade of C- (may be taken concurrently)), and MAT 2020 with a minimum grade of C- (may be taken concurrently)
Corequisite: BE 1310

BE 1310 Materials Science for Engineering: Laboratory Cr. 1
Laboratory component of B E 1300. Offered Every Term.
Corequisite: BE 1300
Fees: $35

BE 1500 Introduction to Programming and Computation for Engineers Cr. 3
Use of computational tools, such as Excel and MATLAB, to solve engineering problems. Topics include general engineering problem solving, algorithm development, programming, and computational analysis. Offered Fall, Winter.
Prerequisites: MAT 2010 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BE 1600 Introduction to Programming and Computation: Python Cr. 3
An introduction to programming using Python for students with no programming experience. Basic control structures (sequence, selection, repetition) and all core data types using objects. Practice on core data structures (string, list, tuple, dictionary, and set). Design, implementation and testing of programs to solve problems with an emphasis on data manipulation using real world, practical examples. Offered Fall, Winter.

BE 2100 Basic Engineering III: Probability and Statistics in Engineering Cr. 3
An introduction to application of probability theory and statistical methods in engineering, including design and manufacturing. Offered Every Term.
Prerequisites: MAT 2020 with a minimum grade of C- (may be taken concurrently)

BE 2201 Innovative Tactical Leadership Cr. 1
Military organizational leadership with focus on leadership development and interpersonal group dynamics. Offered Every Other Year.
Prerequisite: BE 1102 with a minimum grade of C-

BE 2202 Leadership in Changing Environments Cr. 2
Challenges of leading in complex contemporary operational environments. Cross-cultural challenges of leadership applied to practical Army leadership tasks and situations. Offered Every Other Year.
Prerequisite: BE 1102 with a minimum grade of C-

BE 2600 Global Tech Internship Cr. 3
The Global Tech Experience is a virtual, equity-driven experiential learning program that enables undergraduate students from all backgrounds to build career-focused intercultural and technical skills. Offered Every Term.

BE 3000 Engineering Bridge Mentorship Program Leader Cr. 0
Documentation of mentor participation in Engineering Bridge Program. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

BE 3301 Leading Small Organizations I Cr. 2
Leadership development and interpersonal and group dynamics. Methods of visualizing, planning and leading organizations to achieve set goals. Offered Every Other Year.

BE 3302 Leading Small Organizations II Cr. 2
Offered Every Other Year.
Prerequisite: BE 3301 with a minimum grade of C-

BE 3500 Co-Op Record Cr. 0
Engineering practice under supervision in cooperative education program. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Information Technology, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

BE 3510 Internship Experience Cr. 1-3
Engineering practice under supervision in cooperative/internship education program. Written report required. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Industrial Engineering, BS in Information Technology, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Repeatable for 6 Credits

BE 3900 National Design Competition Participant Cr. 0
For engineering undergraduates who are active team members in national engineering design competition projects. Satisfactory completion of this course will document active participation throughout the semester. Offered Every Term.

BE 4401 Leadership and Management Cr. 3
Multiple styles and theories of leadership; ethical decision making, especially as relating to changing organizational and individual behavior; accomplishing goals in resource-constrained environments. Offered Every Other Year.
Prerequisite: BE 3302 with a minimum grade of D-

BE 4402 Military Professionalism and Professional Ethics Cr. 3
Evaluation and assessment of needs of subordinate units and individuals; near-term and short-term plans to address these needs. Analysis of a historical battle as well as analysis of moral and leadership dilemmas in history. Offered Every Other Year.
Prerequisite: BE 4401 with a minimum grade of C-

BE 5900 National Design Competition Projects Cr. 1-4
Primarily for engineering undergraduates who are dedicating a substantial amount of effort towards college-sponsored national design competition projects. Offered Every Term.
Repeatable for 99 Credits

BE 5998 Engineering Honors Thesis Cr. 1-4
Completion of required Honors Thesis. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.
Repeatable for 4 Credits

BIO - Biological Sciences

BIO 1011 The Basics of Climate Change Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
Global climate change is the defining issue of our time because it impacts every aspect of life, from the economy, to agriculture, health, and ecology, in every nation on Earth. The complexity and multidisciplinary nature of climate change, not to mention the preconceptions held by individuals, results in most people having only a limited understanding of the evidence for, predicted effects, and potential solutions to this issue. This course will present students with the scientific background necessary to evaluate the evidence for the theory of anthropogenic climate change and the global effects of climate change. Using the scientific method as a basis, we will explore the multi-disciplinary evidence behind climate change and its global and cross-cultural effects and discuss potential solutions based in adaptation and mitigation. Offered Yearly.

BIO 1030 Biology Today Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
Challenges to modern society from population growth, new diseases, environmental degradation, urban pollution; medical advances and ethical dilemmas in decoding human genome; impact of biological findings on political and personal decisions; issues considered in context of principles and strategies of modern biological research. Optionally, students may add a lab component by enrolling in Bio 1040 concurrently. Not for biology major credit. Offered Fall, Winter.

BIO 1040 Exploring Life Cr. 1
Students will explore key elements of the scientific process, including hypothesis testing, scientific rigor, statistical significance, and peer review. Students will be introduced to fundamental properties and explore basic attributes of various biological systems at a variety of scales. Students will connect knowledge to current societal issues and practice scientific evaluation of arguments and information sources. This lab course is geared towards students who are not majoring in Biology, and is intended to be taken concurrently with BIO 1030 or BIO 1050 lectures. This course may not be taken for credit after BIO 1500 or BIO 1510, or any BIO class at the 2000-level or above. Offered Fall, Winter.
Prerequisites: BIO 1030 with a minimum grade of C- (may be taken concurrently) or BIO 1050 with a minimum grade of C- (may be taken concurrently)
Fees: $25

BIO 1050 An Introduction to Life Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
A factual and conceptual treatment of modern biology at the cell, organismal, and population levels of organization. Students not intending to take BIO 1501 or BIO 1511 labs may optionally add a lab component by enrolling in Bio 1040 concurrently. No credit after BIO 1500 or BIO 1510. Offered Every Term.

BIO 1500 Basic Life Diversity Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
This course provides an overview of the diversity of life on Earth and the processes that impact it. The primary objective of BIO 1500 is to expose students to the great variety of plants, fungi, protists, and animals, examining their structure, function, growth, ecology, evolution, and distribution. BIO 1500 and BIO 1501 must be elected as corequisites when taken for the first time. No credit after former BIO 1520. Offered Every Term.
Prerequisites: BIO 1050 with a minimum grade of C-, BIO Permit to Reg ACT/SAT with a test score minimum of 2, BIO Permit to Reg-(L1-L2) BPE with a test score minimum of 2, or BIO 1510 with a minimum grade of C-
Corequisite: BIO 1501

BIO 1501 Basic Life Diversity Laboratory Cr. 1
Students will explore the branches of life and scientific classification. This course will cover physiological systems, Mendelian genetics and ecological relationships. Students will be introduced to fundamental scientific skills including critical reading and scientific writing, microscopy and use of basic laboratory equipment. BIO 1500 and BIO 1501 must be elected as corequisites when taken for the first time. Offered Every Term.
Corequisite: BIO 1500
Fees: $25

BIO 1510 Basic Life Mechanisms Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
This course provides an understanding of the structure, metabolism and reproduction of living things from the perspective of the cell. The course will focus on the role of biochemical and subcellular components including proteins, nucleic acids, and organelles in the nutrition, inheritance and development of plants and animals. The course will also relate these concepts to topical issues such as nutrition, human genetics, and recombinant DNA technology. BIO 1510 and BIO 1511 must be elected as corequisites when taken for the first time. Offered Every Term.
Prerequisites: BIO 1050 with a minimum grade of C-, BIO Permit to Reg ACT/SAT with a test score minimum of 2, BIO Permit to Reg-(L1-L2) BPE with a test score minimum of 2, or BIO 1500 with a minimum grade of C-
Corequisite: BIO 1511

BIO 1511 Basic Life Mechanisms Laboratory Cr. 1
Students will explore the molecules and biochemical reactions that are vital to life. This course will cover classes of biomolecules, enzymes and life processes including cellular respiration and photosynthesis. Students will be introduced to fundamental scientific skills including critical reading and scientific writing, microscopy and use of basic laboratory equipment. BIO 1510 and BIO 1511 must be elected as corequisites when taken for the first time. Offered Every Term.
Corequisite: BIO 1510
Fees: $30

BIO 2270 Principles of Microbiology Cr. 3
Students will be instructed in the basic principles of microbial structure and function, microbial growth and control, microbial mechanism of pathogenesis, human immune responses, and disease control. Offered Winter, Spring/Summer.
Prerequisites: BIO 1510 with a minimum grade of C- and BIO 1511 with a minimum grade of C-
Corequisite: BIO 2271

BIO 2271 Principles of Microbiology Lab Cr. 2
Students will gain insight into the nature of scientific inquiry, the process by which knowledge is accumulated and accepted as illustrated, and the strengths and limitations of the scientific process and its progressive, self-correcting qualities. Observational and experimental skills will be imparted to students, using both traditional and discovery-based learning. The students will experience the scientific method first hand in performing experiments that reflect the current state of the art and demonstrate the principles underlying major concepts of modern microbiology. Students will also learn to properly record their data in a laboratory notebook. Offered Winter, Spring/Summer.
Prerequisites: BIO 1510 with a minimum grade of C- and BIO 1511 with a minimum grade of C-
Corequisite: BIO 2270
Fees: $90

BIO 2550 Fundamentals of Cell Biology for Neuroscience Cr. 4
This course is designed for undergraduate students majoring in Neuroscience. It introduces the student to the structure and function of the cell, which is the fundamental unit of life, and underlies the functionality of neurons and glia, the cells that make up the brain. Offered Every Term.
Prerequisites: BIO 1510 with a minimum grade of C-

BIO 2600 Introduction to Cell Biology Cr. 4
This course builds on the students' earlier introduction to the basic mechanisms of life and focuses the students on the structure and function of the cell, which is the fundamental unit of all life. It is designed for undergraduates who major in the Biological Sciences or other science majors, including science education, pre-allied health, and engineering. It is also intended for all students who seek an introductory knowledge of cell biology. Offered Every Term.
Prerequisites: BIO 1500 with a minimum grade of C- and BIO 1510 with a minimum grade of C-

BIO 2700 Evolution: Basic Concepts and Applications Cr. 3
Evolution, i.e. "descent with modification," is key to understanding life at the genetic, genomic, and organismal level. Many of the concepts and tools developed by evolutionary biologists have become mainstream concepts and tools in a large number of science areas. This course introduces these basic concepts and tools, and how they relate to key processes that shaped the diversity of organismal life. Course cannot be taken for credit after successful completion of BIO 4200 with a C- or better. Offered Every Term.
Prerequisites: BIO 1500 with a minimum grade of C-

BIO 2870 Anatomy and Physiology Cr. 5
Detailed study of structure and function of the major systems of the body: skeletal, nervous, muscular, endocrine, circulatory, respiratory, digestive, excretory, and reproductive. No major credit for Biological Sciences majors. Offered Every Term.
Prerequisites: BIO 1510 with a minimum grade of C- and BIO 1511 with a minimum grade of C-
Fees: $30

BIO 3070 Genetics Cr. 5
Transmission, nature and action of genetic material in organisms. Laboratory experiments to demonstrate principles of genetics. Offered for five credits to Honors students only; includes lab experience. Offered Every Term.
Prerequisites: (BIO 2550 with a minimum grade of C- or BIO 2600 with a minimum grade of C-) and BIO 1511 with a minimum grade of C-
Fees: $45

BIO 3100 Cellular Biochemistry Cr. 3
Biosynthesis and metabolism of proteins, carbohydrates, lipids, steroids, amino acids and nucleic acids. The basic principles of enzyme kinetics in living systems. Offered Every Term.
Prerequisites: (BIO 2550 with a minimum grade of C- or BIO 2600 with a minimum grade of C-) and CHM 1240 with a minimum grade of D-

BIO 3200 Human Physiology Cr. 3
Basic principles of human physiology, including major systems from a cellular, molecular, and integrative approach. Offered Every Term.
Prerequisites: BIO 2550 with a minimum grade of C-, BIO 2600 with a minimum grade of C-, or BIO 2870 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 3250 Molecular Mechanisms of Microbiology Cr. 3
Introduce students to fundamental mechanisms and the broad spectrum of modern microbiology. An evolutionary approach is used, emphasizing the interrelationships of structure and function on a scale ranging from molecular systems to ecosystems. The course addresses the anatomy, physiology, genetics, and behavior of microorganisms, and interactions of microbes with humans, plants and the environment. The influence of microbes on society will be emphasized by introducing microbial application in commercial products and microbial diseases in their co-evolution with host responses. Offered Fall.
Prerequisites: (1 of (BIO 2550 with a minimum grade of C- or BIO 2600 with a minimum grade of C-) or (BIO 1510 with a minimum grade of C- and CHM 1240 with a minimum grade of C-))
Corequisite: BIO 3251

BIO 3251 Molecular Mechanisms of Microbiology Lab Cr. 2
From the laboratory course, students will gain insight into the nature of scientific inquiry, the process by which knowledge is accumulated and accepted as illustrated, and the strengths and limitations of the scientific process and its progressive, self-correcting qualities. Observational and experimental skills will be imparted to students, using both traditional and discovery-based learning. The students will experience the scientific method first hand in performing experiments that reflect the current state of the art and demonstrate the principles underlying major concepts of modern microbiology. Students will also learn to properly record their data in a laboratory notebook. Offered Fall.
Prerequisites: BIO 3250 with a minimum grade of C- (may be taken concurrently)
Fees: $100

BIO 3270 Introductory Immunology Cr. 3
This course will provide a comprehensive overview of key concepts of innate and adaptive immunity in mammalian organisms, build student appreciation of the elegance and complexity in immune responses against infectious agents, and introduce their implications in autoimmune diseases, organ transplantation and the emerging cancer immunotherapy. Offered Intermittently.
Prerequisites: BIO 2600 with a minimum grade of C- or BIO 2550 with a minimum grade of C-

BIO 3500 Ecology and the Environment Cr. 3
Introduction to key ecological concepts illustrated with contemporary environmental issues; basic population, community, ecosystem, landscape, and global ecology. Offered Fall.
Prerequisites: BIO 1500 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: ESG 3500

BIO 3800 Botany Cr. 3
Introduction to plant morphology, systematics, development, and physiology. Lectures and hands-on laboratory, readings and discussions. Offered Every Other Year.
Prerequisites: BIO 3070 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $40

BIO 4050 Science Advocacy and Public Engagement Cr. 2
This course will provide students with the opportunity to understand diverse types of science media as well as best practices and strategies for interacting with different kinds of audiences. Offered Fall.
Prerequisites: BIO 2550 with a minimum grade of C-, BIO 2600 with a minimum grade of C-, or COM 3150 with a minimum grade of C-
Equivalent: NEU 4050

BIO 4110 Biomedical Technology and Molecular Biology Cr. 4
General principles of molecular biology of prokaryotes and eukaryotes. Includes structures of DNA, RNA, and protein, DNA replication and repair, transcription and translation, gene regulation and gene expression. Emphasis on applications in medical biology and biotechnology. Fulfills General Education Writing Intensive Course in the Major requirement; each student writes reports and one long research paper on topic approved by instructor, in addition to other course writing requirements. Offered Fall.
Prerequisites: BIO 3070 with a minimum grade of C- and BIO 3100 with a minimum grade of C-

BIO 4120 Comparative Physiology Cr. 4
Physiological processes at the molecular, cellular, and organismal levels. Comparison of major physiological systems across groups of organisms. Lab consists of physiology exercises and lab reports that allow students to explore major conceptual themes in physiology. Fulfills General Education Writing Intensive Course in the Major requirement; each student writes reports, and one long research paper on topic approved by instructor, in addition to other course writing requirements. Offered Every Term.
Prerequisites: BIO 1500 with a minimum grade of C-, BIO 3070 with a minimum grade of C-, and BIO 3200 with a minimum grade of C-
Fees: $30

BIO 4130 General Ecology Cr. 4
Principles of population, community, ecosystem, and landscape ecology. Fulfills General Education Writing Intensive Course in the Major requirement; each student writes reports and one long research paper on topic approved by instructor, in addition to other course writing requirements. Offered Winter.
Prerequisites: BIO 3070 with a minimum grade of C- and BIO 3500 with a minimum grade of C-
Fees: $20

BIO 4140 Hormones and Behavior Cr. 3
Examines the relationship between hormones and behavior, taking a biological approach to behavioral questions that have long been of interest to Psychologists, Biologists and Neuroscientists. Explores the research area of Behavioral Endocrinology, a field that seeks biologically (in particular hormone)-based explanations of behavior. Offered Intermittently.
Prerequisites: PSY 1010 with a minimum grade of C and (PSY 3120 with a minimum grade of C or PSY 3330 with a minimum grade of C)
Equivalent: PSY 4140

BIO 4150 Neuronal Circuits Cr. 3
The course explores neuronal circuits (NCs) as functional units of the nervous system and highlights the importance of NCs as an intermediate level of organization, as they bridge the function of individual neurons with the performance of the nervous system as a whole. We will explore NCs through the use of invertebrate and small vertebrate models, and state-of-the-art experimental and theoretical methods. The course includes lectures, reading and discussing scientific articles, written assignments, and oral presentations. Offered Intermittently.
Prerequisite: BIO 3200 with a minimum grade of C-

BIO 4220 Biological Dimensions of Evolutionary Psychology Cr. 3
This course introduces the genetic and comparative tools used in evolutionary psychology and the major insights that have accumulated through these approaches. In the process, the course also discusses how these outcomes impact a wide range of research areas including philosophy, social sciences, political sciences, and economics. Offered Fall.
Prerequisite: BIO 1510 with a minimum grade of C- and (BIO 1500 with a minimum grade of C- or BIO 2700 with a minimum grade of C- or PSY 1010 with a minimum grade of C- or PSY 1020 with a minimum grade of C-)

BIO 4340 Regenerative Biology and Medicine Cr. 4
Introduces students specializing in biomedical engineering and premedical students to the conceptual and methodological principles of modern regenerative biology and medicine. Includes a review of research methods and achievements in this field and the translational applications of regenerative biology to tissue engineering and the development of regenerative therapies. Offered Winter, Spring/Summer.
Prerequisite: BIO 2600 with a minimum grade of C-

BIO 4350 Laboratory Research Experience in Molecular Bacterial Genetics Cr. 3
Discovery-based laboratory research experience centered on identification of genes controlling bacterial behavior. Students will identify genes that control the developmental life cycle of a soil bacterium, design experiments to characterize any genes identified, and characterize their role in regulating bacterial behavior. Students will employ a series of common bacteriology and molecular biology techniques including bacterial transformation, phenotypic assays, PCR amplification, cloning, plasmid isolation, immunoblot, and web-based bioinformatic analyses. Offered Intermittently.
Prerequisite: BIO 2200 with a minimum grade of C- and BIO 3070 with a minimum grade of C-
Fees: $60

BIO 4370 Microbial Communities Cr. 3
An introduction to the concept of microbial communities and their roles in health and the environment. The study of biofilms in disease, microbial communities in the environment, and human/animal microbiota will be covered. Offered Every Other Year.
Prerequisite: (BIO 2200 with a minimum grade of C- or BIO 3250 with a minimum grade of C-) and BIO 3070 with a minimum grade of C-

BIO 4420 Biogeography Cr. 3
An examination of current and past spatial distributions of biological diversity with an emphasis on the ecological, evolutionary, geological, and climatological processes underlying biogeographic variation. Offered Every Other Year.
Prerequisites: BIO 3500 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 4630 Histology Cr. 4
Characteristics and identification of normal mammalian tissues. Micro-anatomy of the mammal. Functional interpretation of microstructure and fine structure. Offered Winter, Spring/Summer.
Prerequisites: BIO 2600 with a minimum grade of C- or BIO 2870 with a minimum grade of C-
Fees: $20

BIO 4690 Molecular and Cellular Neurobiology Cr. 3
Focuses on the molecular and cellular aspects of neuronal function, from cellular signaling to sensory and motor function as well as behavior, learning and memory. Also covers the biological aspects of neuronal function, from molecules to cells to systems. Offered Fall.
Prerequisite: BIO 3200 with a minimum grade of C-

BIO 4795 Special Topics in Behavioral and Cognitive Neuroscience Cr. 3
This is an undergraduate course that is designed to be a participatory exploration with a faculty expert on an advanced, emergent, and/or stimulating topic within Neuroscience. This course will provide students with a detailed understanding of contemporary research topics in the broad interdisciplinary field of Behavioral and Cognitive Neuroscience, encompassing behavioral, clinical, cognitive, developmental, and systems neuroscience. Offered Intermittently.
Prerequisites: BIO 2600 with a minimum grade of C- and (PSY 1010 with a minimum grade of C- and PSY 1020 with a minimum grade of C-)
Repeatable for 6 Credits

BIO 4895 Special Topics in Cellular and Molecular Neuroscience Cr. 3
This is an undergraduate course that is designed to be a participatory exploration with a faculty expert on an advanced, emergent, and/or stimulating topic within Neuroscience. This course will provide students with a detailed understanding of contemporary research topics in the broad interdisciplinary field of Cellular and Molecular Neuroscience. Offered Intermittently.
Prerequisites: BIO 3200 with a minimum grade of C-
Repeatable for 6 Credits

BIO 4990 Introduction to Research Practice Cr. 1
Introduces laboratory safety, research practice and scientific integrity for undergraduate students engaged in independent research. It is a co-requisite for students enrolling in BIO 4991-4994 for the first time. Students must complete online CITI training modules in basic laboratory safety before the conclusion of first two weeks of class. Offered Every Term.
Prerequisites: BIO 4991-4994 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment is limited to students in the Department of Biological Sciences.

BIO 4991 Undergraduate Research in Biological Sciences Cr. 1
Original research performed under the guidance of a faculty member. Registration is by permission only. Offered Every Term.
Prerequisites: BIO 4990 (may be taken concurrently)
Repeatable for 5 Credits

BIO 4992 Undergraduate Research in Biological Sciences Cr. 2
Original research performed under the guidance of a faculty member. Registration is by permission only. Offered Every Term.
Prerequisites: BIO 4990 (may be taken concurrently)
Repeatable for 6 Credits

BIO 4993 Undergraduate Research in Biological Sciences Cr. 3
Original research performed under the guidance of a faculty member. Registration is by permission only. Offered Every Term.
Prerequisites: BIO 4990 (may be taken concurrently)
Repeatable for 6 Credits

BIO 4994 Undergraduate Research in Biological Sciences Cr. 4
Original research performed under the guidance of a faculty member. Registration is by permission only. Offered Every Term.
Prerequisites: BIO 4990 (may be taken concurrently)
Repeatable for 8 Credits

BIO 5001 Molecular Biology Cr. 3
This course provides an in-depth introduction to genetic mechanisms and molecular biology. The course will cover DNA replication and repair as well as mechanisms of gene expression and protein production in prokaryotic and eukaryotic systems. Offered Winter.
Prerequisites: BIO 3070 with a minimum grade of C- and BIO 3100 with a minimum grade of C-

BIO 5020 Comprehensive Virology Cr. 3
Course provides students with a comprehensive knowledge of molecular virology, from viral classification, vital structures and life cycles, to host response and global health. Offered for undergraduate credit only. Offered Fall.
Prerequisites: BIO 2270 with a minimum grade of C-, BIO 3250 with a minimum grade of C-, or BIO 3270 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 5040 Biometry Cr. 4
Quantitative methods in biology. Statistical approach to data analysis and the design of experiments. Laboratory section permits actual analysis of selected statistical problems. Offered Intermittently.
Prerequisites: BIO 2600 with a minimum grade of C- and (STA 1020 with a minimum grade of C-, STA 2210 with a minimum grade of C-, or MAT 2020 with a minimum grade of C-)
Fees: $15

BIO 5060 Special Topics Cr. 1-6
Formalized treatment of the current state of knowledge in a significant area of biology. Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: BIO 2600 with a minimum grade of C-
Repeatable for 6 Credits

BIO 5080 Cellular Basis of Animal Behavior Cr. 3
Relationship between behavior and neuroscience using a variety of animal models, each examined from the level of natural behavior progressively to the cellular level. Topics include: sensory systems, motor behavior, and learning. Offered Winter.
Prerequisite: BIO 2550 with a minimum grade of C- or BIO 2600 with a minimum grade of C- or PSY 3120 with a minimum grade of C- or PSY 3330 with a minimum grade of C-
Equivalent: PSY 5080

BIO 5100 Aquatic Ecology Cr. 4
Physical, chemical and biological processes occurring in lakes, streams and wetlands. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisites: BIO 1500 with a minimum grade of C- and BIO 3500 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $67

BIO 5145 Principles of Genetic Analysis Cr. 3
This course emphasizes the theory and applications of modern methods of genetic analysis and gene manipulation. Practical and theoretical aspects of methods will be considered. Offered Fall.
Prerequisites: BIO 3070 with a minimum grade of C-, BIO 3100 with a minimum grade of C-, and BIO 4110 with a minimum grade of C-

BIO 5150 Genomics Cr. 3
Introduction to the theory and practice of genomics. Topics include sequencing and mapping, overview of genomes, comparative genomics, transcriptomes, population genetics and genomics, basic bioinformatics and statistics, population-level variation (SNPs, MNPs, indels), ethics, evolutionary genomics, and functional genomics. Offered for undergraduate credit only. Offered Fall.
Prerequisites: BIO 3070 with a minimum grade of C- and BIO 3100 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 5180 Field Investigations in Biological Sciences Cr. 12
Field studies of one to fifteen weeks, emphasizing biological principles and techniques demonstrated in the field. Offered Intermittently.
Prerequisites: (BIO 2200 with a minimum grade of C- or BIO 2600 with a minimum grade of C-), BIO 1500 with a minimum grade of C-, and BIO 1510 with a minimum grade of C-
Fees: $125
Repeatable for 20 Credits

BIO 5240 Molecular Systems Biology Cr. 3
Introduces the basic design principles of biological circuits and networks and their functional designs at the molecular, pathway, whole cell, and population levels. Students will perform a comprehensive group project to build a computational model of a simple biological network. Offered Every Other Year.
Prerequisites: BIO 3070 and PHY 2140

BIO 5260 Evolution of Pathogen Genomes of Modern Disease Cr. 3
Understanding the evolutionary processes that shape pathogen genomes is critical to our understanding of infectious disease biology. This course will introduce fundamental concepts in genome evolution, and use common pathogens as examples to discuss the uniqueness of different evolutionary processes and genomic changes in each pathogen, with special emphasis on microbes. Much of the answers lie in the genomes of these pathogens and how their genomes change over time. Offered Intermittently.
Prerequisites: BIO 2700 with a minimum grade of C- or BIO 4200 with a minimum grade of C-

BIO 5280 Bioinformatics Cr. 3
Basic Linux commands and PERL programming skills, sequence comparison, phylogenetic analysis, gene/genome patterns. Offered for undergraduate credit only. Offered Winter.
Prerequisites: BIO 3070 with a minimum grade of C- and BIO 3100 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 5290 Evolutionary Medicine Cr. 3
Examines the recent trend in applying fundamental evolutionary concepts to medical field and how this trend can lead to better treatment and therapy development. Students will explore a range of topics, from what is a disease to body defenses and reproductive medicine, by reading and discussing assigned material from their textbooks and selected research articles. Offered Winter.
Prerequisites: BIO 2550 with a minimum grade of C-, BIO 2600 with a minimum grade of C-, or BIO 2700 with a minimum grade of C-

BIO 5310 Infections and Innate Immunity Cr. 3
There is a constant arms race between pathogens and their hosts. Tipping the balance decides outcomes and severity of infections. The hosts equip multiple lines of defense against the invading pathogens, meanwhile, the pathogens use a wide variety of arsenals to counteract host defense. This course is designed to introduce infection strategies used by pathogens and anti-microbial responses in the host cells at cellular and molecular levels. The course covers the interactions between hosts and microbes, including small molecules, post-translational modifications, protein interactions, signaling transduction and molecular machineries. Understanding these mechanisms during host-microbe interactions will provide important foundation for developing potential therapeutics. Offered Fall.
Prerequisite: BIO 2200 with a minimum grade of C- or BIO 2270 with a minimum grade of C- or BIO 3250 with a minimum grade of C- or BIO 2600 with a minimum grade of C- or BIO 2550 with a minimum grade of C-

BIO 5330 Principles and Applications of Biotechnology I Cr. 3
Review of origins of molecular biotechnology and its characteristic technologies; survey of applications of biotechnology to problems in industries. Offered Fall.
Prerequisites: BIO 2200 with a minimum grade of C-, BIO 3070 with a minimum grade of C-, and BIO 3100 with a minimum grade of C-

BIO 5350 Microbial Biofilms Cr. 3
The objective of the course is understand the features, and molecular mechanisms used by bacteria to build or disperse microbial biofilms. Students will learn the techniques and tools used to research microbial biofilms. Offered Intermittently.
Prerequisites: BIO 3250 with a minimum grade of C-

BIO 5440 Terrestrial Ecology Cr. 4
Ecology of forests and grasslands. Field study and interpretation of ecological processes. Importance of species-site relationships and disturbance history. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisites: BIO 1500 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $110

BIO 5490 Population and Community Ecology Cr. 3
Population dynamics of animals and plants. Life history theory. Species interactions. Structure and dynamics of communities. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisites: BIO 3500 with a minimum grade of C- and (STA 1020 with a minimum grade of C-, MAT 2020 with a minimum grade of C-, or STA 2210 with a minimum grade of C-)
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 5540 Landscape Ecology Cr. 3
Concepts, methods, and applications of landscape ecology; causes and implications of ecological patterns and heterogeneity on landscapes; interrelationships of patterns and ecological processes. Offered Every Other Year.
Prerequisites: BIO 1500 with a minimum grade of C- and BIO 3500 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 5610 Developmental Biology Lab Cr. 1
Slides, models, and 4-D computer programs used to enable the student to know and recognize the cascade of structural changes that take place during the embryological developmental pathways. Offered Winter.
Prerequisites: BIO 5620 with a minimum grade of C- (may be taken concurrently)
Fees: $55

BIO 5620 Developmental Biology Cr. 3
An analytical and comparative study of genetic and cellular mechanisms and their interaction with environmental factors to effect the developmental mechanisms which produce the adult organism. Origin and unfolding of structural patterns characteristic of different species; their evolutionary origins. Offered Winter.
Prerequisites: BIO 3070 with a minimum grade of C-

BIO 5640 Cancer Biology Cr. 3
Introduction to integrated analysis of cancer and cell biology, pathology, etiology and therapy. Offered Intermittently.
Prerequisites: BIO 2600 with a minimum grade of C-, BIO 3070 with a minimum grade of C-, and BIO 3100 with a minimum grade of C-

BIO 5660 Neural Signaling in Health and Disease Cr. 3
Addresses major principles of how various brain systems regulate physiological processes of the body function, both individually and as an integrated unit. Includes principles of physiological communication as it relates to homeostasis, metabolism, and both neural and endocrine communication; emphasis is given not only to major principles but also to how these principles were developed. Topics include (but are not limited to) dysfunction and disorders of the central nervous system (CNS) in the context of signaling pathways and hormonal systems, neurodegeneration, interaction between neurons and glia cells and neuroinflammation. Offered Fall.
Prerequisite: BIO 3200 with a minimum grade of C-

BIO 5680 Basic Endocrinology Cr. 3
Basic description of the human endocrine system, the endocrine control of several physiologic processes (growth, development, metabolism and reproduction), and a description of common endocrine disorders. Offered Fall.
Prerequisites: BIO 3200 with a minimum grade of C- or BIO 4120 with a minimum grade of C-
Equivalent: PSL 5680

BIO 5740 General Entomology Cr. 4
This course will focus on introducing students to the taxonomy (identification), natural history, ecology, and evolutionary biology of the Class Insecta and related taxa. Through in-class lectures and inside and outside the classroom lab-based activities, students will have the opportunity to apply the process of science to tap into the interdisciplinary nature of entomology. More specifically, after successfully completing this course, you should be able to sight-identify the major insect orders and species that exist in urban and suburban Detroit, and have a thorough understanding of the biology and evolution of insects, their diversity, their role in natural ecosystems, the basics of their physiology, development, and behavior, and the many important ways they affect human life. Offered Intermittently.
Prerequisite: BIO 2700 with a minimum grade of C-
Fees: $60

BIO 5750 Biology of Longevity and Aging Cr. 3
Longevity, aging and senescence viewed as fundamental biological processes common to most organisms. Data-based discussion of investigative methods and accepted facts regarding the mechanisms underlying longevity and aging, coupled with critical discussion of behavioral and biological interventions known to retard or reverse the aging processes. Systems biology overview of the process, including societal parameters necessary to the maintenance of longevity. Offered for undergraduate credit only. Offered Winter.
Prerequisites: BIO 3070 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 5760 Proteins and Proteomics Cr. 3
The course gives students a solid understanding of the structure of proteins, functions of proteins including folding of proteins into native conformation and dynamic nature of protein structure; post-translational modification of proteins; protein degradation; approaches and techniques of protein purification and analyses; methods and analysis of proteome using proteomic approaches. Offered Intermittently.
Prerequisites: BIO 3100 with a minimum grade of C- and BIO 5600 with a minimum grade of C-

BIO 5890 Neuroplasticity Cr. 3
Neuroplasticity is the study of the ways the brain changes in response to genetic controls, and to the internal and external environments. Neuroplasticity includes neural development (neurogenesis and migration, neural differentiation, axon pathway formation, and synapse formation and maturation), mechanisms of learning and memory, homeostasis of excitability, aging, diseases, and responses to injury. To explore these topics, students will read and discuss readings from their textbook and seminal research articles from a variety of animal models, and run simulations. Offered Winter.
Prerequisites: BIO 3200 with a minimum grade of C-

BIO 6000 Molecular Cell Biology I Cr. 3
Analysis of cell structure at the molecular and cellular levels and the physiological consequences of these structures: isolation, physico-chemical properties, and biological attributes of cells, organelles, and biopolymers including nucleic acids, proteins, and lipids. Offered Fall.
Prerequisites: BIO 2600 with a minimum grade of C (may be taken concurrently) and BIO 3100 with a minimum grade of C (may be taken concurrently)

BIO 6010 Molecular Cell Biology II Cr. 4
Analysis of cell regulation at the molecular level. Cell development and differentiation. Genetic mechanisms including: DNA synthesis and repair, mechanism of gene expression and control. Offered Winter.
Prerequisite: BIO 6000 with a minimum grade of C-

BIO 6055 Biology of the Eye Cr. 3
Introduction to biology of eye structure/function, and to causes and clinical treatments of eye-related disorders and diseases. Offered for undergraduate credit only. Offered Fall.
Prerequisites: BIO 3200 with a minimum grade of C- and (BIO 3100 with a minimum grade of C- or CHM 5600 with a minimum grade of C-)
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $25
Equivalent: ANA 6050, PYC 6050

BIO 6060 Molecular Evolution Cr. 3
This course introduces the theory and practice of molecular sequence evolution analysis. It examines the pattern and process of evolutionary change at the DNA and protein level. The course covers relevant models of population genetics, nucleotide substitutions, and gene evolution, methods of multiple sequence alignments and phylogenetic inference, and their significance in current applications of protein structure prediction and genetic ancestry analyses. Offered Every Other Year.
Prerequisites: BIO 2700 with a minimum grade of C- or BIO 3070 with a minimum grade of C-

BIO 6090 Population Genetics Cr. 3
Theoretical bases for microevolutionary change in natural populations of organisms; basic to study of evolutionary genetics and evolutionary ecology. Offered Intermittently.
Prerequisite: BIO 3070 with a minimum grade of C-

BIO 6150 Neuronal Circuits Cr. 3
In this course we will discuss neuronal circuits (NCs) as functional units of the nervous system. The course aims to highlight the importance of NCs as an intermediate level of organization, that bridges the role of individual neurons with the performance of the nervous system as a whole. We will explore the structure and function of neuronal circuits, how they are studied through the use of informative model organisms (emphasis on invertebrate and small vertebrate models) and state-of-the-art experimental and theoretical methods, the role of neuronal circuits in learning, decision making, and locomotion, the evolution of neuronal circuits, neuromodulation and neuronal control, the impact of aging, and the concept of internal state. Finally, we will discuss how circuits form bigger networks, see connectomes, and we will touch on key interdisciplinary methods for the study of NCs. Offered Intermittently.
Restriction(s): Enrollment limited to students in a Doctor of Philosophy, Master of Arts or Master of Science degrees.

BIO 6160 Proteins and Proteomics Cr. 3
Structure and dynamics of proteins at the molecular level. Strategies used to biochemically purify, analyze, and characterize proteins. Offered Winter.
Prerequisite: BIO 3100 with a minimum grade of C- or CHM 5600 with a minimum grade of C- or CHM 6620 with a minimum grade of C-

BIO 6165 Biodiversity Changes in the Anthropocene Cr. 4
This course is a study of the Anthropocene—what scientists argue is our current epoch in geologic time—emphasizing changes in Earth's biodiversity as a result of human activities. Following an introduction to the Anthropocene, how it can be defined, and key ecological principles of biodiversity, we will explore the history and context for various types of human-influenced change. We will then survey seven human drivers of biodiversity change—from climate and chemical changes to habitat alteration and resource use and finally species transport (including modern pandemics) and invasion. We will wrap up the course examining past, present, and future tipping points, shifting baselines, goals and targets for management, and attitudes. Through this course, you will be challenged to consider both domestic and global (indigenous and western) perspectives of biodiversity change and issues concerning environmental justice. Emphasis will be placed on biodiversity shifts as influenced by humans. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ESG 6165

BIO 6180 Membrane Biology Cr. 3
Comprehensive analysis of cellular and model membranes integrating molecular structure and physiological properties. Structural, dynamic, and physiological properties examined, including molecular and macromolecular assemblies, physical and chemical analysis of molecular motion, functional aspects including trans-membrane signaling. Offered Intermittently.
Prerequisite: BIO 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

BIO 6185 Environmental DNA for Ecosystem Monitoring and Conservation Cr. 4
This course is a study of environmental DNA principles, approaches, and applications to study anthropogenic change in the environment. Following an introduction to the field of eDNA, challenges and limitations, early landmark studies, and applications in a variety of ecosystems and types of research questions, we will shift our focus to the technical background for designing an eDNA study—including how eDNA samples are collected, processed, and analyzed— and wrap up with considerations of the future of DNA metabarcoding. Emphasis will be placed on eDNA as a tool for studying environmental changes caused by humans. Offered Yearly.
Prerequisites: BIO 3070 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ESG 6180

BIO 6190 Advanced Special Topics Cr. 6
Formalized treatment of current state of knowledge in a significant area of biology. Topics to be announced in Schedule of Classes. Offered Intermittently.
Repeatable for 6 Credits

BIO 6195 Environmental Microbiology Cr. 4
This course is a study of microbial diversity, approaches, and anthropogenic change in the environment. Following an introduction to the field of environmental microbiology, emerging global issues, and exploration of microorganisms in various habitats, we will focus on recent advances in characterization of microorganisms, pathogen transmission (including modern day pandemics), indicators of ecosystem health, and risk assessment. Through this course, you will also develop an understanding of how environmental microbiological samples are collected and processed, analyze how to track microbial sources and transport, and evaluate how microbiota interact with pollutants and ecosystems. Emphasis will be placed on microbiotic changes in the environment as influenced by humans. Offered Yearly.
Equivalent: ESG 6190

BIO 6330 Principles and Applications of Biotechnology II Cr. 3
Application of molecular biology and recombinant DNA technology of contemporary eukaryotic systems. Topics include: specialized application of PCR for cloning, generation of antibodies, the expression of recombinant proteins in cultured cells and transgenic animal models. Offered Winter.
Prerequisite: BIO 5330 with a minimum grade of C-

BIO 6420 Ecotoxicology and Risk Assessment Cr. 3
Provides students with an overview of ecological and environmental aspects of toxicology and pollution biology. The course will emphasize population, community, and ecosystem responses to contaminants. General understanding of ecology, chemistry, and basic statistics is essential. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 6490 Molecular and Cellular Neurobiology Cr. 3
The brain is the most complex object known to man and is the storehouse of our lives. In the past century, humanity has made great strides in our understanding of the brain. In this class, we take a reductionist approach to understanding how the brain works. We start with exploring the basic mechanisms by which neurons process information by studying electrical signaling (Unit I) and chemical signaling (Unit II). These then serve as a foundation for building up an integrated appreciation for how the nervous system interacts with the outside world (Unit III). Taken together, this class provides the foundation for understanding how neurons work individually, an in concert, to from the nervous system. This class will also prepare students for approaching more advanced topics in neuroscience. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 6510 Molecular Interactions Cr. 1
Introduces to methods to study biomolecular interactions. Topics covered will include yeast two-hybrid, protein tagging, protein chips, DNA/RNA footprinting, DNase,MNase, hypersensitivity, ATAC-seq, ChIP-PCR, ChIP-chip, ChIP-seq, HITS-CLIP, PAR-CLIP, three hybrid, Co-immunoprecipitation, EMSA, flourescence polarization and FRET, SPR, isothermal calorimtery and microscale thermophoresis, proximity labeling and lipid: protein interactions. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 6520 Gene Expression Manipulation Systems Cr. 1
Introduces methods to manipulate gene expression. Topics include: Bacterial transformation methods - natural vs artificial competency, conjugation, phage transduction. Eukaryotic cell culture transfection methods - transient and stable. Transgenic organism manipulation: methods for gene knock-out and inducible expression including - homologous recombination, site specific recombination, Lambda red recombination, markerless in-frame deletion, Cre-Lox, transposons, RNAi, CRISPR, TALENS, P-element mutagenesis, inducible/repressible promoters, expression reporters. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 6530 Protein Structure and Dynamics Cr. 1
Provides a solid understanding of the structure of proteins, their physiological functions, and an understanding that the molecular basis of a number of diseases is associated with protein abnormalities. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 6540 Principles of Genetic Analysis Cr. 1
Emphasizes the theory and applications of modern genetic methods of analysis. Practical and theoretical aspects of methods will be considered. Exams and quizzes will focus on concepts, experimental design and strategy. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 6690 Special Topics in Neurobiology Cr. 3
This course will enable students to apply their knowledge of neurobiology to explore a current research area in depth. The course will involve reading and discussing articles from the scientific literature. Offered Winter.
Prerequisites: BIO 3200 with a minimum grade of C-

BIO 6700 Responsible Conduct of Research Cr. 1
Fulfills federal requirements for in person faculty-led training in scientific ethics and responsible conduct of research. Offered Fall.

BIO 6890 Introduction to Research Practice - Honors Cr. 1
Provides instruction in basic laboratory safety and accepted standards for research conduct. It will provide professional development and networking opportunities for students interested in careers in research and the biomedical sciences. Instruction may be provided in the form of reading assignments, discussions, lectures and case studies. It is a co-requisite for students enrolling in BIO 6891-6894 for the first time. Offered Every Term.
Prerequisites: BIO 6891-6894 with a minimum grade of C- (may be taken concurrently)

BIO 6891 Honors Undergraduate Research in Biological Sciences Cr. 1
Original research performed under the guidance of a faculty member. Registration is by permission only. Offered Every Term.
Prerequisites: BIO 6890 with a minimum grade of C- (may be taken concurrently)
Repeatable for 5 Credits

BIO 6892 Honors Undergraduate Research in Biological Sciences Cr. 2
Original research performed under the guidance of a faculty member. Registration is by permission only. Offered Every Term.
Prerequisites: BIO 6890 with a minimum grade of C- (may be taken concurrently)
Repeatable for 6 Credits

BIO 6893 Honors Undergraduate Research in Biological Sciences Cr. 3
Original research performed under the guidance of a faculty member. Registration is by permission only. Offered Every Term.
Prerequisites: BIO 6890 with a minimum grade of C- (may be taken concurrently)
Repeatable for 6 Credits

BIO 6894 Honors Undergraduate Research in Biological Sciences Cr. 4
Original research performed under the guidance of a faculty member. Registration is by permission only. Offered Every Term.
Prerequisites: BIO 6890 with a minimum grade of C- (may be taken concurrently)
Repeatable for 8 Credits

BIO 6990 Honors Directed Study in Biology Cr. 1-4
To be taken under direction of Biological Sciences faculty. Offered for undergraduate credit only Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Biological Sciences Honors or Biological Sciences; enrollment is limited to Undergraduate level students; enrollment limited to students in a BS in Biological Science or Bachelor of Arts degrees.
Repeatable for 99 Credits

BIO 6994 Technical Communication in Molecular Biotechnology Cr. 3
Methods of written and oral communication in the biotechnology field. Offered Winter.

BIO 6999 Honors Undergraduate Research Thesis Cr. 2
Preparation of a thesis, satisfactory completion of which assures Honors graduation, providing performance in preceding Honors courses has been at Honors level; to be taken under direction of Biological Sciences faculty. Offered for undergraduate credit only. Offered Every Term.
Prerequisite: BIO 6891 with a minimum grade of C- or BIO 6892 with a minimum grade of C- or BIO 6893 with a minimum grade of C- or BIO 6894 with a minimum grade of C- or BIO 6990 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Biological Sciences Honors; enrollment is limited to Undergraduate level students.

BIO 7001 Molecular Biology Cr. 3
This course provides an in-depth introduction to genetic mechanisms and molecular biology. The course will cover DNA replication and repair as well as mechanisms of gene expression and protein production in prokaryotic and eukaryotic systems. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7011 Principles of Toxicology Cr. 3
Basic concepts and principles of toxicology, including toxicity of major classes of chemicals (pesticides, solvents, metals) and organ systems (renal, immune, digestive, neuro and respiratory) affected. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PHC 7410

BIO 7020 Comprehensive Virology Cr. 3
Course provides students with a comprehensive knowledge of molecular virology, from viral classification, vital structures and life cycles, to host response and global health. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7040 Signaling Transduction Mechanisms Cr. 3
Overview of signaling strategies and mechanisms used by prokaryotes and eukaryotes (including plants) to sense and respond to extracellular or intracellular stimuli. Additional study of bioinformatic, biochemical, and genetics approaches to characterization of signaling proteins, systems and networks. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7045 Biometry Cr. 4
Provides practical tools for the design of experiments, data exploration and statistical analysis of data. Prepares students to begin to design scientific studies and experiments, critically evaluate data and test hypotheses via data analysis. While the course will delve into some underlying statistical theory, a major emphasis will be providing exposure to and hands-on experience with basic approaches to the analysis of univariate and multivariate data. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7055 Biology of the Eye Cr. 3
Integrated introduction to basic biological structure/function of the eye; causes and clinical treatments of eye-related disorders and diseases. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ANA 7055

BIO 7060 Evolutionary and Developmental Biology Cr. 3
Introduction to animal diversity. Genetic pathways and networks in development; focus on limb and organ formation. Evolving developmental pathways: case studies. Genetic source materials for developmental evolution. Speciation and developmental evolution. Offered Every Other Year.
Prerequisite: BIO 5620 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7090 Molecular Genetics of Development Cr. 3
An examination of the current and classical research literature dealing with the role of gene action in development. Offered Intermittently.
Prerequisite: BIO 5620 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7110 Aquatic Ecology Cr. 4
Physical, chemical and biological processes occurring in lakes, streams, and wetlands. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $67

BIO 7145 Principles of Genetic Analysis Cr. 3
This course emphasizes the theory and applications of modern methods of genetic analysis and gene manipulation. Practical and theoretical aspects of methods will be considered. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7150 Genomics Cr. 3
Introduction to the theory and practice of genomics. Topics include sequencing and mapping, overview of genomes, comparative genomics, transcriptomes, population genetics and genomics, basic bioinformatics and statistics, population-level variation (SNPs, MNPs, indels), ethics, evolutionary genomics, and functional genomics. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7180 Membrane Biology Cr. 3
Comprehensive analysis of cellular and model membranes integrating molecular structure and physiological properties. Structural, dynamic, and physiological properties examined, including molecular and macromolecular assemblies, physical and chemical analysis of molecular motion, functional aspects including trans-membrane signaling. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7240 Molecular Systems Biology Cr. 3
Introduces the basic design principles of biological circuits and networks and their functional designs at the molecular, pathway, whole cell, and population levels. Students will perform a comprehensive group project to build a computational model of a simple biological network. Offered Every Other Year.
Prerequisites: BIO 3070 and PHY 2140
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7280 Bioinformatics Cr. 3
Basic Linux commands and PERL programming skills, sequence comparison, phylogenetic analysis, gene/genome patterns. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7300 Communication of Research Cr. 2
During this course, students will learn to present scientific results and make compelling scientific arguments orally, visually and in written form. In addition, students will learn to professionally and constructively critique the work of others. Students will also prepare a professional resume/CV and cover letter for job applications. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7310 Sustainability of Urban Environmental Systems Cr. 2
Students will be introduced to topics in urban sustainability from multiple disciplinary perspectives such as: ecology, anthropology, communication, engineering, economics and urban planning. Questions in fostering a more sustainable urbanism will be introduced and evaluated. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CE 7311

BIO 7350 Microbial Biofilms Cr. 3
The objective of the course is understand the features, and molecular mechanisms used by bacteria to build or disperse microbial biofilms. Students will learn the techniques and tools used to research microbial biofilms. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7440 Terrestrial Ecology Cr. 4
Ecology of forests and grasslands. Field study and interpretation of ecological processes. Importance of species-site relationships and disturbance history. Offered Every Other Year.
Prerequisite: BIO 1500 with a minimum grade of C- and BIO 4130 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $110

BIO 7490 Population and Community Ecology Cr. 3
Population dynamics of animals and plants. Life history theory. Species interactions. Structure and dynamics of communities. Offered Every Other Year.
Prerequisite: BIO 1500 with a minimum grade of C- and BIO 4130 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7510 Eukaryotic Gene Structure and Function Cr. 2
Knowledge of current molecular technology is absolute prerequisite for this course; prerequisite course must have been satisfied. Analysis of structure, replication, expression and regulation of eukaryotic genome. Experimental approaches to study eukaryotic gene expression, critical comprehension of current research, design of experiments in gene expression. Offered Every Other Year.
Prerequisite: BIO 6010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7540 Landscape Ecology Cr. 3
Concepts, methods, and applications of landscape ecology. Causes and implications of ecological patterns and heterogeneity on landscapes. Interrelationships of patterns and ecological processes. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7560 Light Microscopy and Imaging Cr. 2
The objective of the course is to provide students an in-depth understanding of current microscopy and imaging technology. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $125

BIO 7610 Infections and Innate Immunity Cr. 3
There is a constant arms race between pathogens and their hosts. Tipping the balance decides outcomes and severity of infections. The hosts equip multiple lines of defense against the invading pathogens, meanwhile, the pathogens use a wide variety of arsenals to counteract host defense. This course is designed to introduce infection strategies used by pathogens and anti-microbial responses in the host cells at cellular and molecular levels. The course covers the interactions between hosts and microbes, including small molecules, post-translational modifications, protein interactions, signaling transduction and molecular machineries. Understanding these mechanisms during host-microbe interactions will provide important foundation for developing potential therapeutics. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy, Master of Arts or Master of Science degrees.

BIO 7660 Neural Signaling in Health and Disease Cr. 3
Addresses major principles of how various brain systems regulate physiological processes of the body function, both individually and as an integrated unit. Includes principles of physiological communication as it relates to homeostasis, metabolism, and both neural and endocrine communication; emphasis is given not only to major principles but also to how these principles were developed. Topics include (but are not limited to) dysfunction and disorders of the central nervous system (CNS) in the context of signaling pathways and hormonal systems, neurodegeneration, interaction between neurons and glia cells and neuroinflammation. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7740 General Entomology Cr. 4
This course will focus on introducing students to the taxonomy (identification), natural history, ecology, and evolutionary biology of the Class Insecta and related taxa. Through in class lectures and inside and outside the classroom lab-based activities, students will have the opportunity to apply the process of science to tap into the interdisciplinary nature of entomology. More specifically, after successfully completing this course, you should be able to sight-identify the major insect orders and species that exist in urban and suburban Detroit, and have a thorough understanding of the biology and evolution of insects, their diversity, their role in natural ecosystems, the basics of their physiology, development, and behavior, and the many important ways they affect human life. Students cannot earn credit for both BIO 5740 and BIO 7740. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $60

BIO 7750 Biology of Longevity Aging Cr. 3
Longevity, aging and senescence viewed as fundamental biological processes common to most organisms. Data-based discussion of investigative methods and accepted facts regarding the mechanisms underlying longevity and aging, coupled with critical discussion of behavioral and biological interventions known to retard or reverse the aging processes. Systems biology overview of the process, including societal parameters necessary to the maintenance of longevity. Offered for graduate credit only. Offered Winter.
Prerequisite: BIO 3070 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7760 Proteins and Proteomics Cr. 3
The course gives students a solid understanding of the structure of proteins, functions of proteins including folding of proteins into native conformation and dynamic nature of protein structure; post-translational modification of proteins; protein degradation; approaches and techniques of protein purification and analyses; methods and analysis of proteome using proteomic approaches. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7777 Chemistry Biology Interface Seminar Series Cr. 1
The Chemistry Biology Interface (CBI) seminar series will expose students to CBI-related research, CBI-related professional development activities, review of current literature, topics in rigor and reproducibility, and networking social activities. These activities will be in the format of presentations, panel discussions, workshops, small group discussions, or social activities. The goal is for graduate students from discipline-specific fields to move across a multi-disciplinary landscape, or for students already working in inter-disciplinary fields, such as chemical biology, to gain new expertise in specific disciplines. Beyond scholarly goals, the seminar series will enrich the graduate experience by providing career guidance, non-laboratory skill development, training in rigor and reproducibility, and professional networking. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CHM 7777, PSC 7777

BIO 7890 Neuroplasticity Cr. 3
Neuroplasticity is the study of the ways the brain changes in response to genetic controls, and to the internal and external environments. Neuroplasticity includes neural development (neurogenesis and migration, neural differentiation, axon pathway formation, and synapse formation and maturation), mechanisms of learning and memory, homeostasis of excitability, aging, diseases, and responses to injury. To explore these topics, students will read and discuss readings from their textbook and seminal research articles from a variety of animal models, and run simulations. No credit after BIO 5890. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BIO 7996 Research Problems Cr. 1-8
Original investigation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 998.99 Credits

BIO 7999 Master's Biotechnology Research Report Cr. 3
The purpose of the course is to help students document research findings during the study and scientifically present these findings in both written and oral formats. Through the course, students will improve their critical thinking and reasoning skills, analyses and presentation of scientific data, effective scientific communication skills and further develop skills to document scientific discoveries. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Molecular Biotechnology; enrollment is limited to Graduate level students.

BIO 8050 Scientific Proposal Writing Cr. 2
Scientific investigation begins with questions that address conceptual or applied problems but requires testable hypotheses and funding support leveraged from successful research proposals to initiate and sustain a research program that generates the answers. This course trains the elementary skills of identifying significant scientific questions, building hypotheses, developing experimental designs, and communicating these elements in the form of standard research proposal formats to the major stakeholders and funding agencies that support the Biological Sciences. Participation success is measured based on participation in lecture discussions, on-time completion and quality of writing assignments, and response to instructor and participant peer feedback. The class will cover the grant proposal formats of the major federal funding organizations (NIH, NSF, DOD, DOR, USDA or equivalent) and a selection of additional funding sources tailored to participant interests. Offered Intermittently.
Prerequisites: BIO 6000-9999 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

BIO 8888 Survey of Research at the Chemistry Biology Interface Cr. 3
The Chemistry Biology Interface course will teach students how to apply chemical approaches to study complete biological processes. It will commence with a basic overview of the biochemistry of biomolecules. Next, complex biological processes related to various diseases will be highlighted by introducing cell biology, model cells and organisms, and disease mechanisms. Finally, the course will highlight contemporary examples of how chemical methods are used to answer complex biological questions to show the value and innovation available by taking a multidisciplinary approach. The focus will be on development of skill sets that are applicable for research at the chemistry biology interface, rigor and transparency in data collection and analysis, and identification of cross-disciplinary research at Wayne State. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CHM 8888, PHC 8888, PSC 8888, PSL 8888

BIO 8995 Graduate Seminar in Biology Cr. 2
Presentations by graduate staff, advanced students, visiting lecturers. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Biological Sciences; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy or Master of Science degrees.
Repeatable for 4 Credits

BIO 8996 Research in Molecular Biotechnology Cr. 1-4
Students spend two semesters doing research under the guidance of faculty associated with the Molecular Biotechnology Program and in other laboratories. Offered Winter, Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

BIO 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

BIO 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

BIO 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

BIO 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: BIO 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

BIO 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: BIO 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

BIO 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: BIO 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

BIO 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

BIO 9996 Lab Rotation Cr. 2
Research training in faculty laboratories on a rotating basis, up to two labs per semester. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

BLW - Business Law

BLW 2510 Business Law I Cr. 3
Introduction to the domestic and international legal systems as they relate to business. Impact of the legal environment on management decision-making and the legal and ethical implications of contracts and sales, including product liability. No credit after ACC 2510. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Sophomore, Junior or Senior; enrollment is limited to Undergraduate level students.

BLW 5190 Business Law II Cr. 3
Legal, ethical and managerial implications of various forms of organizing and operating a business; corporations, partnerships, limited liability companies, sole proprietorships. Negotiable instruments and the banking system; agency and professional liability. Offered for undergraduate credit only. Offered Winter.
Prerequisites: BLW 2510 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

BLW 7220 Business Law II Cr. 3
Law governing business corporations; fiduciary duties of managers and directors in situations such as mergers, acquisitions, securities offerings, market domination, litigation. No credit after ACC 7220. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

BMB - Biochemistry and Molecular Biology

BMB 7010 General Biochemistry Lecture Cr. 4
Introduction to biochemistry: structure of biological molecules, enzymes, bioenergetics, intermediary metabolism. Biosynthesis of DNA, RNA, and proteins. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BMB 7015 Introduction to Metabolism Cr. 2
An introduction to intermediary metabolism of carbohydrate, lipids, amino acids and proteins. Focuses on the metabolic pathways involved in the synthesis and degradation of metabolites. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PSL 7015

BMB 7020 Biochemistry Laboratory Rotation Cr. 1-4
Research in labs with various faculty. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Biochem,Microbio & Immunology.
Repeatable for 8 Credits

BMB 7030 Core Concepts in Technologies in Biochemistry and Molecular Biology Cr. 4
Methods-based approach to understanding core concepts in biochemistry and biotechnology. Students acquire competence enabling them to explain and implement these approaches. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

BMB 7140 Foundations of Machine Learning and Artificial Intelligence with Python, Scikit-Learn, and PyTorch Cr. 3
Introduction to basic concepts of linear algebra and their application to data analysis. MATLAB and PYTHON programs are introduced and employed as tools for practical implementation of computational methods. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IBS 7140

BMB 7141 Computational Modeling of Cellular Metabolism Cr. 3
This course introduces medical and graduate students to computational systems biology, focusing on metabolic network analysis using Python-based tools. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IBS 7141

BMB 7320 Protein Structure and Function Cr. 3
Structure, function, and design of proteins: architecture, function, regulation, assembly and evolution of proteins and protein complexes; theory and techniques of kinetic analysis; newer techniques of protein design and engineering. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IBS 7320

BMB 7330 Advanced Molecular Biology Cr. 2
Modern topics in biochemistry, including nucleic acid dynamics, genomic structure, DNA replication and repair, transcription, RNA processing, translation and protein synthesis. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IBS 7330

BMB 7670 Advanced Biochemistry Laboratory Cr. 2-10
Advanced laboratory techniques as applied to investigations of biological materials. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

BMB 7890 Journal Club Cr. 1
Student presentations of papers from recent literature or their own research. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Biochemistry&Molecular Biology or Immunology and Microbiology; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

BMB 7996 Research Cr. 1-15
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 30 Credits

BMB 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

BMB 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

BMB 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

BMB 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: BMB 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

BMB 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: BMB 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

BMB 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: BMB 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

BMB 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

BME - Biomedical Engineering

BME 1900 Biomedical Engineering Freshmen Seminar Cr. 1
This course is designed to expose students to the Wayne State University undergraduate experience. Lectures will focus on presenting an overview of the world of biomedical engineering. Students will gain an understanding of campus resources, how to be successful undergrads, how to make connections with their cohort and faculty members, all while learning about possible career paths in the engineering field and Wayne State's role in achieving their career goals. Offered Fall.
Prerequisites: MAT 1800-5XXX with a minimum grade of D-
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering or Biomedical Engg Honors.

BME 2050 Introduction to Anatomy and Physiology for Biomedical Engineers Cr. 4
Detailed study of the anatomical structure and physiological function of the major systems of the body: skeletal, nervous, muscular, endocrine, circulatory, respiratory, digestive, excretory, and reproductive. Relevant biomedical engineering applications related to these major systems of the body. Offered Yearly.
Prerequisite: BIO 1510 with a minimum grade of C-
Corequisite: BME 2920

BME 2910 Biomedical Engineering Design Lab I Cr. 1
Application of engineering principles to biomedical engineering problems through laboratory and design exercises. First of a four-semester sequence; analysis of musculoskeletal forces biomechanics. Offered Fall.
Prerequisites: BE 1200 with a minimum grade of C-, BE 1300 with a minimum grade of C-, BE 1310 with a minimum grade of C-, BE 1500 with a minimum grade of C-, MAT 2010 with a minimum grade of C-, MAT 2020 with a minimum grade of C-, (CHM 1125 with a minimum grade of C- or CHM 1130 with a minimum grade of C-), and (PHY 2170 with a minimum grade of C- or PHY 2175 with a minimum grade of C-)
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering or Biomedical Engg Honors; enrollment is limited to Undergraduate level students.
Fees: $25

BME 2920 Biomedical Engineering Design Lab II Cr. 1
Application of engineering principles to biomedical engineering problems through laboratory and design exercises involving tissue biomechanics. Introduction to finite element modeling. Second of a four-semester sequence. Offered Winter.
Prerequisites: BE 2100 with a minimum grade of C- (may be taken concurrently), BME 2910 with a minimum grade of C-, and ME 2420 with a minimum grade of C- (may be taken concurrently)
Corequisite: BME 2050
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering or Biomedical Engg Honors; enrollment is limited to Undergraduate level students.
Fees: $25

BME 3010 Biomedical Transport Cr. 3
This is an introductory course of transport phenomena in biological systems. It will cover conservation relations in fluid and mass transport mass at the tissue and cellular levels. Topics including mass transport by diffusion with effects of convection and chemical reactions will be covered. Applications of fundamental principles using quantitative, computational approaches will be emphasized. Offered Fall.
Prerequisites: BE 1500 with a minimum grade of C- and MAT 2150 with a minimum grade of C-
Corequisite: BME 3910

BME 3470 Biomedical Signals and Systems Cr. 3
Mathematical, engineering and computer techniques for describing and analyzing biomedical signals, including ECG, EEG, EMG, blood pressure, and tomographic images. Offered Fall.
Prerequisites: (ECE 3320 with a minimum grade of C- (may be taken concurrently) or ECE 3300 with a minimum grade of C- (may be taken concurrently)), (PHY 2185 with a minimum grade of C- or PHY 2180 with a minimum grade of C-), and MAT 2150 with a minimum grade of C-
Corequisite: BME 3910
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.
Fees: $50

BME 3910 Biomedical Engineering Design Lab III Cr. 1
Application of engineering principles to biomedical engineering problems through laboratory and design exercises. Focus on measurement, analysis, modeling, and interaction with biomedical signals from living systems. Third of a four-semester sequence. Offered Fall.
Prerequisites: BE 1500 with a minimum grade of C-, MAT 2150 with a minimum grade of C-, ENG 3050 with a minimum grade of C- (may be taken concurrently), BME 3010 with a minimum grade of C- (may be taken concurrently), ME 2420 with a minimum grade of C-, and BME 2920 with a minimum grade of C-
Corequisite: BME 3010
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering or Biomedical Engg Honors; enrollment is limited to Undergraduate level students.
Fees: $25

BME 3920 Biomedical Engineering Design Lab IV Cr. 2
Application of engineering principles to biomedical engineering problems through laboratory and design exercises. Introduction to the capstone design process. Integration of the design process with the complete government regulation system for medical device design. Use of advanced CAE tools for analysis. Fourth of a four-semester sequence. Offered Winter.
Prerequisites: BME 3910 with a minimum grade of C- and BME 3470 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering or Biomedical Engg Honors; enrollment is limited to Undergraduate level students.
Fees: $100

BME 4010 Engineering Physiology Laboratory Cr. 2
Measurement and analysis of physiological signals on living systems, with a focus on neural, cardiovascular, respiratory, and muscular systems. Includes a student-designed experiment on a physiological system. Offered Winter.
Prerequisites: BME 2050 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering or Biomedical Engg Honors; enrollment is limited to Undergraduate level students.
Fees: $30

BME 4210 Introduction to Biomechanics Cr. 3
Broad introduction to the application of mechanical engineering principles to biomedical engineering, including motion analysis, injury and forensic biomechanics, cardiovascular and pulmonary mechanics, and design of implants with mechanical functions. Offered Fall.
Prerequisite: ME 2420 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

BME 4310 Introduction to Biomaterials Cr. 3
Broad introduction to the field of biomaterials and its application to tissue engineering, implant design, controlled drug delivery, and designer materials for therapeutic use. Offered Winter.
Prerequisite: ME 2420 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the BS in Biomedical Engineering program.

BME 4410 Introduction to Biomedical Instrumentation Cr. 3
This course provides a comprehensive introduction to the principles, design, and application of biomedical instrumentation used in both clinical and research settings. Topics include the fundamentals of biomedical sensors; signal acquisition and filtering techniques; instrumentation safety standards; and design considerations for both implanted and external bioinstrumentation systems. Students will engage in hands-on laboratory exercises and team-based projects to design, implement, and evaluate biomedical instrumentation components and systems. The final project emphasizes collaborative problem-solving and allows students to integrate course concepts into a design that reflects their individual interests and professional goals. Offered Winter.
Prerequisites: BME 3470 with a minimum grade of C- and (ECE 3300 with a minimum grade of C- or ECE 3320 with a minimum grade of C-)
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.
Fees: $25

BME 4910 Biomedical Engineering Capstone Design I Cr. 3
First in a two-semester sequence during which student teams develop a design to address a biomedical engineering challenge; includes discussions with clinical faculty, analysis of current solutions, and finalization of conceptual design. Offered Fall.
Prerequisite: BME 3920 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major in Biomedical Engineering or Biomedical Engg Honors.
Fees: $50

BME 4920 Biomedical Engineering Capstone Design II Cr. 3
Second of a two-semester sequence. Students develop and test a prototype of their biomedical engineering design; culminates in a public design expo to exhibit student designs. Offered Winter.
Prerequisite: BME 4910 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Biomedical Engineering or Biomedical Engg Honors; enrollment is limited to Undergraduate level students.
Fees: $50

BME 5010 Quantitative Physiology Cr. 4
Basic principles of human physiology presented from the engineering perspective. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by mathematical models where feasible. Offered Every Term.
Equivalent: CHE 5100, ECE 5100, ME 5100

BME 5020 Computer and Mathematical Applications in Biomedical Engineering Cr. 4
Application of numerical methods in biomedical engineering. Programming algorithms and development of data analysis interfaces using Matlab and Excel. Development and refinement of mathematical models, binary data storage and round-off error, algorithm truncation error, and application of Taylor series for function approximation, error estimation, and algorithm development. Numerical methods for solving: roots of equations, systems of linear equations, system optimization, regression and interpolation, integration, differentiation, and ordinary and partial differential equations. Attention is focused on application of techniques within biomedical engineering. Offered Every Term.

BME 5060 Engineering for Women's Health Cr. 3
Engineering approaches have many uses in improving reproductive and non-reproductive aspects of women's health, from basic science understanding through to clinical implementation. This course will start with an overview of reproductive anatomy and physiology and continue with case studies from different engineering sub-fields as applied to reproductive health. Students will complete one in-depth project on a women's health engineering technology development. Offered Yearly.

BME 5070 Anatomy for Engineers Cr. 4
A cadaver based anatomy course for undergraduate students and MS-level students in biomedical engineering. This hands-on course is intended to give the students directed experience of the study of human anatomy in relation to engineering principles. The histological study of tissues in relation to mechanical function of the organism is included in this study. Offered Fall.
Prerequisites: BME 2050 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.
Fees: $225

BME 5130 Vehicle Safety Engineering Cr. 4
Role of vehicle in road safety, occupation and pedestrian injury mechanisms, measures of vehicle safety performance, driver behavior and vehicle interface. Use of new technology to improve vehicle safety. Offered Winter.

BME 5140 Biomedical Aspects of Neurotrauma Cr. 3
Introduction to the biomechanical basis and medical consequences of neurotrauma, including injury to the human brain from mild to severe, from acute to chronic. Exploration of the history and social interactions both engineering (biomechanics) and medicine covering the etiology of human injury and state-of-the-art analytic and observational understanding on neurotrauma including biomechanics of initiating events, acute consequences including shock, systemic pathophysiology and long term prognosis, care and rehabilitation. This includes discussion of the evolution of medical opinion compared to contemporary knowledge of neurotrauma, especially in the evolving understanding of both severe neurotrauma and milder forms of injury. The course will additionally consider complex predisposing interactions that may lead to neurotrauma, social consequences, comorbidities, and their effects on short and long term outcomes. Offered Winter.

BME 5210 Musculoskeletal Biomechanics Cr. 4
Structure and properties of the major tissue components of the musculoskeletal system and evaluation of how tissues combine to provide support and motion to the body. Offered Fall.
Prerequisite: BME 5010 with a minimum grade of B-
Equivalent: ME 5160

BME 5220 Cellular and Tissue Biomechanics Cr. 3
Introduces biomechanics on the cellular to the tissue level. We will be studying mediators of cell mechanics such as the cytoskeleton, extracellular matrix and force transduction on the cellular and tissue levels. Topics include fluid flow, biochemical diffusion, and hemodynamics. Understanding of these topics will lend to discussion of translation of these forces up to the tissue level and subsequent tissue function. Offered Fall.
Prerequisites: ME 2420 with a minimum grade of C- and BIO 1050 with a minimum grade of C-

BME 5310 Device and Drug Approval and the FDA Cr. 3
Government regulations and industrial procedures that lead to device/drug approval. Offered Spring/Summer.

BME 5370 Introduction to Biomaterials Cr. 4
Introduction to study of both biological materials (bone, muscle, etc.) and materials for medical applications. Topics include tissue properties and effects of pathology, biocompatibility, and design considerations. Offered Intermittently.
Prerequisites: BME 5010 with a minimum grade of C- (may be taken concurrently)
Equivalent: ME 5180

BME 5380 Biocompatibility Cr. 4
Introduces concepts and applications of biocompatibility. Cellular response to implants (e.g. prosthetics, gene therapies, cells, etc.) will be covered in detail, including wound healing, immune response, and foreign body response. Topics include stem cell effects; in vitro and in vivo studies; and synthetic and natural material body response. The course material will be applicable to implant design, gene therapies, and stem cell treatments. Offered Winter.
Prerequisites: BIO 1050 with a minimum grade of C-, BIO 1500 with a minimum grade of C-, or BIO 1510 with a minimum grade of C-
Equivalent: MSE 5385

BME 5425 Robotic Systems I Cr. 4
Introduction to robot kinematics and control. Computational algorithms for robot movement, sensor fusion, and intelligent behavior, which are needed to build a system that performs actions and interacts with its environment. Offered Winter.
Prerequisites: BE 1500 with a minimum grade of C-, BE 1600 with a minimum grade of C-, BME 5020 with a minimum grade of C-, or ECE 3040 with a minimum grade of C-
Equivalent: ECE 5425

BME 5570 Design of Human Rehabilitation Systems Cr. 3
This course provides basic to advanced knowledge in the field of rehabilitation engineering. The course will cover engineering principles required to 1) develop technological solutions and devices to assist individuals with disabilities and 2) aid the recovery of physical functions lost due to disease or injury. Special emphasis will be placed on learning techniques for measuring, processing, and interpreting movement biomechanics during locomotion. Students will apply these skills to develop and test orthotics and neural prosthetics. Offered Winter.
Prerequisites: BME 4210 with a minimum grade of C-

BME 5990 Directed Study Cr. 1-4
Independent projects on subjects in the field of biomedical engineering. Offered Every Term.
Repeatable for 4 Credits

BME 5995 Special Topics in Biomedical Engineering I Cr. 1-4
Topics as announced in Schedule of Classes. Offered Intermittently.
Repeatable for 12 Credits

BME 6050 Engineering for Women's Health Cr. 3
Engineering approaches have many uses in improving reproductive and non-reproductive aspects of women's health, from basic science understanding through to clinical implementation. This course will start with an overview of reproductive anatomy and physiology and continue with case studies from different engineering sub-fields as applied to reproductive health. Students will complete one in-depth project on a women's health engineering technology development. Offered Yearly.

BME 6130 Accident Reconstruction Cr. 3
Passenger car and light truck behavior in collisions; recognition of roadway markings and vehicle damage used to analyze vehicle accidents and to use that evidence to reconstruct driver, vehicle and occupant dynamics at the time of the collision. Offered Spring/Summer.

BME 6470 Smart Sensor Technology I: Design Cr. 3
Introduction to various types of sensors and the design of basic analog VLSI circuit building blocks. Offered Winter.
Prerequisites: PHY 2185 with a minimum grade of C- or PHY 2180 with a minimum grade of C-
Equivalent: ECE 6570, PHY 6570

BME 6991 Internship in Industry Cr. 1-6
Industrial internship in biomedical engineering. Offered Every Term.
Repeatable for 6 Credits

BME 7020 Cardiovascular Systems Modeling Cr. 3
Application of engineering principals and mathematical and computational techniques to cardiovascular systems. Partial differential equations, signal transduction pathway and biotransport modeling, and introduction to systems biology approaches. Offered Winter.
Prerequisites: BME 5010 with a minimum grade of B- or BME 5020 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PSL 7120

BME 7100 Mathematical Modeling in Impact Biomechanics Cr. 4
Review of models created for impact simulations. Regional impact simulation models. Human and dummy models subject to various restraint systems. Offered Intermittently.
Prerequisite: BME 5010 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ECE 7100, IE 7100, ME 7100

BME 7150 Biomechanics of Blast-Related Injuries Cr. 3
This course covers new and old information developed by military researchers on injuries sustained by military personnel due to explosions or blasts caused by a variety of weapon systems. Injuries to body regions from head to foot are discussed. Particular emphasis is placed on injuries to the spine and lower extremities for the mounted soldier and on brain injury for both the mounted and dismounted soldier. The course includes the modeling of blast and blast-related effects on selected body regions. Offered Fall.
Prerequisite: BME 7100 with a minimum grade of B- or BME 7160 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

BME 7160 Impact Biomechanics Cr. 4
Biomechanical response of the body regions and the whole body to impact. Mechanisms of injury in blunt impact. Effects of restraints on injury reduction. Development of test surrogates such as dummies. Offered Fall.
Prerequisite: BME 5010 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10
Equivalent: ME 7160

BME 7170 Experimental Methods in Impact Biomechanics Cr. 4
Lecture and laboratory combined; principles of impact testing; hands-on experience in use of impact-test equipment, including sled, pendulum, other types of impactors, and drop-test techniques. Offered Intermittently.
Prerequisite: BME 6480 with a minimum grade of B- and (BME 7100 with a minimum grade of B- or BME 7160 with a minimum grade of B-)
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $100

BME 7180 Advanced Topics: Impact Biomechanics Cr. 4
A seminar format course in which advanced topics in impact biomechanics are investigated and presented by the class. Topics will include sports biomechanics (protective gear evaluation, standards certification, etc.) ballistic impacts (behind body armor effects, kinetic energy munitions, standards) and other various topics. The focus of the class will be the critical evaluation and review of literature. Offered Winter.
Prerequisite: BME 7160 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

BME 7210 Advanced Tissue Biomechanics Cr. 3
Tissue-level mechanical properties. Analytical models of hard and soft tissue mechanics. Soft tissue viscoelasticity and poroelastic theory. Nonlinearity and anisotropy. Composite mechanics. Form and function relationships from microstructure to macrostructure. Application of theoretical models to experimental data sets. Offered Every Other Year.
Prerequisites: (BME 5010 with a minimum grade of C or BMS 6550 with a minimum grade of C), BME 5020 with a minimum grade of C, and BME 5210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ME 7195

BME 7300 Advanced Topics in Biomaterials and Tissue Biomechanics Cr. 4
Seminar format: advanced topics presented to the class; lectures by the instructor and by the participants based on literature reviews. Topics determined by student interest. Offered Every Other Fall.
Prerequisite: BME 5210 with a minimum grade of C or BME 5370 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ME 7180, MSE 7180

BME 7380 Adv Biocompatability Cr. 3
Topics of body and material response to biomedical engineering interventions and treatments will be discussed in further depth with more application-based discussion. Independent thinking on the topics will be developed through critical thinking exercises. Graduate student skills will be developed such as journal article critical reading skills and manuscript writing. Offered Every Other Winter.
Prerequisite: BME 5380 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $30

BME 7390 Tissue Engineering and Hybrid Systems Cr. 4
Seminar and project based approach to the design, development, analysis and application of organ and tissue replacement systems which incorporate processed materials and living cells. Offered Fall.
Prerequisites: BME 5370 with a minimum grade of C and (CHE 7100 with a minimum grade of C or BME 5020 with a minimum grade of C)
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CHE 7390

BME 7425 Robotics Systems II Cr. 4
Project-based class to understand technology that interfaces computer engineering, software design, electronics and sensors with robotics. We will cover Robot Operating System simulation and real. Advanced application areas of robotics will be covered including medical, military, space, vehicle robotics. Completion of ECE/BME#5425#Robotic Systems I is recommended prior to registering for this course. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: ECE 7425

BME 7470 Smart Sensor Technology II: Characterization and Fabrication Cr. 4
Integration of ongoing research in integrated technology of smart sensors. Design of smart sensor devices using computer simulation. Fabrication of smart sensor. Offered Spring/Summer.
Prerequisite: BME 6470 with a minimum grade of B- or ECE 6570 with a minimum grade of B- or PHY 6570 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $50
Equivalent: ECE 7570, PHY 7580

BME 7670 Experimental Methods in Physiology Cr. 3
Basic principles and techniques for monitoring and reading EMGs, EEGs, ECGs, respiratory cycle, pulmonary function, galvanic skin response and polygraph, human acceleration response. Designing and carrying out a project involving human body acceleration measures and EMG responses; a second project will be designed and carried out using measurement techniques chosen by the students. Offered Fall.
Prerequisite: BME 5010 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $40

BME 7720 MR Imaging of Neurovascular Disease Cr. 3
Recent advances in MRI technology applied to human brain vascular diseases. Methods include: 3D anatomical imaging, diffusion tensor imaging, functional brain imaging, perfusion imaging, and susceptibility weighted imaging. Offered Every Other Fall.
Prerequisite: BME 5010 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: PYC 7320

BME 7990 Directed Study Cr. 1-4
Independent projects on subjects of interest in the field of biomedical engineering. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

BME 7995 Special Topics in Biomedical Engineering II Cr. 1-4
Topics as announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

BME 8070 Seminar in Biomedical Engineering Cr. 1
Lectures on biomedical engineering and related fields by guest speakers, faculty, and students. M. S. and Ph.D. students are required to take one semester. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

BME 8080 BME PhD Qualifying Exam Cr. 1
Qualifying exam and procedures to write the exam. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering; enrollment limited to students in a Doctor of Philosophy degree.

BME 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

BME 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

BME 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: BME 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering; enrollment is limited to Graduate level students.
Repeatable for 18 Credits

BME 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Biomedical Engineering; enrollment is limited to Graduate level students.
Repeatable for 0 Credits

BMS - Basic Medical Science

BMS 6550 Medical Anatomy for Health Professionals Cr. 4
Basics of human anatomy for BMS and selected graduate students. Offered Spring/Summer.
Fees: $15

BMS 7880 Special Topics/Projects Cr. 1-4
Up to four credits in research, laboratory, discussion, or field work, in any combination; for students in Basic Medical Sciences or Medical Research program. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

BMS 7999 Essays in Basic Medical Science Cr. 3
Methodologies in library research and critical evaluation of current biomedical literature. Written summary and report on a specific topic in current biomedical literature. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

CB - Cancer Biology

CB 7130 Clinical Aspects of Cancer Biology Cr. 1
Cancer Biology Ph.D. students accompany clinicians during rounds in hospital and outpatient clinics, as well as attend clinical conferences, tumor boards and related sessions. Offered for S and U grades only. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.

CB 7210 Fundamentals of Cancer Biology Cr. 4
This course focuses on fundamental principles underlying the complex field of contemporary cancer biology. The lectures are organized into two thematic blocks: I, mechanisms of cancer development and progression, and II, characteristics of cancer types and approaches to cancer therapy. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CB 7220 Molecular Biology of Cancer Development Cr. 4
The course will provide a basic understanding of the molecular biology of cancer with emphasis on core concepts and molecular technologies. The course will include lectures, student-led discussions, and critical reading of literature. Students are required to present and actively participate in discussions. Offered Winter.
Prerequisite: IBS 7015 with a minimum grade of C and CB 7210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CB 7240 Molecular Mechanisms of Cancer and Therapy Cr. 4
This course will introduce graduate students to the biology of solid tumors and hematological malignancies, and the principles of conventional chemotherapy, targeted therapy, radiation therapy, and immunotherapy. The lectures cover cancer-related signaling pathways, tumor immunology, tumor microenvironment, cancer metastasis, tumor imaging, mechanisms of drug action, pharmacokinetics and clinical implementation. Offered Fall.
Prerequisite: IBS 7015 with a minimum grade of C and CB 7210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CB 7300 Special Topics in Cancer Biology Cr. 1-5
This special topics course will provide students with the opportunity for in-depth study of emerging themes and technologies on basic, translational, epidemiologic and clinical topics related to cancer, as well as augment material from other courses in Cancer Biology. Offered Every Term.
Prerequisite: CB 7210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 5 Credits

CB 7430 Cancer Epidemiology Cr. 2
This course introduces concepts and methods used in cancer epidemiology research and focuses on the cancer burden in the United States and worldwide, as well as the major causes of cancer. Students will be required to review and provide critical appraisal of selected literature in innovative areas of cancer epidemiologic research. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CB 7500 Introduction to Cancer Biostatistics Cr. 2
This is an introductory masters-level course in biostatistics for students pursing a master's degree in Cancer Biology. The main goal of this course is for the student to be introduced to basic statistical methods utilized in cancer research including experimental design, statistical hypothesis tests, linear regression, and survival analysis. The course will utilize Excel and the PSPP programming environment for instruction. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology; enrollment limited to students in a Master of Science degree.

CB 7510 Journal Club/Seminar Cr. 1
This journal club/seminar format course is required for master's students in the Cancer Biology Graduate Program. Classes will be split between cancer research-focused paper presentations/discussions and seminar presentations. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology; enrollment limited to students in a Master of Science degree.
Repeatable for 2 Credits

CB 7600 Applied Cancer Biostatistics Cr. 2
The objective of this course is to equip students with the knowledge and skills to understand, apply, and interpret fundamental biostatistical concepts using a statistical software package. These skills are essential for conducting, evaluating, and presenting research in the field of biological science. Students will gain hands-on experience with a statistical software package to manage, analyze, and present biological data. Key activities include data recording, transformation, generating descriptive and inferential statistics, and interpreting statistical reports and outcomes in the context of biological research. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.

CB 7700 Recent Developments in Cancer Biology Cr. 1
This course is a journal club designed for students to develop proficiency in critically evaluating original cancer biology literature, to broaden their knowledge of contemporary topics in cancer biology, and to provide insights into current research strategies. Each student is expected to participate in class discussions. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.
Repeatable for 4 Credits

CB 7710 Individual Studies in Cancer Biology Cr. 1-3
Cancer Biology graduate students pursue experimental research under the guidance of selected faculty. This is the research rotation through which students select their Ph.D. dissertation mentor. Students are required to complete three rotations. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.
Repeatable for 3 Credits

CB 7800 Rigor and Reproducibility in Cancer Biology Cr. 1
This course will introduce students to basic principles of rigorous and reproducible Cancer Biology research. This includes experimental design and data interpretation, publishing, animal and human research, and other topics relevant to the conduct of research in Cancer Biology. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.

CB 7890 Seminar in Cancer Biology Cr. 1
This course provides Cancer Biology students with the opportunity to present their dissertation research to their peers. This class not only provides students with the opportunity to develop their oral presenting skills but also gives the students a chance to critically evaluate their peers' research. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.
Repeatable for 4 Credits

CB 7991 Internship in Cancer Biology Cr. 8
Practical research experience through visiting a university, industry, or national laboratory. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology; enrollment limited to students in a Master of Science degree.
Repeatable for 8 Credits

CB 7996 Research Cr. 1-7
Directed study and pre-dissertation research with faculty in the program. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.
Repeatable for 7 Credits

CB 7999 Master's Essay Cr. 1-4
Review of relevant literature and research summary based on master's research in Cancer Biology. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.
Repeatable for 4 Credits

CB 8910 Applied Cancer Bioinformatics Cr. 1
This course is to equip students with the knowledge and skills of the basic concepts and computational methods in the interdisciplinary field of bioinformatics and their applications in biomedical and cancer research. The course will focus on the multi-omics data generated from next generation sequencing technology. Students will receive an introduction to the concepts, analysis and interpretation of multi-omics data and their applications in cancer research. This course is designed to instruct students having a general background in molecular biology. No coding or programming experience is required. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CB 8920 Principles of Translational and Clinical Cancer Research Cr. 1
The goal of this course is for the students to understand the fundamentals of translational and clinical cancer research with emphasis on identifying clinically meaningful research goals and application of laboratory based research into clinical trials. The students will attend a series of lectures from clinical oncology faculty members. Students will work with their clinical mentors to develop translational research projects or correlative end points for a clinical trial concept. Students are expected to present a brief proposal of the project at the end of the course, which will be evaluated by the course director. Offered Fall.
Prerequisite: CB 7130 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.

CB 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.
Repeatable for 8 Credits

CB 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Candidacy Research Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.

CB 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Candidacy Research Level 2 Offered Every Term.
Prerequisite: CB 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.

CB 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Cancer Biology.
Repeatable for 0 Credits

CE - Civil Engineering

CE 2000 How Cities Work: An Introduction to Civil and Environmental Infrastructure Cr. 3
Satisfies General Education Requirement: Social Inquiry
Cities are built on the backbone of infrastructure, particularly civil and environmental infrastructure. These infrastructures provide essential services to residents. This course will make students aware of the tensions that arise out of the social, economic, and environmental demands on sustaining engineered infrastructure in the diverse, pluralistic social forums that are our cities. Students will learn how our engineered urban centers operate so they are better prepared for careers in governance and management, to perform social work with citizens who are disconnected from vital services, work as an engineer toward sustainable urban futures; serve as an informed public health or medical professional, among other endeavors that can benefit from an understanding of how cities strive to serve and provide services to residents. Offered Yearly.

CE 2410 Statics Cr. 3
Basic concepts and principles of statics with applications to Newton's Laws of Motion to engineering problems. Forces, moments, equilibrium, couples, free body diagrams, trusses, frames, fluid statics, friction, area and mass moment of inertia. Offered Every Term.
Prerequisites: MAT 2020 with a minimum grade of C- and PHY 2170 with a minimum grade of C-
Equivalent: ME 2410

CE 2420 Elementary Mechanics of Materials Cr. 3
Elastic relationships between external forces acting on deformable bodies and the associated stresses and deformations; structural members subjected to axial load, torsion, and bending; column buckling; combined stresses; repeated loads; unsymmetrical bending. Offered Every Term.
Prerequisites: ME 2410 with a minimum grade of C- or CE 2410 with a minimum grade of C-
Equivalent: ME 2420

CE 3010 Introduction to CAD: For Civil Engineers Cr. 3
Hands-on introduction to CAD for civil engineers using AutoCAD and Civil 3D. Students learn drafting fundamentals, layers, blocks, viewports, annotation, plotting, and Civil 3D workflows including points, surfaces, parcels, alignments, profiles, corridors, and pipe networks. A term project produces a coordinated civil drawing set aligned to professional conventions. Offered Every Other Year.
Prerequisite: MAT 2020 with a minimum grade of C- and BE 1200 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CE 3070 Surveying Cr. 3
Principles of plane surveying; measurement of horizontal and vertical distance, directions and angles, traverses, areas. Offered Intermittently.
Prerequisite: PHY 2185 with a minimum grade of C- or PHY 2180 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $20

CE 3250 Applied Fluid Mechanics Cr. 4
Application of theoretical fluid mechanics to problems of special interest to civil engineers including pipe flow, open channel flow, forces on submerged bodies, and flow measurement. Laboratory component of course provides experimental verification of theories and computer visualization. Offered Fall.
Prerequisite: MAT 2030 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $15

CE 3450 Civil Engineering Materials Cr. 4
Structure, composition and engineering properties of aggregates, cement concrete, asphalt, asphalt concrete, and other civil engineering materials. Mix design, testing, and quality control. Material Fee as indicated in the Schedule of Classes. Offered Winter.
Prerequisites: BE 2100 with a minimum grade of C- and CE 2420 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $35

CE 4020 Introduction to Construction Engineering and Management Cr. 3
An introduction to the organization and management of construction projects. This course will cover the life cycle of a construction project including planning, design, procurement, construction, commissioning, and close-out phases. Also, the students will learn about fundamentals of cost estimating, scheduling, quality, safety and risk management, sustainability, and various applicable technology for construction projects. Offered Winter.
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.

CE 4210 Introduction to Environmental Engineering Cr. 3
Introduction to environmental laws; reaction kinetics; principles of mass balances; plug-flow and completely stirred tank reactors; Stoke's Law; Streeter-Phelps oxygen sag curves; water chemistry; hydrologic cycle; population growth models; elements of soil waste management and air pollution. Offered Winter.
Prerequisite: CE 3250 with a minimum grade of C-
Corequisite: CE 4230
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $10

CE 4230 Environmental Engineering Laboratory Cr. 1
This laboratory course includes multiple experiments that demonstrate fundamental environmental engineering concepts and principles. The course involves laboratory and field work techniques commonly used in the field of environmental engineering. Through this course, students will 1) develop safe and effective laboratory and field work techniques, 2) understand how to apply hypothesis development and testing, along with experimental and engineering design, data analysis and interpretation, and 3) build a foundation of good engineering understanding that they can apply in their future academic and industrial career. Offered Winter.
Prerequisites: CE 4210 with a minimum grade of C- (may be taken concurrently)
Fees: $75

CE 4240 Environmental Engineering Design Cr. 3
Design of engineered environmental systems, including drinking water distribution systems, sanitary and storm water sewer systems, and municipal waste disposal sites. Offered Fall.
Prerequisite: CE 3250 with a minimum grade of C- and CE 4210 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CE 4400 Structural Analysis Cr. 4
Basic concepts of structural analysis; reactions, forces, and stresses in trusses and beams; influence lines; elastic deflections; introduction to indeterminate structures; computer applications. Offered Fall.
Prerequisites: CE 2410 with a minimum grade of C- and CE 2420 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CE 4410 Steel Design Cr. 3
First course in design of steel structures. Introduction to the concepts, requirements, and fundamental skills for steel building structural design. Offered Winter.
Prerequisites: CE 4400 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CE 4420 Reinforced Concrete Design Cr. 3
First course in design of concrete structures. Design and analysis of reinforced concrete beams, columns, and other structural members; ACI code requirements, cost concerns, safety, industry practices; introduction to prestressed concrete. Offered Fall.
Prerequisite: CE 4400 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CE 4510 Introduction to Geotechnical Engineering Cr. 4
Composition, engineering properties and behavior of soils. Principles of soil mechanics. Experimental determination of engineering classification, strength and deformation characteristics of natural and artificially placed soils. Offered Fall.
Prerequisites: CE 3250 with a minimum grade of C- (may be taken concurrently) and CE 3450 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $30

CE 4600 Transportation Engineering Cr. 3
Transportation functions; transportation systems including highways, railways and airways. Techniques of transportation systems analysis including optimization, network flows and queueing theory. Offered Winter.
Prerequisite: BE 3220 with a minimum grade of C- or BE 2100 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CE 4610 Highway Design Cr. 3
This course covers the standards recommended by: American Association of State Highway and Transportation Officials (AASHTO); FHWA; and MDOT for designing and evaluation of highways. Its objective is to introduce the students to the concepts, requirements, and fundamental skills for highway design and evaluation. The primary goal of geometric design is to provide for the safety and comfort of road users with due regard to social, economic and environmental constraints. Although there are suggested design standards and controls that must be followed to meet design goals, their application is determined on a case-by-case basis. The objective of this course is to illustrate the practical application of scientific knowledge to the planning and designing of roadway elements. The course uses up-to-date software design tools in accomplishing these goals. Upon completion of the course, the student is expected to be able to design and evaluate highways per AASHTO, MDOT and FHWA standards. Offered Fall.
Prerequisite: CE 4600 with a minimum grade of C-

CE 4640 Transportation Systems Design and Operation Cr. 3
Provides an overview of various system components of transportation, including the driver, vehicle and roadway. The subject matter will be covered at an intermediate level, appropriate for CEE students already familiar with the basic concepts of transportation engineering who wish to expand their knowledge. There will be a particular emphasis on transportation safety and multimodal roadway operations, as are typical priorities in an urban or suburban setting. Topics include: traffic flow design elements including volume, density and speed; intersection design elements including delay, capacity and crash countermeasures and terminal design elements including inflow, outflow and circulation. Offered Fall.
Prerequisite: CE 4600 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CE 4850 Engineering Economy Cr. 3
Economic analysis of engineering projects. Selection of appropriate financial parameters (e.g., interest rates) and methods of analysis for depreciation, tax considerations, and use of accounting data for comparison among investment options. Offered Fall.
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Equivalent: IE 4850

CE 4985 Fundamentals of Civil Engineering Cr. 1
Prepares students to take the first step toward licensure and pass the Fundaments of Engineering (FE) examination administered by the National Council of Examiners for Engineering and Surveying (NCEES). Students will review material covered on the exam and be presented with strategies to maximize the likelihood of successfully passing the FE exam. Offered Winter.
Prerequisites: CE 3250 with a minimum grade of C-, CE 4020 with a minimum grade of C-, CE 4400 with a minimum grade of C-, and CE 4600 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

CE 4990 Directed Study Cr. 1-4
Supervised study and instruction in civil engineering. Written report required. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Repeatable for 6 Credits

CE 4995 Senior Design Project Cr. 3
Capstone design experience through civil engineering projects. Offered Winter.
Prerequisites: CE 3250 with a minimum grade of C-, CE 4020 with a minimum grade of C-, CE 4400 with a minimum grade of C-, and CE 4600 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CE 5020 Introduction to Construction Safety Cr. 3
This course provides an understanding of safe work practices, mandatory training, record-keeping, and compliance with OSHA worker safety and environmental safety laws. Topics include the role of construction personnel, ethics, worker's compensation, OSHA compliance, hazard analysis, accident investigation, and emergency response plan. The course aims to improve students' knowledge of construction safety, enhance their communication skills, and foster a sense of civic duty and responsibility grounded in high moral and ethical standards. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.

CE 5030 Introduction to Construction Planning and Scheduling Cr. 3
This course introduces students to the principles and practices of construction project scheduling and control within the context of outcome-based education and accreditation standards. Emphasizing the core requirements outlined by accrediting bodies such as ACCE and ABET, the course focuses on developing students' ability to plan, schedule, and manage construction projects effectively using industry-standard tools including Primavera P6 and Microsoft Project. Students will learn to interpret and prepare Critical Path Method (CPM) schedules, develop accompanying narratives, and apply scheduling techniques across multiple levels of detail. Through a combination of lectures, applied exercises, and assignments, the course trains students to analyze, communicate, and resolve scheduling challenges in alignment with professional standards in Construction Management and Construction Engineering programs. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.

CE 5080 Causal Inference Research Methods for Engineers and Planners Cr. 3
This course focuses on causal inference methods in engineering and planning research. Students will learn how to design studies, estimate causal effects, and address heterogeneity in real-world infrastructure and policy applications. Topics include regression models, instrumental variables, simultaneous equation models, discrete choice modeling, duration analysis, and quasi-experimental approaches (e.g., difference-in-differences, propensity score matching). While examples from transportation and urban planning will be emphasized, the methods covered are broadly applicable to engineering, public policy, and infrastructure decision-making. Offered Fall.
Prerequisite: BE 2100 with a minimum grade of D-

CE 5220 Environmental Chemistry Cr. 3
Fundamentals of aqueous chemistry for environmental engineers and scientists. Basic chemistry, equilibria, kinetics and thermodynamics; includes acid/base reactions, precipitation/dissolution, oxidation/reduction reactions and partitioning. Offered Every Other Year.
Fees: $5

CE 5230 Water Supply and Wastewater Engineering Cr. 3
Analysis and design of water supply and wastewater treatment systems; water distribution systems; treatment of municipal water supplies, including sedimentation, softening, filtration and disinfection; design of sanitary and storm sewers; primary, secondary and tertiary treatment plant design; sludge handling. Offered Yearly.
Prerequisite: CE 4210 with a minimum grade of C-
Fees: $5

CE 5240 Air Pollution Engineering Cr. 3
Designed to introduce students to the fields of air pollution and air quality, this course will provide an overview of the U.S. regulation of air pollution and explain the fundamental principles of the physical and chemical processes of air pollutants associated with natural and anthropogenic emission sources. In particular, we will focus on air pollutants that contribute to the formation of acid rain, smog and haze, as well as the gas- and particle-phase tropospheric chemistry. Engineering methods to control and mitigate air pollution will be also covered. Offered Yearly.

CE 5350 Introduction to Structural Dynamics Cr. 4
Dynamic properties of structures,. Modeling of dynamic loads. Structural response to dynamic loading. Structural design requirements for dynamic loads. Fundamental techniques of dynamic system analysis. Offered Winter.
Prerequisite: ME 3400 with a minimum grade of C- and CE 4400 with a minimum grade of C-

CE 5370 Finite Element Analysis Fundamentals Cr. 3
Matrix structural analysis, discretization of continuous structural systems, stress analysis. Commercial finite element software preprocessing for developing finite element models; post-processing for evaluating analysis results. Offered Fall.
Prerequisites: CE 4400 with a minimum grade of C-

CE 5390 Design of Prestressed Concrete Structures Cr. 3
Focuses on the design of prestressed structures. The principle and methods of prestressing are discussed including approaches for computing prestress losses. The course deals with the estimation of capacity of various structural members such as beams and columns and their response to various structural actions such as flexure, vertical shear, horizontal shear, and combined axial and flexure loads. Performance at service is discussed in terms of stresses, deflections and crack control. Offered Yearly.
Prerequisite: CE 4420 with a minimum grade of C-

CE 5410 Energy, Emissions, Environment (E3) Design Cr. 3
Provides students the tools to uncover the relation between energy consumption and energy generation and optimize processes to take most advantage of low emitting energy options. Exposes students to design tools and methodologies from a diverse group of sources including US EPA, DOE, EIA, and the latest in emerging research. Offered Fall.
Equivalent: AET 5410, STE 5410

CE 5510 Geotechnical Engineering I Cr. 4
Site investigation, site improvement, bearing capacity and settlement of shallow foundations, axial capacity and lateral deflection of deep foundations, design of conventional earth retaining walls, and basics of slope stability analyses. Offered Fall.
Prerequisites: CE 4510 with a minimum grade of C-

CE 5520 Geotechnical Engineering II Cr. 3
Lateral earth pressure theories, design of conventional earth-retaining walls and of reinforced earth walls, anchored sheet-pile walls and cofferdams, fundamentals of soft-ground tunneling, two- and three-dimensional slope stability analyses, and static design of earth dams. Offered Every Other Year.
Prerequisites: CE 4510 with a minimum grade of C-

CE 5530 Foundation Engineering Cr. 3
This course applies the principles of soil mechanics to address the engineering challenges encountered in the design and construction of foundations. Students will be introduced to the principles and practice of foundation engineering, with a focus on the analysis and design of shallow and deep foundations for buildings, retaining walls, and other structures. Topics will include both analytical, calculation-based problems and practical considerations that influence design decisions in the field. The knowledge and skills developed in this course will enhance the technical competencies expected of early-career engineers and support their progression toward professional credentialing. Offered Yearly.
Prerequisites: CE 4510 with a minimum grade of C-

CE 5600 Graduate Introduction to Transportation Engineering Cr. 3
The goal of this course is to provide students—both within Civil Engineering and from other disciplines—with an introduction to transportation engineering, with specific emphasis on traffic signals, the fundamentals of traffic flow theory, level-of-service and capacity analysis, the transportation planning process, traffic safety, geometric design of highways, and pavement design. Students must complete BE 2100 with a C- or higher as a prerequisite. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CE 5610 Advanced Highway Design Cr. 3
This course covers the standards recommended by: American Association of State Highway and Transportation Officials (AASHTO); FHWA; and MDOT for designing and evaluation of highways. Its objective is to introduce the students to the concepts, requirements, and fundamental skills for highway design and evaluation. The primary goal of geometric design is to provide for the safety and comfort of road users with due regard to social, economic and environmental constraints. Although there are suggested design standards and controls that must be followed to meet design goals, their application is determined on a case-by-case basis. The objective of this course is to illustrate the practical application of scientific knowledge to the planning and designing of roadway elements. The course uses up-to-date software design tools in accomplishing these goals. Upon completion of the course, the student is expected to be able to design and evaluate highways per AASHTO, MDOT and FHWA standards. Offered Fall.
Prerequisites: CE 4640 with a minimum grade of C-

CE 5620 Intelligent Transportation Systems Cr. 3
This course aims to provide graduate students with a comprehensive understanding of Intelligent Transportation Systems (ITS) and their role in enhancing transportation efficiency, safety, and sustainability. Students will explore the principles, technologies, and applications of ITS, including data-driven decision making, vehicle-to-everything (V2X) communication, autonomous and connected vehicles, real-time traffic management, and multimodal transportation integration. In addition, emerging AI technologies and their applications are also covered. Through a combination of theoretical foundations and practical case studies, students will develop skills in designing, analyzing, and implementing ITS solutions to address contemporary challenges in urban mobility, traffic congestion, environmental impacts, and infrastructure resilience. Offered Winter.

CE 5640 Advanced Transportation Systems Design and Operation Cr. 3
Provides an overview of various system components of transportation, including the driver, vehicle and roadway. The subject matter will be covered at an intermediate level, appropriate for CEE students already familiar with the basic concepts of transportation engineering who wish to expand their knowledge, and for non-CEE students specifically interested in applications of transportation engineering theory. There will be a particular emphasis on transportation safety and multimodal roadway operations, as are typical priorities in an urban or suburban setting. Traffic flow design elements including volume, density and speed; intersection design elements including delay, capacity and crash countermeasures and terminal design elements including inflow, outflow and circulation. Offered Fall.

CE 5830 Business of Engineering Cr. 3
Defining the engineering company, creating the organization, support services, business development, project management, scheduling, budgeting and profitability, operations, financial management and risk management. Offered Every Term.
Prerequisites: CE 4850 with a minimum grade of C-

CE 5995 Special Topics in Civil Engineering I Cr. 1-3
Topics to be announced in Schedule of Classes. Offered Intermittently.
Repeatable for 12 Credits

CE 6010 Advanced Construction Engineering and Management Cr. 3
This course will cover the life cycle of a construction project including planning, design, procurement, construction, commissioning, and close-out phases. Also, the students will learn about fundamentals of cost estimating, scheduling, quality, safety and risk management, sustainability, and various applicable technology for construction projects. Offered Winter.

CE 6050 Construction Cost Estimating Cr. 3
Estimating construction costs of engineering projects including materials, man-hours, equipment and overhead. Emphasis on construction equipment, including productivity and planning. Bidding and bid documents. Offered Every Other Year.
Prerequisites: CE 4850 with a minimum grade of C-

CE 6060 Construction Techniques and Methods Cr. 3
Construction techniques and methods for excavation, foundations, concrete, wood, steel, masonry, heavy construction, wastewater treatment plants, highways and roads, high rise structures, bridges, and tunneling projects. Offered Every Other Year.
Prerequisites: CE 3450 with a minimum grade of C-

CE 6130 Open Channel Hydraulics Cr. 3
Theoretical development of equations governing flow in open channels. Application to real-world engineering problems involving water surface profiles, flood studies, and river. Offered Winter.
Prerequisites: CE 3250 with a minimum grade of C-

CE 6150 Hydrologic Analysis and Design Cr. 3
Principles of surface water hydrology and their application for evaluation of floods and the design of surface runoff control system; watershed characteristics; design storms and SCS methods; unit hydrographs; hydrologic models; application of computer methods. Offered Every Other Year.
Prerequisites: CE 4210 with a minimum grade of C-

CE 6160 Principles of Atmospheric Chemistry and Applications Cr. 3
Provides the student with an overview of photochemical reactions that directly impact atmospheric composition and thus pertinent to the management of air quality. Focuses on atmospheric radicals, tropospheric ozone and mechanisms of particulate matter formation; the impact of these constituents associated with air pollutions on air quality and global climate change. Students will be introduced to modeling atmospheric chemistry using simple box models as well as state-of-the-science 3-dimensional global chemical transport models. Offered Yearly.

CE 6170 River Assessment and Restoration I Cr. 3
Students will learn field methods to assess stability, condition of rivers and contributing watersheds. Students will learn basic surveying techniques, apply these to the collection, analysis of cross-sectional data and longitudinal profiles. Other field methods include: Wolman pebble count, measurement of plan-form geometry, identification of key geomorphic features (e.g., bankful elevation, abandoned floodplains, mid-channel and transverse features). Field measurements will be made to calculate Bank Erosion Hazard Index (BEHI), Near-Bank Stress Index. Students will learn how to monitor a river for bank erosion (e.g., bank pins), riverbed aggradation/degradation (e.g., scour chains). Students will learn stream classification, sediment budgeting, methods to quantify sediment yield and transport, and how to analyze data, and identify trends in river hyrdology and sediment supply. Offered Every Other Spr/Sum.
Equivalent: ESG 6150

CE 6190 Groundwater Cr. 3
Historical background, aquifers and aquitards, saturated and unsaturated flow, sources of ground water contamination, artificial recharge of ground water, development of ground water basins and efficient use of ground water resources. Offered Yearly.
Prerequisites: CE 3250 with a minimum grade of C-

CE 6220 Wastewater Treatment and Resource Recovery Cr. 3
A critical challenge of wastewater treatment is the intensive energy usage, accounting for 2-5% of total US energy consumption. The energy consumed primarily originates from nonrenewable fossil fuels and is not sustainable. Therefore, there is an increasing expectation that WWTPs should deliver not only high-quality effluents but also energy recovery and value-added by-products. State regulators, municipalities and other industrialized jurisdictions are transitioning Wastewater Treatment Plant (WWTPs) to Water Resource Recovery Facilities (WRRFs). This course is designed for graduate and upper level undergraduate students who are interested in advancing their knowledge in wastewater treatment and resource recovery. This course will provide you 1) fundamental engineering principles and knowledge of wastewater treatment, 2) advanced wastewater treatment technologies for improved wastewater treatment efficiency and resource recovery. Offered Every Other Year.
Prerequisites: CE 4210 with a minimum grade of C-

CE 6270 Sustainability Assessment and Management Cr. 3
Sustainability assessment and management for engineering design and development; theoretical, regulatory, and practical implications; Detroit and global applications. Offered Yearly.
Equivalent: STE 6270

CE 6340 Bridge Design and Evaluation Cr. 3
Concepts, procedures, methods of design and condition evaluation for modern highway bridges, according to current specifications. Entire system is covered, including superstructure, substructure, and their connections. Offered Every Other Year.
Prerequisites: CE 4420 with a minimum grade of C-

CE 6370 Advanced Reinforced Concrete Design Cr. 3
Theory and design of two-way slabs, footings, retaining walls, shear walls, and composite beams using ultimate strength design. Precast and prestressed concrete fundamentals. Offered Yearly.
Prerequisites: CE 4420 with a minimum grade of C-

CE 6410 Advanced Steel Design Cr. 3
Advanced topics of structural steel design: thin walled rolled and built-up members, beam columns, lateral torsional buckling, steel fatigue design, connection details. Steel design project. Offered Every Other Year.
Prerequisites: CE 4420 with a minimum grade of C-

CE 6420 Masonry Design Cr. 3
Students will learn to use the Building Code Requirements for Masonry Structures (TMS 402/602-16) including masonry properties, anchors, lintels, bearing walls, and columns. The course will also utilize the 2021 Michigan Building Code for design loads. Offered Every Other Year.
Prerequisites: CE 4400 with a minimum grade of C-

CE 6430 Timber Design Cr. 3
Students will learn to use the ANSI/AF&PA NDS-2018 (2018 National Design Specification for Wood Construction) including beam, column, beam-column, tension, bearing, and connection design. Course discussion will also include glulam products and engineered wood products such as laminated veneer lumber and metal plate connected wood roof trusses. The student will also learn the application of the 2015 Michigan Building Code for use with timber design as well as properly designing load paths. Offered Every Other Year.
Prerequisites: CE 4400 with a minimum grade of C-

CE 6650 Pavement Design Cr. 3
The goal of this course is to provide graduate students with a comprehensive insight into the analysis and design of flexible and rigid pavements, with a keen emphasis on pavement materials, the mechanistic analysis of pavement structure under the impacts of traffic and weather, and the mechanistic-empirical pavement design method. Additionally, the course aims to enhance students' problem-solving skills in pavement research and prepare them for the Fundamentals of Engineering (FE) and Principles and Practice of Engineering (PE) exams. Offered Fall.
Prerequisite: CE 4600 with a minimum grade of C

CE 6660 Pavement Asset Management Cr. 3
Principles and practices of pavement management at the network and project level: serviceability, pavement design models, economic analysis, and priority programming. Offered Yearly.
Prerequisites: CE 4610 with a minimum grade of C- or CE 4640 with a minimum grade of C-

CE 6880 Building Information Modeling (BIM) Cr. 3
Lectures, hands-on demonstrations and lab exercises to familiarize students with concepts and tools in Revit Architecture 2010 software; how software integrates 3D and 2D modeling. Includes an overview of the Building Information Modeling (BIM) process; integration of designs from different disciplines (architectural, structural and MEP) in a BIM model; and use of BIM tools (including Revit and Navisworks) to create 2D, 3D, 4D (schedule) and 5D (cost) models for project control purposes, as well as clash detections. Offered Every Other Year.

CE 6910 Pharmaceutical Waste: Environmental Impact and Management Cr. 2-3
Course designed for advanced professional and graduate students with sufficient chemistry and/or biological sciences background who are interested in the environmental impact, management, and regulation of waste pharmaceuticals as emerging issues. Offered Winter.
Restriction(s): Enrollment is limited to Graduate or Professional level students.
Equivalent: PSC 6910

CE 6991 Internship in Industry Cr. 1-4
Written report describing internship experience. Offered Every Term.
Repeatable for 4 Credits

CE 7020 Construction Safety Cr. 3
Safety problems in the construction industry and their technical and managerial solutions, construction accident and failure analysis and control. Safety program design and implementation with TQM integration. Offered Yearly.
Prerequisite: CE 6010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CE 7070 Risk and Reliability in Civil Engineering Cr. 3
Uncertainty in civil engineering practice (e.g., loads, traffic, water demand, construction quality). Reliability theory based on probabilistic and statistical methods. Reliability-based engineering design and decision making. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7080 Civil Engineering Research Methods Cr. 3
Methods of data collecting and statistical analysis in context of civil engineering. Applications of advanced statistical analysis techniques, theory, discussion of methodological limitations. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

CE 7090 Statistical and Econometric Methods in Civil Engineering II Cr. 3
The purpose of this course is to provide students with advanced training in the application of various statistical/econometric analysis techniques for addressing civil engineering-related problems. The methods considered in this class are an extension of the techniques taught in CE 7080. The course will present a number of model-estimation methods that are used in the areas of planning, design, operations and management of transportation systems. The course will emphasize model estimation and application, but underlying theory and limitations will be discussed to ensure that the methods are properly applied and understood. After completing this course, students will have exposure to an assortment of statistical modeling tools and additional insight to transportation data sources, their limitations, and the analysis of such data. It is important to note that the methods presented go well beyond the techniques typically covered in statistics courses. Offered Intermittently.
Prerequisite: CE 7080 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

CE 7160 Advanced Principles of Atmospheric Chemistry and Applications Cr. 3
This course will provide students with an overview of photochemical reactions that directly impact atmospheric composition and thus pertinent to the management of air quality. In particular, we will focus on atmospheric radicals, tropospheric ozone and mechanisms of particulate matter formation; the impact of these constituents associated with air pollutions on air quality and global climate change. Students will be introduced to modelling atmospheric chemistry using simple box models as well as state-of-the-science 3-dimensional global chemical transport models. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7170 Advanced River Assessment and Restoration I Cr. 3
Students will learn field engineering methods to assess the stability and condition of rivers and contributing watersheds. Students will learn basic surveying techniques, apply them to the collection and analyze cross-sectional and longitudinal profile data. Other methods include: Wolman pebble count, measurement of plan-form geometry, identification of key geomorphic features. Field measurements will be made to calculate the Bank Erosion Hazard Index (BEHI) and Near-Bank Stress Index among other parameters. Students will learn how to monitor riverbank erosion and riverbed aggradation/degradation via scour chains. Students will learn stream classification, the importance of sediment budget, methods to quantify sediment yield and transport, and how to analyze data to assess trends in hyrdology and sediment supply. Offered Every Other Spr/Sum.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7180 Advanced River Assessment & Restoration II - Field Methods in Fluvial Geomorphology Cr. 3
Students will learn advanced field methods to assess the stability & condition of a river. Rivers are composed of water & sediment, both flowing under the influence of gravity. The proportions of water & sediment that make up the stream will dictate the stable form or the extent to which it is unstable. As such, one must be able to accurately quantify the water & sediment delivered to and transported through a stream. A considerable portion of this class will be spent in the field where students will learn techniques for measuring stream-flow & sediment transport. Students will learn several methods for calculating sediment transport & sediment yield rates. Students will learn field methods to quantitatively characterize the bed of a stream & the movement of that bed. Additionally, the quantification of sediment sinks such as deposition on the floodplain & in ponds/reservoirs, will be performed. Students will learn how the hydrology & sediment supplies to the Great Lakes have changed. Offered Every Other Spr/Sum.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7240 Advanced Air Pollution Engineering Cr. 3
Designed to introduce students to the fields of air pollution and air quality, this course will provide an overview of the U.S. regulation of air pollution and explain the fundamental principles of the physical and chemical processes of air pollutants associated with the natural and anthropogenic emission sources. In particular, we will focus on air pollutants that contribute to the formation of acid rain, smog and haze, as well as the gas- and particle-phase tropospheric chemistry. Engineering methods to control and mitigate air pollution will be also covered. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7270 Big Data Applications in Environmental Engineering Cr. 3
This graduate-level course will focus on numerical methods and computational techniques required to run state-of-the-art 3-dimensional (3D) chemical transport models and process big data in order to address problems in environmental engineering, with a focus on air pollution and air quality. Students will have hands-on experience running GEOS-Chem models over Grid High Performance Computing at Wayne State University and employing programming skills to analyze the often dense model output datasets, and then employing strategies to visualize and interpret these data. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7280 Applied Environmental Microbiology Cr. 3
Provides knowledge of microbiology, roles and relations of microorganisms to the environment. Topics include practical applications of environmental microbiology to environmental issues including water treatment, biodegradation and bioremediation of environmental pollutants, production of alternative fuels, and emerging environmental concern. Special consideration will be given to water treatment and microbe-mediated cycling of organic materials (i.e. pollutants) in a variety of natural and engineered environment. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

CE 7311 Sustainability of Urban Environmental Systems Cr. 2
Students will be introduced to topics in urban sustainability from multiple disciplinary perspectives such as: ecology, anthropology, communication, engineering, economics and urban planning. Questions in fostering a more sustainable urbanism will be introduced and evaluated. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 7310

CE 7385 Advanced Topics in Reinforced Concrete Design Cr. 3
Focuses on reinforced concrete plasticity, plastic mechanism analysis, and the application of these concepts to design for strength of reinforced concrete structures. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7395 Advanced Design of Prestressed Concrete Structures Cr. 3
Focuses on the design of prestressed structures. The principle and methods of prestressing are discussed including approaches for computing prestress losses. Deals with the estimation of capacity of various structural members such as beams and columns and their response to various structural actions such as flexure, vertical shear, horizontal shear, and combined axial and flexure loads. Performance at service is discussed in terms of stresses, deflections and crack control. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7460 Advanced Composite Materials for Civil Infrastructure Cr. 3
Infrastructure problems. Advanced fiber reinforced plastics, including applications in primary/secondary and marine structures, and in rehabilitation. High performance fiber reinforced concrete. Controlled composite properties via composite design. Review of composite analysis and failure criteria based on micromechanics and laminate theory. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7500 Constitutive Models in Geomechanics Cr. 3
This course introduces students to computational techniques and constitutive modeling in geomechanics. The first portion of the course develops essential numerical computing skills for numerical analysis and visualization. The remainder of the course focuses on fundamental models of soil and geomaterial behavior, including elastic, plastic, and elastoplastic formulations. Using the numerical computing skills, they develop early in the semester, students program and explore these constitutive models through a series of hands-on computational labs and structured homework assignments, gaining experience in analyzing stress-strain responses and interpreting material behavior under different loading conditions. Students should have completed Introductory Soil Mechanics (CE 4510) and engineering calculus sequence (MAT 2010, 2020, 2030) or their equivalents as prerequisites. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7580 Environmental Remediation Cr. 3
Site assessment; soil and groundwater investigation for remediation; application of remediation technologies; legislation related to remediation. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7600 Highway Safety and Risk Management Cr. 3
The focus of this course is on developing knowledge, skills, and abilities for planning, managing, and operating safe roadways for all users and modes of travel. It includes analysis of roadway design alternatives, statistical analysis of roadway safety issues, and crash countermeasure selection and evaluation. Students should have prior knowledge of the roadway geometric design process, traffic flow fundamentals (i.e., volume, density, speed, etc.), traffic control devices, and basic statistics (linear regression, t-tests, p-values, etc.). Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7620 Traffic Engineering Control and Operation Cr. 3
Traffic flow theories, macroscopic and microscopic models of traffic control, statistical analysis; design and application of intelligent transportation systems on traffic flow characteristics; evaluation. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7625 Advanced Intelligent Transportation Systems Cr. 3
This course aims to provide graduate students with a comprehensive understanding of Intelligent Transportation Systems (ITS) and their role in enhancing transportation efficiency, safety, and sustainability. Students will explore the principles, technologies, and applications of ITS, including data-driven decision-making, vehicle-to-everything (V2X) communication, autonomous and connected vehicles, real-time traffic management, and multimodal transportation integration. In addition, emerging AI technologies and their applications are also covered. Through a combination of theoretical foundations and practical case studies, students will develop skills in designing, analyzing, and implementing ITS solutions to address contemporary challenges in urban mobility, traffic congestion, environmental impacts, and infrastructure resilience. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7630 Urban Transportation Planning Cr. 3
This course provides an in-depth view of transportation planning and the analytical and statistical tools needed to understand different planning principles and the relationship between transportation and land use, travel demand forecasting, demand versus supply characteristics, and the development and evaluation of alternative systems. Additional topics will include benefit-cost analysis, transportation equity analysis, and transit accessibility measurement. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7670 Advanced Traffic Signal Systems Cr. 3
Analysis and design of traffic signal systems. Hardware, communication and detection systems associated with microcomputer-based signal systems. Coordinated signal systems. Offered Every Other Year.
Prerequisite: CE 7620 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CE 7810 Advanced Legal Aspects of Engineering and Construction Cr. 3
Examines the legal structure of the architecture, engineering, and construction (AEC) industry from the perspective of the working professional. Topics covered include: fundamental principles of law; components of a contract; industry standard agreements; project delivery methods; liabilities of owner, architect, engineer, contractor, and subcontractors/suppliers; torts, negligence, and claims; delays and unforeseen conditions; insurance and indemnification; intellectual property; liens and bonds; dispute resolution basics; rights in land, boundaries, and foundations. Case studies will be used, where appropriate, to illustrate keys concepts. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7830 Construction Planning and Scheduling Cr. 3
Planning and scheduling of construction projects, project networks and critical path methods, resource leveling, use of Primavera software. Offered Yearly.
Prerequisite: CE 6010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CE 7840 Facilities Management Cr. 3
Buildings and grounds operations and maintenance, planning design and construction, facilities economics and financing, real estate administration, environmental health and safety, health issues. Offered Winter.
Prerequisite: CE 6010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CE 7860 Construction Accounting and Financial Management Cr. 3
Construction financial management, construction accounting systems, analysis of financial statements, monitoring and controlling construction costs, managing overhead costs, markup, profit center analysis, cash flows for construction projects, financing, making financial decisions. Offered Every Other Year.
Prerequisite: CE 6010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CE 7890 Integrated Construction Project Management Cr. 3
Construction project management framework, construction project integration, project scope management, time management, cost management, quality management, procurement management, risk management, communication management. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CE 7990 Directed Study Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

CE 7995 Special Topics in Civil Engineering II Cr. 1-3
A consideration of special subject matter in civil engineering. Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CE 7996 Research Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

CE 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

CE 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CE 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CE 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: CE 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

CE 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

CED - Counselor Education

CED 5090 Family Counseling and Substance Use Cr. 3
Conceptual and clinical foundations for counseling family systems in which one more members has a substance use disorder or addiction. Offered Intermittently.
Prerequisites: CED 5030

CED 6005 Professional Counseling: Orientation Cr. 3
Introduction to the counseling profession including history, philosophy, training, roles, functions, responsibilities, advocacy, organizations, laws, ethical codes and decision making models, licensure, credentialing, technology, and helping relationships. This course also orients students to Wayne State's Counselor Education (CED) Master's Degree concentrations. Offered Every Term.

CED 6015 Diversity, Multicultural Competence, and Social Justice Advocacy for Human Service Professionals Cr. 3
Theories and models for conceptualizing and counseling diverse clients including identity development, social justice, and advocacy. Awareness of the impact of cultural context on experiences and worldviews. Offered Every Term.
Corequisite: CED 6005

CED 6025 Counseling Theories, Philosophies, and Techniques Cr. 3
Individual and systemic theories, underlying philosophies, and associated techniques that counselors use to conceptualize and counsel clients. This course also introduces students to research-informed counseling practice. Offered Every Term.

CED 6045 Professional Counseling Laws and Ethics Cr. 3
Overview of legal and ethical counseling practice including Michigan Mental Health Code, professional ethical codes, and ethical decision-making models. Offered Every Term.
Prerequisite: CED 6015 with a minimum grade of B and CED 6025 with a minimum grade of B

CED 6055 Testing and Assessment for Counselors Cr. 3
Overview of assessing counseling clients including intake, harm, diagnostic, and other assessments. Offered Every Term.
Prerequisite: CED 6015 with a minimum grade of B and CED 6025 with a minimum grade of B and EDP 7370 with a minimum grade of B and EDP 7410 with a minimum grade of B
Fees: $82

CED 6065 Career Development and Employment Strategies Cr. 3
Overview of career counseling processes including assessing and conceptualizing career development and decision-making in clinical, school, and rehabilitation contexts, accessing and interpreting labor market data, supporting job placement, and ethical and cultural considerations. Offered Every Term.
Prerequisite: CED 6045 with a minimum grade of B
Fees: $30

CED 6075 Trauma: Conceptualization and Treatment Planning Cr. 3
Impact of trauma on adjustment and coping including definitions and constructs of trauma and ways of conceptualizing trauma and crisis. Students are introduced to skills and techniques utilized in trauma/crisis intervention. Offered Every Term.
Prerequisite: CED 6045 with a minimum grade of B and CED 6055 with a minimum grade of B

CED 6085 Sexuality Cr. 3
Counseling clients with sexual concerns, diverse sexual orientations, and diverse gender identities. Offered Every Term.
Prerequisite: CED 6045 with a minimum grade of B and CED 6055 with a minimum grade of B

CED 6095 Introduction to Counseling Groups Cr. 2
Overview of group counseling including formation, theories, process, development, leadership, and ethical and cultural considerations. Offered Every Term.
Prerequisite: CED 6065 with a minimum grade of B and CED 6075 with a minimum grade of B

CED 6096 Group Counseling Participation Cr. 1
Participate as a group member and transfer learning from the Introduction to Counseling Groups course by coleading a group. Offered Every Term.
Corequisite: CED 6095

CED 6105 Individual and Systemic Approaches to Treating Addictions Cr. 3
Assessing, diagnosing, conceptualizing, and treating clients who have addictions. Offered Every Term.
Prerequisite: CED 6095 with a minimum grade of B

CED 6700 The Role of the Teacher in Guidance Cr. 2
Introduction to guidance principles, techniques and roles, with stress on classroom application. Experiential laboratory sessions required to sensitize educators to the basic ideas and skills involved in being a helper. Primarily for school personnel other than counselors. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.

CED 6710 Professional Seminar: Contemporary Issues Cr. 1-6
Principles, procedures and methods specific to a critical contemporary issue, such as: child abuse, sexual abuse, bereavement, stress management, infectious diseases, self-esteem, self-efficacy, conflict management, and trauma. Offered Every Term.
Repeatable for 6 Credits

CED 6720 Workshop in Counseling Cr. 2-4
For counselors, teachers, and pupil personnel workers. Consideration of counseling issues in school, agency and community settings. Counseling, consultation, and coordination dimensions of counseling in substance abuse, family groups, and human sexuality issues. Offered Every Term.
Repeatable for 18 Credits

CED 7005 Counseling Skills Cr. 3
Students engage in supervised counseling role plays in which they demonstrate microskills and other foundational counseling skills including interviewing, relationship building, and case conceptualization. Offered Every Term.
Prerequisite: CED 6095 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

CED 7015 Counseling Practicum Cr. 4
Supervised experience during which students apply learning from previous courses to build relationships, assess, diagnose, conceptualize, and treat clients with diverse presenting concerns. Students are encouraged to develop a personalized, reflective approach to counseling. Offered Every Term.
Prerequisite: CED 7005 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

CED 7020 Counseling Internship Cr. 1-12
Supervised counseling internship in settings that are congruent with students' concentrations. Students function in the professional role to apply theories and skills to clients. Offered Every Term.
Prerequisite: CED 7015 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CED 7105 Introduction to School Counseling, Consulting, and Collaboration Cr. 3
Principles and practices of counseling, consulting, and collaboration in the P -12 school setting. Focus includes history and development of the School Counseling profession, professional roles and identity, individual and group approaches that facilitate student development and adjustment in the areas of academic, career, and social/behavioral aspects, staff, parental, and community resources and referral procedures, models of school counseling programs, program development, operation, assessment, and evaluation. Offered Every Term.
Restriction(s): Enrollment is limited to students with a concentration in School Counseling; enrollment is limited to Graduate level students.

CED 7115 Advanced School Counseling Cr. 3
Advanced principles and practices of counseling, consulting, and collaboration in the P-12 school setting including holistic approaches to facilitating student growth, development, and self-awareness as well as advanced ethical decision-making. Offered Every Term.
Prerequisite: CED 7105 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a concentration in School Counseling; enrollment is limited to Graduate level students.

CED 7125 School Counseling: Postsecondary Planning and College Counseling Cr. 3
Explores the role of the School Counselor in relation to postsecondary planning and college counseling. The Eight Components of College and Career Readiness approach will be used to educate school counselors to prepare and inspire students for post-secondary and college success and opportunity. Offered Every Term.
Prerequisite: CED 7105 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a concentration in School Counseling; enrollment is limited to Graduate level students.

CED 7205 Foundations of Rehabilitation Counseling Cr. 3
Introduction to clinical rehabilitation counseling, including history, values, philosophy, professional organizations, and professional roles. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CED 7215 Medical Aspects of Disability Cr. 3
Medical characteristics of disabling conditions including medical terminology and etiologies, symptoms, prognoses, and treatment. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CED 7225 Psychosocial Aspects of Disability Cr. 3
Psychological, social, and cultural aspects that impact diverse clients with disabling conditions. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CED 7235 Rehabilitation Counseling Professional Roles Cr. 3
Explores the roles, including case management, that professional counselors play within rehabilitation counseling settings. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CED 7305 Clinical Counseling Roles: Consultation, Collaboration, and Coordination Cr. 3
Consultation theory and processes in human service agencies and post-secondary educational institutions. Roles and functions of counselors in program and proposal development, conflict management, organizational administration and evaluation of services, public relations, and community referral processes. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

CED 8000 Seminar in Group Counseling Cr. 3
Students counsel groups which they have established. Tape and/or process recordings of counseling sessions analyzed to develop a theory and method of group counseling, group leadership, and techniques in the counseling of individuals in groups. Offered Every Other Year.
Prerequisite: CED 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CED 8020 Advanced Practicum Cr. 2-8
Supervised practice counseling in the counseling laboratory. Counseling competence evaluated. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CED 8030 Advanced Consultation Theory and Methods Cr. 3
Advanced consultation theory and methods in agencies and educational institutions. Roles and functions of counselor educators and supervisors in program and proposal development; organization, administration, and evaluation of services; conflict management; third party intervention; legal and ethical issues; public relations. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CED 9020 Internship in Counseling/Counselor Education Cr. 1-6
Purposes, objectives, materials, techniques and practices in counselor education programs. Supervised experience in advanced counseling and in various phases of the counselor education program. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Counseling; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Education, Doctor of Philosophy or Education Specialist Cert degrees.
Repeatable for 24 Credits

CED 9120 Seminar and Internship Supervising Counselors Cr. 3
Theory and practice of supervision. Students supervise practicum counselors under staff guidance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Counseling; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Education, Doctor of Philosophy or Education Specialist Cert degrees.

CHE - Chemical Engineering

CHE 2800 Material and Energy Balances Cr. 4
Material balances, stoichiometry and simultaneous mass energy balances. Offered Fall.
Prerequisites: (PHY 2170 with a minimum grade of C- or PHY 2175 with a minimum grade of C-) and MAT 2020 with a minimum grade of C-
Fees: $10

CHE 3100 Transport Phenomena I Cr. 3
Presents a practical introduction to the field of transport phenomena and its applications, with a primary focus on the transport of momentum and mechanical energy balances in engineering systems. Students will develop the mathematical tools and skills necessary to design and analyze chemical process systems involving the movement or transfer of fluids (i.e., momentum transport) and the interchange among forms of mechanical energy as fluids flow. Offered Fall.
Prerequisites: BE 1600 with a minimum grade of C-, CHE 2800 with a minimum grade of C-, and MAT 2150 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.

CHE 3220 Measurements Laboratory Cr. 2
Laboratory course in the principles and practice of measuring chemical, physical and thermodynamic properties of importance to chemical engineering problems. Technical reports. Offered Winter.
Prerequisites: BE 1600 with a minimum grade of C-, BE 2100 with a minimum grade of C-, ENG 3050 with a minimum grade of C-, and CHE 3600 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $25

CHE 3300 Thermodynamics: Chemical Equilibria Cr. 4
Qualitative and quantitative treatment of homogeneous and heterogeneous phase and chemical equilibria. Use of chemical activities and activity coefficients relating ideal to actual systems. Use of reference states and excess properties of the prediction of equilibrium diagrams and the determination of feasibility of chemical reactions. Offered Winter.
Prerequisites: BE 1600 with a minimum grade of C-, CHE 2800 with a minimum grade of C-, and MAT 2150 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students in the College of Engineering.
Fees: $10

CHE 3400 Kinetics and Reactor Design Cr. 4
Quantitative treatment of complex homogeneous and heterogeneous chemical reactions and the design of batch, stirred and flow reactor systems. Offered Fall.
Prerequisites: BE 1600 with a minimum grade of C-, CHE 3300 with a minimum grade of C-, and MAT 2150 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $10

CHE 3510 Co-op Experience Cr. 1-3
Presentation of oral and written report to peer group describing Co-op experience. Attendance required at the CHE and MSE seminar series for the semester. Offered Every Term.
Prerequisites: CHE 4260 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Repeatable for 3 Credits

CHE 3600 Transport Phenomena II Cr. 3
Presents a practical introduction to the field of transport phenomena and its applications, with a primary focus on the transport of heat and mass of chemical species in engineering systems. Students will develop the mathematical tools and skills necessary to design and analyze chemical process systems involving the movement or transfer of thermal energy (i.e., heat transfer) and movement of a chemical species under a concentration gradient (i.e. mass transfer and diffusion). Offered Winter.
Prerequisites: BE 1600 with a minimum grade of C-, CHE 2800 with a minimum grade of C-, and CHE 3100 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CHE 3800 Separation Processes Cr. 3
Quantitative treatment of separation processes in which there is simultaneous heat and mass transfer. Offered Winter.
Prerequisites: BE 1600 with a minimum grade of C-, CHE 3100 with a minimum grade of C-, CHE 3300 with a minimum grade of C-, and CHE 3600 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $10

CHE 3820 Chemical Engineering Laboratory Cr. 2
Experimental study of chemical equilibria, reaction kinetics and rate processes. Laboratory case studies. Offered Fall.
Prerequisites: CHE 3220 with a minimum grade of C-, CHE 3400 with a minimum grade of C-, CHE 3800 with a minimum grade of C-, BE 1600 with a minimum grade of C-, and ENG 3060 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $100

CHE 4200 Product and Process Design Cr. 3
The overall design of chemical products, systems, and processes. Economic analysis, computational design calculations, and optimization of design based on factors such as economics, environmental protection and waste minimization, and safety. Offered Fall.
Prerequisites: CHE 3400 with a minimum grade of C-, CHE 3600 with a minimum grade of C-, and CHE 3800 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CHE 4260 Chemical Engineering Seminar I Cr. 0
Offered Fall, Winter.
Prerequisites: CHE 3220 with a minimum grade of C- (may be taken concurrently), CHE 3300 with a minimum grade of C-, and CHE 3600 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CHE 4600 Process Dynamics and Simulation Cr. 3
Application of system dynamics and mathematical modeling to design and analysis of chemical processing systems. Offered Fall.
Prerequisites: CHE 3400 with a minimum grade of C-, CHE 3600 with a minimum grade of C-, and CHE 3800 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $10

CHE 4800 Chemical Process Integration Cr. 3
Application of engineering and science background to the design of chemical processes. Comprehensive problems deal with sources of data, design principles and optimization techniques. Offered Winter.
Prerequisite: CHE 4200 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CHE 4860 Chemical Engineering Seminar II Cr. 1
Offered Fall, Winter.
Prerequisite: CHE 4260 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CHE 4990 Directed Study Cr. 1-9
Students select a field of chemical engineering for advanced study and instruction. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Repeatable for 9 Credits

CHE 5050 Statistics and Design of Experiments Cr. 3
Application of modern statistical experimental design methods to improve effectiveness and success in experimental projects, in chemical industry manufacturing, and research and design. Offered Intermittently.
Prerequisites: BE 2100 with a minimum grade of C-, BE 1600 with a minimum grade of C-, (CHE 3200 with a minimum grade of C- or CHE 3600 with a minimum grade of C-), and CHE 3300 with a minimum grade of C-

CHE 5060 Low-Cost Microfluidic and Millifluidic Systems: Design, Fabrication and Testing Cr. 3
This course provides a hands-on, experimental introduction to the field of microfluidic and millifluidic devices. These devices are increasingly used for research, diagnostics, and treatment in cost-sensitive applications and low-resource settings. The content and methods focus on systems of interest for micro-scale biological/chemical processes and lab-on-chip applications. Project building methods employ readily available, low-cost materials and technologies, including 3D printing, polymer casting, and paper-based fluidics. The course consists of several hands-on design and build projects. Each project highlights a fabrication method and/or an analytical or processing objective. Participants work in groups to design, build and subsequently analyze the performance of functional systems using quantitative tools including: cell phone spectroscopy, electrical detection, quantitative image analysis. Not available for graduate credit. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Biomedical Engineering, Biomedical Engg Honors, Chemical Engineering Honors or Chemical Engineering; enrollment is limited to Undergraduate level students.
Fees: $50

CHE 5100 Quantitative Physiology Cr. 4
Basic principles of human physiology presented from the engineering perspective. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by mathematical models where feasible. Offered Every Term.
Equivalent: BME 5010, ECE 5100, ME 5100

CHE 5110 Fundamental Fuel Cell Systems Cr. 4
Introduce various types of fuel cells, materials properties of electrodes and polymeric membranes, and electrochemical mechanisms. Reforming of various types of hydrocarbon fuel to hydrogen, and reforming technology. Offered Fall.
Equivalent: AET 5110, EVE 5130, ME 5110

CHE 5120 Fundamentals of Battery Systems for Electric and Hybrid Vehicles Cr. 4
Fundamental electrochemistry and engineering aspects for electric propulsion batteries, including lead acid, nickel metal hydride, and lithium ion technologies. Offered Intermittently.
Equivalent: AET 5310, EVE 5120, ME 5215

CHE 5350 Polymer Science Cr. 3
Fundamental relationships between chemical structure and physical properties of high polymers. Basic structures, states and transitions of polymers. Polymerization reactions and processes. Molecular weight, viscous flow and mechanical properties of polymers. Offered Fall.
Prerequisites: MAT 2150 with a minimum grade of C- (may be taken concurrently)
Fees: $10
Equivalent: MSE 5350

CHE 5360 Polymer Processing Cr. 3
A detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendering, extrusion, coating and injection molding. Offered Intermittently.
Prerequisites: CHE 3200 with a minimum grade of C-
Fees: $10
Equivalent: MSE 5360

CHE 5995 Special Topics in Chemical Engineering I Cr. 1-4
A consideration of special subject matter in chemical engineering. Topics to be announced in Schedule of Classes . Offered Every Term.
Repeatable for 8 Credits

CHE 5996 Chemical Engineering Research Cr. 1-6
Research project. Offered Every Term.
Restriction(s): Enrollment limited to students in the following programs: BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

CHE 6100 Introduction to Sustainable Engineering Cr. 3
Economic, environmental, social, and technological perspectives relevant to the design, operation and management of engineering activities. Multiple perspectives addressed from a system sustainability view point. Offered Yearly.

CHE 6450 Biochemical Engineering Cr. 3
An introductory study of the principles of chemical engineering, biochemistry and biology which are essential for the design of industrial systems involving biological transformations. Offered Intermittently.
Prerequisites: CHE 3400 with a minimum grade of C- or CHE 3800 with a minimum grade of C-

CHE 6570 Safety in the Chemical Process Industry Cr. 3
Fundamental and practical experience necessary for safe operation of a chemical process plant. Actual industrial case studies conducted under industry supervision. Offered Winter.
Prerequisites: CHE 3400 with a minimum grade of C- or CHE 3800 with a minimum grade of C-

CHE 6810 Chemical Engineering Research Project Cr. 4
Application of engineering and science background to the completion of a senior research project. Methods of research and analysis and interpretation of data. Preparation of a written research paper; oral presentation of research results. Offered Intermittently.
Prerequisite: CHE 4200 with a minimum grade of C- and CHE 4600 with a minimum grade of C-

CHE 7060 Low-Cost Microfluidic Systems: Design, Fabrication, and Computational Analysis Cr. 3
This course provides a hands-on, experimental introduction to the field of microfluidic and millifluidic devices. These devices are used for research, diagnostics, and treatment in cost-sensitive applications and low-resource settings. The content and methods focus on systems of interest for micro-scale biological/chemical processes and lab-on-chip applications. Project building methods employ readily available, low-cost materials and technologies, including 3D printing, polymer casting, and paper-based fluidics. The course consists of several hands-on design and build projects. Each project highlights a fabrication method and/or an analytical or processing objective. Participants will design and build functional fluidic systems and will analyze/optimize system performance of using computational fluid dynamic (CFD) tools. Not available for credit after CHE 5060. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Fees: $50

CHE 7090 Writing for Engineering Research Cr. 3
Provides an introduction to the basic principles of technical writing for career pursuit in an academic or industry setting, with a focus on professional manuscript and grant writing. Throughout the course, key principles examined will include the writing process, writing structure, making your writing clear and concise, and handling style, tone, and voice. Through assignments and lecture-based learning, students will examine the “dos” and the “don’ts” in preparing manuscripts for journal submission, abstracts, conference papers, letters to editors, and grants. Throughout the semester, students will receive faculty and peer critiques of their manuscript writing. Finally, students will create a foundation/government grant, with preference toward the research area of the faculty in which they work. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CHE 7100 Advanced Engineering Mathematics Cr. 3
Presentation, evaluation and use of mathematical methods within the framework of engineering problems; including ordinary and partial differential equations, transforms and vector operations. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: MSE 7100

CHE 7200 Advanced Transport Phenomena Cr. 3
Basic properties of heat, mass and momentum transfer systems; fundamental equations, transforms and vector operations; includes independent study project. Offered Winter.
Prerequisite: CHE 7100 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

CHE 7300 Advanced Thermodynamics Cr. 3
Advanced presentation of the principles of thermodynamics; application to open systems, phase diagrams and chemical equilibria. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: MSE 7300

CHE 7350 Polymer Solutions Cr. 3
Solubility of polymers, configuration of chain molecules, colligative properties of dilute polymer solutions, spectroscopy, optical activity, light and x-ray scattering of polymer solutions, frictional properties of dissolved polymers, solution properties of polyelectrolytes. Offered Every Other Year.
Prerequisite: CHE 5350 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHE 7390 Tissue Engineering and Hybrid Systems Cr. 4
Seminar and project based approach to the design, development, analysis and application of organ and tissue replacement systems which incorporate processed materials and living cells. Offered Every Other Year.
Prerequisites: BME 5370 with a minimum grade of C and (BME 5020 with a minimum grade of C or CHE 7100 with a minimum grade of C)
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7390

CHE 7400 Advanced Kinetics and Reactor Design Cr. 3
Basic properties of reacting systems including the steady state approximation, the relationship of thermodynamics to kinetics, the treatment of coupled reaction problems and design of chemical reactors; includes independent study project. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10

CHE 7507 Machine Learning for the Chemical Sciences Cr. 3
Presentation of the principles and methods of basic machine learning and introduction to advanced techniques with applications to chemical engineering, materials science, and chemistry with real-world data sets. Foundations of machine learning, including linear algebra, statistics, optimization, and programming. Derivation and application of machine learning principles, including regression, bias-variance trade-off, classification, and dimensionality reduction. Exploration of advanced machine learning techniques, including decision trees, random forests, support vector machines, and neural networks. Requires an independent study project using machine learning techniques to analyze and predict real-world data. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CHE 7530 Materials Characterization and Computational Data Analysis for Engineers Cr. 3
Principles of data acquisition and analysis from a wide range of experimental measurements, with an emphasis on high-throughput and automated processing, data visualization, and effective communication. Data management and functional Python skills (no prior programming experience needed, though students with concerns should reach out to the instructor early). Experimental techniques covered in lessons and examples include microscopies, spectroscopies, thermal characterization, ellipsometry, rheology, and X-ray and neutron scattering and reflectivity. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: MSE 7530

CHE 7990 Directed Study Cr. 1-9
Library investigation of an approved project in chemical engineering. Independent study, conferences with supervisor and preparation of a comprehensive written and oral report. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

CHE 8510 Graduate Co-op Experience Cr. 1-3
Presentation of oral and written reports to peer group describing co-op experience. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

CHE 8996 Research Cr. 1-9
Library and laboratory investigation of an approved proposal for advanced research project. Conferences and periodic oral progress reports. Comprehensive report of entire project upon completion. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 30 Credits

CHE 8997 Chemical Engineering Graduate Seminar Cr. 0.5
Advanced concepts in chemical engineering; presentation of research results. Must attend and present evidence of attending 30 hours of seminar over two-year period, and present one seminar. Offered Every Term.
Prerequisite: CHE 7200 with a minimum grade of C and CHE 7400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHE 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

CHE 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CHE 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CHE 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: CHE 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

CHE 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: CHE 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

CHE 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: CHE 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

CHE 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

CHI - Chinese

CHI 1010 Elementary Chinese I Cr. 4
Introduction to the written and spoken forms of Chinese. Offered for undergraduate credit only. Offered Yearly.
Fees: $5

CHI 1020 Elementary Chinese Cr. 4
Continuation of CHI 1010. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: CHI 1010 with a minimum grade of D-
Fees: $5

CHI 2000 Chinese Phonetics Cr. 1
Students will have the hands-on experience of learning Chinese sounds and tones with the intensive instruction and correction of the instructor. After studying the articulatory mechanisms for the Chinese phonetic inventory and system in theory, students will practice them in different combinations and contexts with that native accuracy as the target. Offered Winter.
Equivalent: LIN 2000
Repeatable for 2 Credits

CHI 2010 Intermediate Chinese Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Completion of Chinese language sequence. Offered Yearly.
Prerequisite: CHI 1020 with a minimum grade of D-
Fees: $5

CHI 2020 Intermediate Chinese II Cr. 4
Continuation of CHI 2010. Offered Winter.
Prerequisites: CHI 2010 with a minimum grade of D-

CHI 2030 Chinese Character Writing Cr. 3
The most difficult part of Chinese learning is character writing. Basic stroke orders, intermediate literacy level. Art of Chinese calligraphy. Offered Spring/Summer.
Prerequisites: CHI 1010 with a minimum grade of D-

CHI 2050 Gateway to Chinese Civilizations Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Introduction to Chinese culture, society, and politics. Offered Every Term.

CHI 3000 Chinese Mythology and the Supernatural Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
The study of Chinese mythical and supernatural literature from the late Zhou through the Qing dynasties (from around 10th century BCE to 18th century CE); the cultural functions of myth and the supernatural as they relate to nation, ethnic identities, social and political structures, as well as religious and philosophical ideals. Taught in English. Offered Fall, Winter.

CHI 3010 Contemporary Chinese Pop Culture Cr. 3
Introduction to Chinese pop culture: values, functions, and changes. Offered Winter.

CHI 3022 Introduction to Chinese Literature Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Genres and traditions of Chinese literature; influence on China of today. Offered Every Term.

CHI 3100 Advanced Chinese I Cr. 4
Continuation of CHI 2020. Offered Fall.
Prerequisites: CHI 2020 with a minimum grade of D-

CHI 3200 Advanced Chinese II Cr. 4
Continuation of CHI 3100. Offered Winter.
Prerequisites: CHI 3100 with a minimum grade of D-

CHI 3990 Directed Study Cr. 1-6
Directed study tailored to student and faculty interests and specializations. Offered Every Term.
Repeatable for 9 Credits

CHI 4010 Business Chinese Cr. 3
Basic knowledge of business Chinese; basic abilities of listening, speaking, reading, writing, and translating in business Chinese. Offered Fall.
Prerequisites: CHI 3200 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

CHI 5000 Space and Everyday Life in Chinese Literature and Film Cr. 3
This course explores spaces and everyday practices within these spaces represented in Chinese literature, film, as well as art. We will primarily focus on everyday life from early modern China through modern times, discussing the interactions among spaces, practices of daily life, and literary as well as cinematic representations. A knowledge of modern Chinese is not required. Offered Every Other Year.
Equivalent: ASN 5000

CHI 5210 Introduction to Chinese Linguistics Cr. 3
Writing, sound and grammar systems of Chinese; interaction between Chinese language and Chinese society. Offered Fall.
Equivalent: LIN 5220

CHI 5220 Languages of Asia Cr. 3
Introduction to major language families in Asia; grammar, sounds, language contacts. Offered Winter.
Equivalent: JPN 5220, LIN 5100

CHI 5230 Grammar of Chinese Cr. 3
Chinese grammar from perspectives of negation, question formation, aspects and different parts of speech, and the like. Offered Fall.
Equivalent: LIN 5240

CHM - Chemistry

CHM 1000 Chemistry and Your World Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry
Facts and theories from analytical, inorganic, organic, and physical chemistry, and from biochemistry; their consequences in life processes and the environment. Meets General Education Laboratory Requirement when elected for 4 credits. Offered Fall, Winter.
Fees: $110

CHM 1020 Survey of General Chemistry Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry
High school chemistry not required. First course in the terminal sequence consisting of CHM 1020 and CHM 1030. Matter and energy in chemistry, chemical symbols and equations, structure and properties of atoms, introduction to chemical bonding; periodicity in chemistry, solids, liquids, gases, solutions, acids and bases, and equilibrium. Meets General Education Laboratory Requirement. Offered Fall, Winter.
Prerequisites: Math Permit to Reg - (L1-L4) with a test score minimum of 2-4, MAT 0993-6XXX with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 2-4, ACT Math with a test score minimum of 18-36, SAT Mathematics with a test score minimum of 490-800, or SAT MATH (POST-2016) with a test score minimum of 490-800
Fees: $110

CHM 1030 Survey of Organic/Biochemistry Cr. 4
Organic and biological chemistry; brief introduction to organic chemistry, emphasizing classes of compounds important in biochemical processes; survey of biochemistry with applications to nutrition, physiology, and clinical chemistry; protein structure; intermediary metabolism; molecular biology; and metabolic regulation. Offered Winter.
Fees: $110

CHM 1040 Chemistry Skills and Reasoning Cr. 4
Reasoning and mathematical skills needed for development of a scientific approach in chemistry. No credit if taken after any other chemistry course. Offered Every Term.
Prerequisites: MAT 0993-6XXX with a minimum grade of C-, ACT Math with a test score minimum of 21-36, SAT MATH (POST-2016) with a test score minimum of 530-800, MAT Permit to Reg ACT/SAT with a test score minimum of 2-4, or Math Permit to Reg - (L1-L4) with a test score minimum of 2-4

CHM 1060 General, Organic and Biochemistry Cr. 5
Satisfies General Education Requirement: Natural Scientific Inquiry
Chemistry 1060 is an integrated approach to the study of General Chemistry, Organic Chemistry, and Biochemistry for students pursuing careers in health-related fields. In each area, Health Links and Biochemistry Links will be used to demonstrate key chemistry principles. The laboratory experiments focus on general, organic, and biochemistry. Offered Fall, Winter.
Fees: $100

CHM 1100 General Chemistry I Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry Introduction to the principles of chemistry. Chemistry and measurements, chemical formulas and equations, chemical reactions, gas laws, thermochemistry, quantum theory of the atom, electron configurations and periodicity, ionic and covalent bonding, molecular geometry and chemical bonding, states of matter, and solutions. Satisfies General Education laboratory requirement upon completion of both CHM 1100 and 1130. Only two credits if taken after CHM 1020. No credit if taken after CHM 1125. Offered Every Term.
Prerequisites: (CHM 1040 with a minimum grade of C-, CHM Permit to Reg (L1-L3) CPE with a test score minimum of 2-3, or (CHM 1020 with a minimum grade of C- and 1 of (MAT 1070 with a minimum grade of C-, MAT Permit to Reg ACT/SAT with a test score minimum of 3-4, or Math Permit to Reg - (L1-L4) with a test score minimum of 3-4)))
Equivalent: CHM 1125

CHM 1125 General Chemistry I for Engineers Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry Introduction to the principles of chemistry. Chemistry and measurements, chemical formulas and equations, chemical reactions, gas laws, thermochemistry, quantum theory of the atom, electron configurations and periodicity, ionic and covalent bonding, molecular geometry and chemical bonding, states of matter, and solutions. Satisfies General Education laboratory requirement upon completion of both CHM 1125 and 1130. Only one credit if taken after CHM 1020. No credit if taken after CHM 1100. Offered Every Term.
Prerequisites: (CHM 1040 with a minimum grade of C-, CHM Permit to Reg (L1-L3) CPE with a test score minimum of 2-3, or (CHM 1020 with a minimum grade of C- and 1 of (MAT 1070 with a minimum grade of C-, MAT Permit to Reg ACT/SAT with a test score minimum of 3-4, or Math Permit to Reg - (L1-L4) with a test score minimum of 3-4)))
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: CHM 1100

CHM 1130 General Chemistry I Laboratory Cr. 1
Laboratory course designed to introduce students to the scientific method, properties of materials, the role of energy, structure and spectroscopy. Satisfaction of General Education lab requirement is awarded only upon successful completion of both CHM 1100 (or CHM 1125) and this lab course. Offered Every Term.
Prerequisites: CHM 1100 with a minimum grade of C- (may be taken concurrently) or CHM 1125 with a minimum grade of C- (may be taken concurrently)
Fees: $110

CHM 1140 General Chemistry II Cr. 4
Kinetics, equilibria, acids, bases, thermodynamics, electrochemistry, oxidation-reduction reactions, and coordination chemistry. A variety of examples from science, engineering, technology and everyday life will be emphasized. Offered Every Term.
Prerequisites: CHM 1100 with a minimum grade of C-, CHM 1220 with a minimum grade of C-, CHM 1125 with a minimum grade of C-, or CHM 1225 with a minimum grade of C-
Equivalent: CHM 1145

CHM 1145 General Chemistry II for Engineers Cr. 3
Kinetics, equilibria, acids, bases, thermodynamics, electrochemistry, oxidation-reduction reactions, and coordination chemistry. A variety of examples from science, engineering, technology and everyday life will be emphasized. Offered Every Term.
Prerequisites: CHM 1100 with a minimum grade of C-, CHM 1220 with a minimum grade of C-, CHM 1125 with a minimum grade of C-, or CHM 1225 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: CHM 1140

CHM 1150 General Chemistry II Laboratory Cr. 1
Experiments in advanced topics such as chemical equilibrium, monoprotic acid and base titrations, buffers, electrochemistry, solubility equilibria and chemical kinetics. Offered Every Term.
Prerequisites: CHM 1140 with a minimum grade of C- (may be taken concurrently) and (CHM 1130 with a minimum grade of C- or CHM 1230 with a minimum grade of C-)
Fees: $110

CHM 1240 Organic Chemistry I Cr. 4
Introductory organic chemistry combined with the general principles of chemistry. Carbon compounds and chemical bonding, acid-based chemistry, stereochemistry and introductory organic reactions. Offered Every Term.
Prerequisites: CHM 1140 with a minimum grade of C-

CHM 1250 Organic Chemistry I Laboratory Cr. 1
Integrated general/organic chemistry laboratory focusing on spectroscopy, acid-based chemistry, molecular modeling and organic reactions as well as some attention to chromatography. Offered Every Term.
Prerequisites: CHM 1240 with a minimum grade of C- (may be taken concurrently) and CHM 1150 with a minimum grade of C-
Fees: $110

CHM 2220 Organic Chemistry II Cr. 4
Organic reactions of functional groups such as aldehydes, ketones and related carbonyl compounds. Extensive discussion of the interface of organic/biochemistry and bioinorganic chemistry. No credit after if taken after CHM 2225. Offered Every Term.
Prerequisites: CHM 1240 with a minimum grade of C-

CHM 2225 Organic Chemistry II for Engineers Cr. 3
Organic reactions of functional groups such as aldehydes, ketones and related carbonyl compounds. Extensive discussion of the interface of organic/biochemistry and bioinorganic chemistry. No credit after if taken after CHM 2220. Offered Every Term.
Prerequisites: CHM 1240 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CHM 2230 Organic Chemistry II Laboratory Cr. 1
Synthesis of organic and bio-organic compounds. Offered Every Term.
Prerequisites: CHM 2220 with a minimum grade of C- (may be taken concurrently) and CHM 1250 with a minimum grade of C-
Fees: $110

CHM 2999 Honors Research Problems in Chemistry Cr. 2-4
Research projects under the direction of a senior faculty member. Offered Every Term.
Prerequisites: (CHM 1240 with a minimum grade of C and CHM 1250 with a minimum grade of C) or CHM 1410 with a minimum grade of C

CHM 3000 Metals in Biology Cr. 3
Descriptive approach to metals involved in biological systems. Offered Fall.
Prerequisites: CHM 1240 with a minimum grade of C

CHM 3020 Intermediate Inorganic Chemistry I Cr. 3
Emphasizes chemistry of the main group elements and includes basic coordination chemistry of the transition metals. Offered Winter.
Prerequisites: CHM 1240 with a minimum grade of C

CHM 3120 Analytical Chemistry Cr. 3
The basic principles of analytical chemistry with an emphasis on quantitative chemical analysis, theoretical and practical aspects of equilibrium calculations including statistics, spectroscopy and instrumentation will be covered. Analytical examples from science, engineering, technology and biochemistry will be included. Offered Fall, Winter.
Prerequisites: CHM 1140 with a minimum grade of C and CHM 1150 with a minimum grade of C

CHM 3130 Analytical Chemistry Laboratory Cr. 1
In this laboratory course, students will learn to use quantitative analytical chemistry techniques to determine the amount of various compounds in an unknown sample. These techniques include acid-base titrations, reduction-oxidation (redox) titrations, uv-vis spectrophotometry, fluorescence spectrophotometry, column and gas chromatography. Offered Fall, Winter.
Prerequisites: CHM 3120 with a minimum grade of C (may be taken concurrently)
Fees: $100

CHM 4850 Frontiers in Chemistry Cr. 1
Fields of fundamental chemistry now under investigation, presented by invited specialists actively engaged in research. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Chemistry or Chemistry Honors; enrollment limited to students in a BS in Chemistry or Bachelor of Arts degrees.
Repeatable for 2 Credits

CHM 5020 Intermediate Inorganic Chemistry II Cr. 3
Transition metal chemistry. Coordination compounds and organometallics. Bonding theories and reactivity. Synthesis, purification, and characterization of inorganic compounds with an emphasis on transition metal compounds. Offered Fall.
Prerequisites: CHM 6070 with a minimum grade of C or (CHM 3020 with a minimum grade of C and CHM 5400-5440 with a minimum grade of C)
Fees: $110

CHM 5160 Instrumental Analytical Chemistry Cr. 3
Application of modern instrumental methods to quantitative analysis. Methods that relate instrumental response to chemical concentrations or content. Calibration, data handling, and data evaluation. Emission, flame, infrared, Raman, fluorescence, and magnetic resonance spectroscopy. Mass spectrometry. Electrochemical methods. Chromatography. Offered Fall.
Prerequisite: CHM 3120 with a minimum grade of C and CHM 3130 with a minimum grade of C

CHM 5400 Biological Physical Chemistry Cr. 3
Presentation of physical chemistry topics: thermodynamics, solution equilibria, chemical kinetics, quantum chemistry, spectroscopy, statistical mechanics, transport processes, and structure with biological applications. Offered Winter.
Prerequisites: CHM 3120 with a minimum grade of C, MAT 2010 with a minimum grade of C, and (PHY 2130 with a minimum grade of C (may be taken concurrently) or PHY 2170 with a minimum grade of C (may be taken concurrently))

CHM 5420 Physical Chemistry I Cr. 3
Chemical thermodynamics, phase equilibrium, solutions, surface chemistry, electrochemistry. Only two credits applicable toward degree after CHM 5400. Offered Fall.
Prerequisites: (CHM 2280 with a minimum grade of C or CHM 3120 with a minimum grade of C), MAT 2020 with a minimum grade of C, and PHY 2170 with a minimum grade of C (may be taken concurrently)

CHM 5440 Physical Chemistry II Cr. 4
Kinetic theory, empirical and theoretical kinetics, quantum theory, atomic and molecular structure, molecular spectroscopy, statistical mechanics. Only three credits applicable to degree after CHM 5400. Offered Winter.
Prerequisites: (CHM 2280 with a minimum grade of C or CHM 3120 with a minimum grade of C), MAT 2020 with a minimum grade of C, and PHY 2170 with a minimum grade of C (may be taken concurrently)

CHM 5510 Chemical Synthesis Laboratory Cr. 3
Advanced techniques for the synthesis, purification and characterization of organic compounds. Offered Fall.
Prerequisites: CHM 1420 with a minimum grade of C or (CHM 2220 with a minimum grade of C and CHM 2230 with a minimum grade of C)
Fees: $110

CHM 5550 Physical Chemistry Laboratory Cr. 2
Principles of measurement. Fundamental investigations of thermodynamics. Fundamental spectroscopic and kinetic measurements. Offered Fall, Winter.
Prerequisites: (CHM 5400 with a minimum grade of C (may be taken concurrently), CHM 5420 with a minimum grade of C (may be taken concurrently), or CHM 5440 with a minimum grade of C (may be taken concurrently)) and PHY 2180 with a minimum grade of C
Fees: $110

CHM 5570 Instrumental Analytical Chemistry Laboratory Cr. 2
Lecture and laboratory experiments covering electronics, measurement, and instrumentation. Principles and analytical applications of electrochemistry, chromatography, and spectroscopy including UV-visible, IR, magnetic resonance, and mass spectroscopy. Offered Winter.
Prerequisite: CHM 3120 with a minimum grade of C and CHM 3130 with a minimum grade of C
Fees: $110

CHM 5600 Survey of Biochemistry Cr. 3
Protein structure and its relationship to function. Principles of enzyme catalysis. Allosteric regulation of protein function and enzyme catalysis. Pathways of carbohydrate, fat, and protein metabolism in eukaryotic organisms. Introduction to mechanisms of energy coupling and photosynthesis. Information transfer in living systems. Molecular biology. Offered Fall, Winter.
Prerequisites: CHM 1420 with a minimum grade of C, CHM 2220 with a minimum grade of C, or CHM 2225 with a minimum grade of C

CHM 5900 Biomedical Research as Discovery Cr. 2
Solving biochemical research problems using laboratory research tools including computational methods. Offered Yearly.
Prerequisites: CHM 6610 with a minimum grade of C and CHM 6620 with a minimum grade of C
Fees: $100

CHM 5998 Honors Thesis Research in Chemistry Cr. 2-4
Original investigation under direction of senior staff member. Submission of B.S. thesis or manuscript in publication format. Presentation of public lecture on B.S. research. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Biochem & Chem Bio Honors or Chemistry Honors.
Repeatable for 8 Credits

CHM 5999 Research in Chemistry Cr. 2-4
Original investigation under the direction of a senior staff member. Submission of B.S. thesis or manuscript in publication format. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Biochem & Chem Bio Honors, Biochem & Chemical Biology, Chemistry or Chemistry Honors.
Repeatable for 8 Credits

CHM 6060 Materials Chemistry and Engineering Cr. 3
Solid state structure and bonding. Crystallography, defects, and non-stoichiometry. Phase diagrams. Synthesis and properties of extended solids and nanomaterials. Molecular interactions and statistical physics of soft matter. Synthesis and characterization techniques of polymeric and colloidal material. Physical properties, phase behavior, self-assembly and ordering in synthetic and biological soft matter. Offered Intermittently.
Prerequisites: CHM 3020 with a minimum grade of C

CHM 6070 Advanced Bioinorganic Chemistry Cr. 3
Applications of inorganic chemistry principles to understanding biological systems including metalloenzymes. Offered Winter.
Prerequisite: CHM 3000 with a minimum grade of C

CHM 6090 Organometallic Chemistry Cr. 3
Models and Applications of the Organometallic Chemistry of the Transition Metals including Activation of Small Molecules and Bioorganometallics. Offered Winter.
Prerequisite: CHM 5020 with a minimum grade of C

CHM 6100 Theory of Analytical Chemistry Cr. 3
Provides an overview of the fundamental theory and instruments required to conduct analytical measurements for diverse applications. Offered Yearly.
Prerequisites: (CHM 2280 with a minimum grade of C and CHM 2290 with a minimum grade of C) or (CHM 3120 with a minimum grade of C and CHM 3130 with a minimum grade of C)

CHM 6120 Electroanalytical Chemistry Cr. 3
This course provides an overview of the fundamental concepts of electrochemical science and their applications in catalysis, batteries, electrochemical sensors. Offered Intermittently.
Prerequisites: (CHM 2280 with a minimum grade of C and CHM 2290 with a minimum grade of C) or (CHM 3120 with a minimum grade of C and CHM 3130 with a minimum grade of C)

CHM 6160 Separation Science Cr. 3
Fundamentals, instrumentation, and modern applications in medicine, cannabis and food testing, and environmental monitoring. Offered Intermittently.
Prerequisite: CHM 2280 with a minimum grade of C or CHM 3120 with a minimum grade of C

CHM 6170 Advances in Bioanalytical Chemistry Cr. 3
How analytical methods are used to obtain information regarding biological systems. Offered Intermittently.
Prerequisites: (CHM 2280 with a minimum grade of C and CHM 2290 with a minimum grade of C) or (CHM 3120 with a minimum grade of C and CHM 3130 with a minimum grade of C)

CHM 6180 Mass Spectrometry Cr. 3
This course provides an overview of the fundamental concepts of electrochemical science and their applications in catalysis, batteries, electrochemical sensors. Offered Intermittently.
Prerequisites: ((CHM 2280 with a minimum grade of C and CHM 2290 with a minimum grade of C) or (CHM 3120 with a minimum grade of C and CHM 3130 with a minimum grade of C)) and CHM 5160 with a minimum grade of C

CHM 6200 Organic Structures and Mechanisms Cr. 3
Structure and stereochemistry of organic molecules. Correlations between structure and chemical and physical properties. Reaction mechanisms. Offered Fall.
Prerequisites: CHM 2220 with a minimum grade of C or CHM 2225 with a minimum grade of C

CHM 6220 Organic Reactions and Synthesis Cr. 3
Alkylation, condensation, and Grignard reactions; synthesis of acid derivatives; cycloadditions and unimolecular rearrangements. Scope and limitations of important synthetic methods of organic chemistry. Offered Winter.
Prerequisite: CHM 6200 with a minimum grade of C

CHM 6240 Organic Spectroscopy Cr. 3
Application of IR, NMR, UV, and mass spectrometry to the identification of organic compounds. Emphasis on interpretation of spectra, especially NMR. Recommended for students intending to do graduate or industrial work in organic chemistry. Offered Winter.
Prerequisite: CHM 1420 with a minimum grade of C or CHM 2220 with a minimum grade of C

CHM 6270 Advanced Bioorganic Chemistry and Drug Design Cr. 3
Studies of biological problems using organic synthetic methods and applications to drug design. Offered Fall.
Prerequisite: CHM 6620 with a minimum grade of C

CHM 6410 Statistical Thermodynamics Cr. 3
Statistical methods of determining thermodynamic properties of bulk materials from molecular properties. Real gases at high density, crystals, liquids; phase transitions, transport properties Offered Intermittently.
Prerequisite: CHM 5400 with a minimum grade of C or CHM 5420 with a minimum grade of C or CHM 5440 with a minimum grade of C

CHM 6440 Computational Chemistry Cr. 3
Aspects of computational chemistry pertinent to effective use of molecular modeling techniques. Molecular mechanics, semi-empirical and ab initio calculations, molecular dynamics. Offered Intermittently.
Prerequisite: CHM 5440 with a minimum grade of C
Fees: $95

CHM 6470 Quantum Chemistry Cr. 3
Theorems of quantum mechanics, approximation methods, solutions to simple atomic and molecular systems, electronic structure of many-electron atoms and molecules, chemical bonding. Offered Intermittently.
Prerequisites: CHM 5400 with a minimum grade of C, CHM 5420 with a minimum grade of C, or CHM 5440 with a minimum grade of C

CHM 6610 Biological Chemistry Laboratory Cr. 3
Basic experiments in isolation, purification, and analysis of biomolecules. Techniques currently used in molecular biology and recombinant DNA procedures stressed. Offered Fall, Winter.
Prerequisite: CHM 6620 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Biochem & Chem Bio Honors, Biochem & Chemical Biology, Chemistry or Chemistry Honors.
Fees: $110

CHM 6620 Metabolism: Pathways and Regulation Cr. 3
Major metabolic pathways of carbohydrate, fatty acid, amino acid, and nucleotide synthesis and degradation. Pathways and mechanisms of energy generation. Hormonal and allosteric regulation of enzyme activity. Offered Fall.
Prerequisites: CHM 2220 with a minimum grade of C

CHM 6635 Tools of Molecular Biology Cr. 3
Principles underlying genetic and biochemical methods; complements work in lab CHM 6610. Offered Winter.
Prerequisite: CHM 6620 with a minimum grade of C

CHM 6640 Molecular Biology Cr. 3
Nucleic acid structure and function. Mechanism and control of replication, transcription, and translation. Mutation, genetic recombination, and recombinant DNA. Membranes and organelles. Offered Winter.
Prerequisite: CHM 6620 with a minimum grade of C

CHM 6680 Clinical and Molecular Aspects of Cancer Cr. 3
Current molecular, biochemical, and clinical aspects of human cancer for students without prior exposure to the topic. Offered Yearly.
Prerequisite: CHM 6620 with a minimum grade of C or (CHM 5600 with a minimum grade of C and BIO 1510 with a minimum grade of C)

CHM 6700 Green Chemistry: Mindful Design in Science, Engineering, and Medicine Cr. 3
Green Chemistry is the design of chemical products, processes, and instrumentation that reduce or eliminate the use and generation of hazardous substances. While there are many mechanisms and tools available to assess the impact of materials and processes on human health and the environment, there are few tools available to help design and create products as such. This course will present the fundamentals of the 12 principles of green chemistry and explore relevant examples of their practical use in commercial applications. It will explore examples from a wide spectrum of industrial sectors including research and development, medical applications, and electronics/instrumentation. Students will analyze how chemists and other researchers in the sciences engineering, and medicine can help address global human health and environmental issues. They will also evaluate the extent to which a focus on green chemistry can boost innovation and time to market while lowering costs. Offered Yearly.
Prerequisites: CHM 2220 with a minimum grade of C (may be taken concurrently) or CHM 2225 with a minimum grade of C (may be taken concurrently)

CHM 6740 Laboratory Safety Cr. 1-2
Discussion and demonstration of safe laboratory practice. Use, storage and disposal of ordinary and hazardous substances; personal protection devices; regulations and codes. Required for all graduate degrees in chemistry. Not for chemistry major credit. Offered Fall, Winter.

CHM 6990 Directed Study Cr. 1-4
Offered Every Term.
Repeatable for 8 Credits

CHM 6991 Internship in Chemistry Cr. 1
Practical research experience through visiting a university, industry, or national laboratory. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Chemistry; enrollment is limited to Graduate level students.
Repeatable for 2 Credits

CHM 7010 Descriptive Inorganic Chemistry Cr. 3
Reactions and reactivity of inorganic compounds. Emphasizes mechanistic and synthetic approaches to transition metal, organometallic, main group chemistry. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7060 Materials Chemistry and Engineering Cr. 3
Solid state structure and bonding. Crystallography, defects, and non-stoichiometry. Phase diagrams. Synthesis and properties of extended solids and nanomaterials. Molecular interactions and statistical physics of soft matter. Synthesis and characterization techniques of polymeric and colloidal material. Physical properties, phase behavior, self-assembly and ordering in synthetic and biological soft matter. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7070 Advanced Bioinorganic Chemistry Cr. 3
Applications of inorganic chemistry principles to understanding biological systems including metalloenzymes. Offered Intermittently.
Prerequisite: CHM 3000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7090 Organometallic Chemistry Cr. 3
Models and Applications of the Organometallic Chemistry of the Transition Metals including Activation of Small Molecules and Bioorganometallics. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7100 Theory of Analytical Chemistry Cr. 3
Physicochemical principles applied to reaction equilibria and kinetics of analytical importance. Approaches to problem solving in complex systems, principally in the solution phase. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7110 Instrumental Analytical Chemistry Cr. 3
Prominent analytical instruments used in industrial and academic chemistry laboratories. Students will learn the fundamental principles behind these analytical techniques along with details on internal instrument components. Discussions on sample preparation and data processing for each technique will also be covered to provide students with a thorough understanding of quantitative analytical chemistry methods. Students completing this course will demonstrate proficiency in each analysis technique to aid in future Chemistry courses and potential future careers. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7120 Electroanalytical Chemistry Cr. 3
The theory and practice of modern voltammetric methods as applied to analytical, kinetic, and mechanistic studies. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7142 Data Analysis Cr. 3
Application of statistics, chemometrics, and experimental design to the interpretation of chemical measurements; validation of analytical methods; practice and theory of sampling for chemical measurements. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7160 Separation Science Cr. 3
Fundamentals, instrumentation, and modern applications in medicine, cannabis and food testing, and environmental monitoring. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7170 Advances in Bioanalytical Chemistry Cr. 3
How analytical methods are used to obtain information regarding biological systems. Offered Intermittently.
Prerequisite: CHM 5160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7180 Mass Spectrometry Cr. 3
Topics will include ICP, ICP-MS, AA, LIBX, MIPS, etc. Instrumentation concepts. Review of contemporary literature. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7200 Organic Structures and Mechanisms Cr. 3
Structure and stereochemistry of organic molecules. Correlations between structure and chemical and physical properties. Reaction mechanisms. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7220 Organic Reactions and Synthesis Cr. 3
Alkylation, condensation, and Grignard reactions; synthesis of acid derivatives; cycloadditions and unimolecular rearrangements. Scope and limitations of important synthetic methods of organic chemistry. Offered Winter.
Prerequisite: CHM 7200 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7240 Organic Spectroscopy Cr. 3
Application of IR, NMR, UV, and mass spectrometry to the identification of organic compounds. Emphasis on interpretation of spectra, especially NMR. Recommended for students intending to do graduate or industrial work in organic chemistry. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7270 Advanced Bioorganic Chemistry and Drug Design Cr. 3
Studies of biological problems using organic synthetic methods and applications to drug design. Offered Intermittently.
Prerequisite: CHM 6620 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7410 Statistical Thermodynamics Cr. 3
Statistical methods of determining thermodynamic properties of bulk materials from molecular properties. Real gases at high density, crystals, liquids; phase transitions, transport properties. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7430 Chemical Kinetics Cr. 3
Empirical analysis of reaction rates, theories of chemical kinetics, gas phase reactions, molecular collisions and non-thermal reactions, and kinetics in liquids. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7440 Computational Chemistry Cr. 3
Aspects of computational chemistry pertinent to effective use of molecular modeling techniques. Molecular mechanics, semi-empirical and ab initio calculations, molecular dynamics. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $15

CHM 7470 Quantum Chemistry Cr. 3
Theorems of quantum mechanics, approximation methods, solutions to simple atomic and molecular systems, electronic structure of many-electron atoms and molecules, chemical bonding. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7480 Molecular Spectroscopy Cr. 3
Basic theory of interaction of molecules with the electromagnetic field. Rotational, vibrational, and electronic spectra of molecules; elements of lasers, multiphoton spectroscopy. Offered Every Other Year.
Prerequisite: CHM 7470 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7600 Structure and Function of Biomolecules Cr. 3
Introduction to the structure and function of macromolecules of biological importance. Emphasis on bioenergetics, nucleic acid and protein structure and chemical reactivities, enzyme catalysis, enzyme kinetics, carbohydrate and lipid structure and function, and membrane structure. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7620 Metabolism: Pathways and Regulation Cr. 3
Major metabolic pathways of carbohydrate, fatty acid, amino acid, and nucleotide synthesis and degradation. Pathways and mechanisms of energy generation. Hormonal and allosteric regulation of enzyme activity. Offered Fall.
Prerequisite: CHM 7600 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7635 Tools of Molecular Biology Cr. 3
Principles underlying genetic and biochemical methods; complements work in lab CHM 6610. Offered Yearly.
Prerequisite: CHM 7620 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7640 Molecular Biology Cr. 3
Nucleic acid structure and function. Mechanism and control of replication, transcription, and translation. Mutation, genetic recombination, recombinant DNA. Membranes and organelles. Offered Winter.
Prerequisite: CHM 7600 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7680 Clinical and Molecular Aspects of Cancer Cr. 3
Current molecular, biochemical, and clinical aspects of human cancer. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7700 Green Chemistry: Mindful Design in Science, Engineering, and Medicine Cr. 3
Green Chemistry is the design of chemical products, processes, and instrumentation that reduce or eliminate the use and generation of hazardous substances. While there are many mechanisms and tools available to assess the impact of materials and processes on human health and the environment, there are few tools available to help design and create products as such. This course will present the fundamentals of the 12 principles of green chemistry and explore relevant examples of their practical use in commercial applications. It will explore examples from a wide spectrum of industrial sectors including research and development, medical applications, and electronics/instrumentation. Students will analyze how chemists and other researchers in the sciences engineering, and medicine can help address global human health and environmental issues. They will also evaluate the extent to which a focus on green chemistry can boost innovation and time to market while lowering costs. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7740 Responsible Conduct of Research Cr. 1
Recognition of and approach to ethical issues that chemistry students may confront during their careers; the tools for dealing with these quandaries; procedures for reporting and resolving such conflicts. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Chemistry.

CHM 7770 Proposals in Chemical Research Cr. 2
This course is writing-intensive and based on hands-on exercises aiming to conceive and articulate novel scientific ideas in an effective way. Strategies will be taught on how to extract information from peer-reviewed papers, how to develop concise and descriptive research aims, and how to defend their ideas in written and oral formats. Topics in this course include hypothesis-driven research, basics of extramural funding, literature search, the meaning of “Intellectual Merit & Broader Impacts”, designing experiments, reporting results, tutorials on relevant scientific software, and the criteria for peer-review. The development of personal statements and biosketches will also be covered. Offered Fall.
Prerequisite: CHM 7100 with a minimum grade of B or CHM 7600 with a minimum grade of B or CHM 7010 with a minimum grade of B or CHM 7200 with a minimum grade of B or CHM 7470 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

CHM 7777 Chemistry Biology Interface Seminar Series Cr. 1
The Chemistry Biology Interface (CBI) seminar series will expose students to CBI-related research, CBI-related professional development activities, review of current literature, topics in rigor and reproducibility, and networking social activities. These activities will be in the format of presentations, panel discussions, workshops, small group discussions, or social activities. The goal is for graduate students from discipline-specific fields to move across a multi-disciplinary landscape, or for students already working in inter-disciplinary fields, such as chemical biology, to gain new expertise in specific disciplines. Beyond scholarly goals, the seminar series will enrich the graduate experience by providing career guidance, non-laboratory skill development, training in rigor and reproducibility, and professional networking. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 7777, PSC 7777

CHM 7990 Directed Study Cr. 1-4
Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CHM 8190 Advanced Topics in Analytical Chemistry Cr. 1-3
The following topics offered in different semesters: sample preparation, surface analysis, analytical mechanisms, advanced instrumentation, computer interfacing. Offered Intermittently.
Prerequisite: CHM 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CHM 8700 Research in Chemistry Cr. 1-16
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 40 Credits

CHM 8800 Seminar in Analytical Chemistry Cr. 1
Required of all graduate students in analytical chemistry. Weekly meetings of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and enters into the discussion that follows. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

CHM 8810 Seminar in Organic Chemistry Cr. 1
Required of all graduate students in organic chemistry. Weekly meetings of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and enters into the discussion that follows. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

CHM 8820 Seminar in Inorganic Chemistry Cr. 1
Required of all graduate students in inorganic chemistry. Weekly meeting of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and enters into the discussion that follows. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

CHM 8830 Seminar in Physical Chemistry Cr. 1
Required of all graduate students in physical chemistry. Weekly meetings of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and enters into the discussion that follows. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

CHM 8840 Seminar in Biochemistry Cr. 1
Required of all graduate students in biochemistry. Weekly meetings of staff, invited guests, and qualified students to study recent developments. Each seminar member presents papers and participates in discussions. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Chemistry; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy or Master of Science degrees.
Repeatable for 4 Credits

CHM 8850 Frontiers in Chemistry Cr. 1
Fields of fundamental chemistry now under investigation, presented by invited specialists actively engaged in research. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 3 Credits

CHM 8888 Survey of Research at the Chemistry Biology Interface Cr. 3
The Chemistry Biology Interface course will teach students how to apply chemical approaches to study complete biological processes. It will commence with a basic overview of the biochemistry of biomolecules. Next, complex biological processes related to various diseases will be highlighted by introducing cell biology, model cells and organisms, and disease mechanisms. Finally, the course will highlight contemporary examples of how chemical methods are used to answer complex biological questions to show the value and innovation available by taking a multidisciplinary approach. The focus will be on development of skill sets that are applicable for research at the chemistry biology interface, rigor and transparency in data collection and analysis, and identification of cross-disciplinary research at Wayne State. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 8888, PHC 8888, PSC 8888, PSL 8888

CHM 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

CHM 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CHM 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CHM 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: CHM 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

CHM 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: CHM 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 998.99 Credits

CHM 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: CHM 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 998.99 Credits

CHM 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 998.99 Credits

CLA - Classics

CLA 1010 Classical Civilization Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
Survey of the culture and civilization of Ancient Greece and Rome, in particular those aspects that laid the political, social, and cultural framework of the modern world. Offered Every Term.

CLA 1230 Word Origins: English Words from Greek and Latin Cr. 3-4
Vocabulary-building course designed to enlarge English vocabulary and increase understanding and spelling proficiency through a study of Greek and Latin roots of English words; aspects of interpreting and remembering legal, medical, and scientific vocabularies included. Offered Intermittently.

CLA 1240 Etymology of Medical Terms Cr. 2
The goal of this course is to help students master the language and vocabulary of modern science and medicine, most of which is derived from Latin and Ancient Greek. Offered Winter.

CLA 2000 Greek Mythology Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
Typical myths related to religion, custom, ethics, philosophy, art, literature. Offered Every Term.

CLA 2200 Introduction to Greek Tragedy Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
Dramatic and literary qualities of representative plays of Aeschylus, Sophocles and Euripides. The origin and development of Greek tragedy related to the enduring quality and contemporary relevance of these dramas. Offered Fall.

CLA 2300 Ancient Comedy Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Dramatic and literary qualities of representative plays of Aristophanes, Menander, Plautus and Terence. Origins and development of Greek Comedy related to the enduring quality and contemporary relevance of these dramas and their influence on later literature. Offered Winter.

CLA 3050 Cleopatra Cr. 3
Cleopatra as a figure of history and of myth, using sources ranging from ancient texts to contemporary websites, literature, history, art and film. Use of methodologies that classicists employ to focus on this single aspect of the ancient world; study of a historical problem that is plagued with biases. Offered Intermittently.

CLA 3060 Medea in African American Literature Cr. 3
Ancient sources about Medea; her presence in work of four African American authors: W.E.B. DuBois, Countee Cullen, Toni Morrison, and Percival Everett. Offered Intermittently.

CLA 3150 Athens and the Ancient Greek World Cr. 3-4
Cultural history of ancient Greece from the time of the first Olympic games (776 BCE) to the reign of Alexander the Great and the advent of the Hellenistic kingdoms (336 BCE); focus on the greatest of the Greek city-states, Athens. Offered Every Other Year.

CLA 3530 The World of Early Christianity Cr. 3
A historical survey of the cultural, social, and literary world of early Christianity. Offered Every Other Year.
Equivalent: GKM 3530

CLA 3590 Byzantine Civilization Cr. 3
Satisfies General Education Requirement: Social Inquiry
Survey of Byzantine culture, religion, society, and literature from late Antiquity to 1453, through secondary and primary sources in translation. Offered Yearly.
Equivalent: GKM 3590

CLA 3700 The Golden Age of Rome Cr. 3-4
Interdisciplinary approach to the most important period of Roman history: the beginning of The Roman Empire under Augustus; history, politics, literature, art. Offered Every Other Year.

CLA 3720 Greek Identity from Antiquity to Modernity Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Explores what it meant to be Greek from Archaic Greece to the modern era. Offered Yearly.
Equivalent: GKM 3720

CLA 3800 Survey of Greek Literature Cr. 3-4
Representative sampling of important Greek literary texts in English translation. Offered Every Other Year.

CLA 3825 Survey of Latin Literature Cr. 3-4
Representative sampling of important Latin literary texts in English translation. Offered Every Other Year.

CLA 3999 Further Studies in Mythology Cr. 3
A more in-depth study of mythology with special reference to particular classical myths or theories. Offered Intermittently.
Prerequisites: CLA 2000 with a minimum grade of D-

CLA 4998 Honor's Thesis Cr. 3
Completion of an extended examination of a topic or research question in Classics, under the direction of one or more members of the departmental faculty. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Classics Honors.

CLA 5050 Cleopatra Cr. 3
Cleopatra as a figure of history and of myth, using sources ranging from ancient texts to contemporary websites, literature, history, art and film. Use of methodologies that classicists employ to focus on this single aspect of the ancient world; study of a historical problem that is plagued with biases. Offered Intermittently.

CLA 5150 Athens and the Ancient Greek World Cr. 3-4
Cultural history of ancient Greece from the time of the first Olympic games (776 BCE) to the reign of Alexander the Great and the advent of the Hellenistic kingdoms (336 BCE); focus on the greatest of the Greek city-states, Athens. Offered Every Other Year.

CLA 5200 Special Studies Cr. 1-4
In-depth study of some aspect of Greek and Roman civilization. Topics may be drawn from the fields of literature, archaeology, art and history, and will be announced in Schedule of Classes . All readings in English. Offered Intermittently.
Repeatable for 8 Credits

CLA 5350 Plutarch's Lives of the Noble Greeks and Romans Cr. 3
Structured reading of one of the formative works in the Western canon, which has had lasting influence on biography as a genre and upon individuals such as William Shakespeare, Jean-Jacques Rousseau, Ralph Waldo Emerson, William Wordsworth, George Bernard Shaw, Harry Truman, Robert Lowell, Barbara Chase-Riboud, and many others. Offered Intermittently.

CLA 5530 The World of Early Christianity Cr. 3
A historical survey of the cultural, social, and literary world of early Christianity. Offered Every Other Year.
Equivalent: GKM 5530

CLA 5590 Byzantine Civilization Cr. 3
Survey of Byzantine culture, religion, society, and literature from late Antiquity to 1453, through secondary and primary sources in translation. Offered Yearly.
Equivalent: GKM 5590

CLA 5700 The Golden Age of Rome Cr. 3-4
Interdisciplinary approach to the most important period of Roman history: the beginning of The Roman Empire under Augustus; history, politics, literature, art. Offered Every Other Year.

CLA 5720 Greek Identity from Antiquity to Modernity Cr. 3
Satisfies General Education Requirement: Historical Studies
Explores what it meant to be Greek from Archaic Greece to the modern era. Offered Yearly.
Equivalent: GKM 5720

CLA 5800 Survey of Greek Literature Cr. 3-4
Representative sampling of important Greek literary texts in English translation. Offered Every Other Year.

CLA 5825 Survey of Latin Literature Cr. 3-4
Representative sampling of important Latin literary texts in English translation. Offered Every Other Year.

CLA 5990 Directed Study Cr. 1-4
Directed independent research in depth on a topic or author not treated in the regular classics offerings, culminating in a course paper. Offered Every Term.
Repeatable for 8 Credits

CLA 5993 Writing Intensive Course in Classical Civilization Cr. 0
Disciplined writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Grade in CLA 5993 is independent of grade in corequisite course. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

CLA 6260 Further Studies in Mythology Cr. 3
An in-depth study of mythology with special reference to particular classical myths or theories of myth. Offered Intermittently.
Prerequisites: CLA 2000 with a minimum grade of D-
Repeatable for 6 Credits

CLA 7100 Introduction to Translation Studies Cr. 3
Introduction to Translation Studies presents the essential theories as tools to deal with the significant practical problems and issues that may confront the practitioner in specialized translation. The class will focus on the following points: 1) acquisition of the basics of translation theory in order to facilitate the comprehension of translation's multidisciplinary processes and be aware of the variety of theoretical approaches, 2) the study and evaluation of primary methods of research to enhance future research and practices, 3) the acquisition of necessary metalanguage, which allows the textual analysis of the translation process, the solution driven mind of a translator, the approach to tackle recurring translation problems, and the evaluation of translated texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ARB 7100, FRE 7100, GER 7110, ITA 7100

CMT - Construction Management

CMT 2200 Soils and Foundations Cr. 3
It is essential for construction manager to understand basic soil engineering properties, classification system, phase diagram, relationship between density and moisture content, and how it determines foundation design, and real-world application in the construction industry. Application of International Building Code in foundation design. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Construction Management.

CMT 3000 Construction Estimating and Bidding Cr. 3
Fundamental cost estimating principles, processes and methods used in residential and commercial construction. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 3010 Introduction to Construction Management Cr. 3
Overview of construction industry; processes involved in construction projects from conception to final delivery. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 3020 Residential and Commercial Land Development and Design Cr. 3
Role and responsibilities of a developer; financing strategies and new trends in lending; forming an effective partnership. Technical processes: from undeveloped land to surveying, conceptual drawing, site planning process, engineering and design, permits, and construction. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 3030 Construction Safety Management Cr. 3
Construction safety and health management as applicable to contractors, owners, and designers. Construction injury and fatality statistics; humanitarian, legal and economic justification for safety; accident causation and control theories; OSHA standards and safe construction procedures. Safety policy, project safety rules, communications network, accident investigation and record keeping, worker orientation and training, and safety program evaluation and audits. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 3040 Building Codes Cr. 3
Requirements by regulatory agencies pertaining to the construction industry; current International Building Code and other regulations; emphasis on Michigan applications. Offered Winter.
Prerequisites: CMT 3010 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 3050 Construction Accounting and Financial Management Cr. 3
Successful management of finances of the construction project and companies. Accounting systems, financial statements, overhead and profits, cash flows for construction projects and companies, project financing, and financial decision making. Offered Fall.
Prerequisites: ECO 2020 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 3070 Introduction to Green Construction Cr. 3
Sustainable or green-building design and construction: efficient use of resources to create healthier and more energy-efficient buildings. Motivations for green construction projects, technical aspects of their design, obstacles, future directions. Knowledge and capabilities to project-manage a green building. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 3080 Advanced Computers in Construction Cr. 3
Advanced applications of MS Excel software in estimating and financial management of construction projects; making effective project presentations using MS PowerPoint. Field applications of computers; use of PDAs and handheld devices in data acquisition and management. Use of REVIT software in Building Information Modeling (BIM). Offered Winter.
Prerequisites: ET 2140 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 4050 Construction Methods Cr. 3
Overview of construction practices in industry; processes and equipment involved in construction projects from conception to final delivery. Offered Winter.
Prerequisites: MAT 1800 with a minimum grade of C- or CMT 2200 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 4200 Senior Project Cr. 3
Capstone project; senior students work in teams; application of skills, knowledge, techniques and concepts. Satisfies the University General Education Writing Intensive Course in the Major requirement. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

CMT 5030 Facilities and Management Principles Cr. 3
An introduction to Facilities Management (FM) with an overview of the many facets of FM including the Facility lifecycle, strategic, master, and annual planning cycles. Including how these cycles are used in the management of finances, spaces, real property, sustainability, projects, security, emergencies, operations, and maintenance. Offered Fall.
Prerequisites: CMT 3010 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Engineering.

CMT 5040 Residential Construction Management Cr. 3
This course offers comprehensive and accessible guidance through every stage of single-family and multifamily residential construction, from site preparation and project delivery to finishes and systems installation. Emphasizing current industry standards, students will explore foundational methods across various structural systems, including light wood frame, steel, masonry, and concrete, while examining modern practices in prefabrication, energy efficiency, ventilation, and green building. Updated to reflect the latest codes (including IRC and energy codes), tools like CAD/BIM, and sustainable techniques, the course prepares students to manage residential projects effectively using real-world applications, illustrated examples, and hands-on digital resources. Offered Winter.

CMT 5050 Construction Field Operations Cr. 3
Introduction to the methods, equipment, and management techniques used in the construction industry. Topics include equipment operating characteristics, job site safety, and field management. Offered Winter.

CMT 5060 Planning and Scheduling Cr. 3
Provides an overview of the principles needed to successfully manage the time schedule of construction projects using Primavera P5. There principles are attributed to many processes and techniques, including, Critical path Method (CPM) Technique, Time Scheduling and updating, Resource Management (Allocation, Leveling and Control), Cost Management, and Reporting. Offered Fall.

CMT 5070 Mechanical and Electrical Systems in Buildings Cr. 3
Principles and applications of basic mechanical and electrical systems; design examples; emerging technology and environmental issues; essential engineering calculations and data. Offered Winter.
Prerequisites: MAT 1800 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.

CMT 5080 Construction Management Law Cr. 3
The objectives of this course are to introduce students to the legal responsibilities, risks, and rights inherent in the professional practice of construction management. Offered Winter.

CMT 7010 Applications of AI in Construction Management Cr. 3
This course focuses on practical applications of artificial intelligence (AI) using available software programs in construction project management, emphasizing real-world workflows and use cases. Students will learn how AI tools are applied to plan, manage, monitor, and optimize construction practices through experiential, hands-on activities using commercially available software and industry-relevant software packages (e.g., Autodesk BIM360, Revit). The course emphasizes hands-on, industry-oriented implementation, enabling students to understand the technical feasibility, performance, and limitations of AI technologies in construction while building, testing, and evaluating AI-enabled applications for construction management. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CMT 7020 Construction Safety Management Cr. 3
This course covers building the safety culture, establishing accountability for safety, working with contractors, hazard prevention and control, and the steps to identify OSHA requirements. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CMT 7030 Building Information Modeling Cr. 3
This course will focus on improving skills in Revit and Navisworks while using advanced knowledge of the construction industry to manipulate models to create deliverables. Students will focus on completing detailed quantitative takeoffs for several building services including structural, mechanical, electrical, and plumbing. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CMT 7040 Lean Construction Management Cr. 3
Students will be introduced to LEAN-SIX SIGMA (LSS) philosophy, tools, and practices as they relate to real world issues in the construction industry. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CMT 7050 VR Technologies in Construction Management Cr. 3
Students will get hands-on experience with VR technology before spending time researching different products. This research will give students an understanding of the limitations of the software and which companies are proving to have an edge on the competition. Offered Yearly.
Prerequisite: CMT 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CMT 7060 Risk Management in Construction Cr. 3
Students will learn topics related to project risk management, including project risks and opportunities, plan risk analysis, implement risk responses and construction risk register templates and tools. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CMT 7070 Construction Cost Estimating Cr. 3
This course provides an in-depth analysis of cost estimates; budget estimates; preconstruction services estimates; subcontractor work estimates; and bid preparation. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CMT 7080 Applications of Machine Learning & Data Analytics in Construction Management Cr. 3
This course prepares students to apply machine learning (ML) and data-driven software techniques to construction management workflows through hands-on exercises, real-world construction datasets, and industry-standard software. Students will learn how to clean, structure, analyze, and model field-generated data and industry-relevant software packages (e.g., Autodesk BIM360, Revit, Procore Analytics). The course includes hands-on exercises and discipline-specific implementations, with each week students build a functional component of a predictive or diagnostic model used in construction project planning, cost forecasting, productivity monitoring, safety analytics, or equipment maintenance. Students will implement models, test results against actual performance outcomes, visualize insights, and evaluate deployment feasibility using field-ready tools. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

COM - Communication

COM 1010 Oral Communication: Basic Speech Cr. 3
Satisfies General Education Requirement: Oral Communication Competency
Beginning course emphasizing fundamentals of speech preparation. Development of poise and confidence in speaking. Offered Every Term.

COM 1500 Survey of Mass Communication Cr. 3
Introductory course in understanding communication theory and effects and the communication industry in the United States. Offered Every Term.

COM 1600 Introduction to Audio-Television-Film Production Cr. 3
Foundational course in production principles, techniques, and processes and current industry practices. Through in-class exercises and out-of-class projects, students gain hands-on experience with camera, lighting, sound, and non-linear editing equipment and software in the creation of digital film, video, and audio content. Offered Every Term.
Fees: $90

COM 1610 Fundamentals of New Media Production Cr. 3
Critical introduction to the emerging landscape of producing original digital content for information and communication technology. Students will develop a critical perspective and the skills needed to engage in new media culture. Offered Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $70

COM 1700 Media Literacy Cr. 3
Satisfies General Education Requirement: Social Inquiry
Explores the goals and methods of various media industries, identify the influence media has on us, understand benefits and potential negative consequences of media, while identifying specific techniques for becoming media literate. Offered Every Term.

COM 2000 Introduction to Communication Practices and Professions Cr. 3
Introduction to the broad field of communication and corresponding majors within the department. Students will learn and apply core communication practices, which are grounded in lived experience and research-based knowledge, and college-to-career possibilities. Students will learn some basic skills to use in daily life and build a foundation for continuing studies in communication. Offered Fall, Winter.

COM 2010 Introduction to Film Cr. 4
Satisfies General Education Requirement: Cultural Inquiry
Examination of film techniques and basic methods of film analysis. Offered Every Term.
Fees: $15
Equivalent: ENG 2450

COM 2020 History of Film Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Critical study of the motion picture as a modern visual art; screening and analysis of representative fiction films to illustrate historical periods and genres. Offered Every Term.
Fees: $15

COM 2030 Media Writing Toolkit Cr. 3
Grammar and style in journalism; information gathering and presentation in multiple formats. Offered Every Term.

COM 2100 News Reporting Cr. 3
Basic news reporting: gathering the facts and writing them well. Journalism skills course. Offered Fall, Winter.
Prerequisites: COM 1700 with a minimum grade of C and COM 2030 with a minimum grade of C
Fees: $30

COM 2110 Argumentation and Debate Cr. 3
Satisfies General Education Requirement: Critical Thinking Competency
Logical and legal foundation of the argumentation process; practical experience in analysis, reasoning, case-building, evaluation of evidence, refutation and cross-examination. Offered Yearly.

COM 2160 Campaigns and Social Movements Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Critical discussion of the social foundations and values underlying human persuasion. Analysis of persuasive strategies and techniques used in contemporary society: political campaigns, social movements, advertising and consumerism in the U.S. Offered Yearly.

COM 2170 Persuasive Speaking Cr. 3
Advanced public speaking; emphasis on persuasive speeches. Application of social psychology to audience analysis, to speech construction and presentation, and to critical analysis of persuasive public discourse. Offered Every Term.
Prerequisites: COM 1010 with a minimum grade of C or Oral Communication P=100/F=000 with a test score minimum of 100

COM 2200 Interpersonal Communication Cr. 3
Satisfies General Education Requirement: Social Inquiry
Introduction to theory and research on interpersonal communication; analysis of everyday communication situations. Offered Yearly.

COM 2210 Media Writing and Storytelling Cr. 3
Application of writing principles to various forms of copy; continuity, commercials, public service announcements, features, documentary, drama. Offered Every Term.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

COM 2230 Broadcasting Cr. 3
Theory and practice in broadcast news-writing, reporting, performing and editing. There will also be an audio performance and editing component and students will produce, anchor, and edit a newscast and create a final audition air check. Offered Fall, Winter.
Prerequisites: COM 1700 with a minimum grade of C
Fees: $50

COM 2240 Forensics Practicum Cr. 1-2
Training and participation in debate and contest speaking. Offered Every Term.
Repeatable for 6 Credits

COM 2260 Digital Writing and Research Methods Cr. 3
This course prepares students to participate intelligently and critically in the production and consumption of digital media. The course emphasizes fundamental writing and research skills. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.

COM 2280 Visual Communication & Content Creation Cr. 3
Visual Content Creation is designed for all communication majors and non-majors to learn effective visual aspects of multimedia storytelling for the current communication industry standards. By the end of this course, students will be adept at using digital tools for visual storytelling and content creation, creating compelling visual narratives, editing multimedia content, and analyzing the effectiveness of their efforts in reaching and influencing public audiences—all while adhering to the ethical and legal standards related to visual contents in social media. Offered Fall, Winter.
Fees: $50

COM 2290 Fundamentals of New Media Communication Cr. 3
Interdisciplinary introduction to the study of new media by way of an investigation of both theories and applications of emerging forms of communication. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.

COM 2300 Intercultural Communication Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
The purpose of this course is to engage students in an in-depth exploration of culture within and among different social groups, from a communicative perspective. Discussions and readings will include communication as an element of culture, key concepts and terms that ground our understandings of cross-cultural interactions, a history of the discipline and relevant theories and research in this area. Offered Yearly.

COM 2310 Introduction to Web Design Cr. 3
Introduces students to the current methods and procedures utilized to effectively design and maintain web pages and websites using various CMS (content management system) platforms. Offered Fall.
Fees: $35

COM 3010 Media Analysis and Criticism Cr. 3
Through a focus on the analysis of media texts (from movies to memes and everything in between and beyond) students are introduced to the techniques and methods necessary for the comprehension and practice of media criticism. By thinking and writing critically, evaluation of media texts will draw from aspects of both reception and production practices; case studies will be made of a broad-based spectrum of styles, genres, and periods. Offered Yearly.
Prerequisites: COM 1700 with a minimum grade of C
Restriction(s): Enrollment is limited to students in the Department of Communication.
Fees: $10

COM 3100 Solutions Journalism Cr. 3
Advanced news reporting, focusing on governmental stories. Offered Winter.
Prerequisites: COM 2100 with a minimum grade of C
Fees: $30

COM 3150 Science Communication Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
Students will have an opportunity to become familiar with the theory, research, and practice of science communication. They will develop an understanding of quantitative research methods in science and engage with the meaning of both science and scientific practice, so that they may critique and help shape broader public interpretation of socially relevant scientific topics (e.g., vaccines, evolution, climate change). Various channels to communicate science with diverse audiences will be examined and students are encouraged to examine how multiple media shape scientific understanding in different ways. Offered Every Other Winter.

COM 3170 Fundamentals of Public Relations Cr. 3
Historical background of the profession of public relations; communication variables in public relations; emphasis on presentational techniques, publicity preparation and development of special events. Offered Fall, Winter.
Prerequisites: COM 1010 with a minimum grade of C, COM 1700 with a minimum grade of C, or Oral Communication P=100/F=000 with a test score minimum of 100

COM 3210 News Editing Cr. 3
Copy editing, headline writing, AP style, online and print news presentation, preparation for different news platforms. Journalism skills course. Offered Fall, Winter.
Prerequisites: COM 2100 with a minimum grade of C
Fees: $15

COM 3230 The African-American Film Experience Cr. 4
Satisfies General Education Requirement: Cultural Inquiry
Historical and contemporary portrayals of African American people in narrative and documentary film. Emphasis on filmic approaches to race relations, cinematic elaboration of racial stereotypes, and legitimation functions of film. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: AFS 3200

COM 3240 Queer Film and Media Cr. 3
Queer voices have been an integral part of cinema since its inception in the late nineteenth century. Students in this course will study the intersections of queer lives with the industry and artistry of film and media. To do this, we will revisit film history with an eye for the queer experience, identify landmark works and key pioneers of queer cinema, consider how queer representations have shifted across decades, and analyze the integral themes and styles of queer media. Offered Yearly.
Equivalent: GSW 3240

COM 3250 Organizational Communication Cr. 3
Introduction to major theories and principles used to guide the effective practice of communication within organizations. Offered Fall, Winter.

COM 3300 Business and Professional Presentations Cr. 3
Review and practice of various oral communication forms used in modern organizations. Topics include persuasive speaking, informative speaking, speech writing, multi-media presentations and business and report writing. Offered Every Term.
Prerequisites: (COM 1010 with a minimum grade of C, ENG 3060 with a minimum grade of C, or Oral Communication P=100/F=000 with a test score minimum of 100) and (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C)

COM 3380 Editing and Field Production Cr. 3
Theoretical, technical and creative storytelling processes of editing; development of technical competency in skills required for location production (camera, lighting, and sound). Offered Every Term.
Prerequisites: COM 1600 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Film, Film Honors, Film Studies, Journalism, Journalism Honors, Media Arts and Studies or Media Arts and Studies Honors.
Fees: $130

COM 3400 Theories of Communication Cr. 3
Exploration of the role of theory in describing, explaining and predicting human communication behavior in face-to-face and mediated contexts. Offered Every Term.

COM 3990 Directed Study Cr. 1-4
Offered Every Term.
Repeatable for 4 Credits

COM 4041 Rhetoric and the Body Cr. 3
Humanistic analysis, research, and theory in how rhetoric of/about the human body intersects with broader social concerns (e.g., consumerism, gender, disease and health, and race). Offered Every Other Year.

COM 4100 Feature Writing Cr. 3
Advanced news reporting, focusing on feature writing. Offered Fall, Winter.
Prerequisites: COM 2100 with a minimum grade of C
Fees: $30

COM 4110 Studies of Legal Argument Cr. 3
Uses of legal argument in a variety of fields and contexts. Different methods of studying argument will be examined. Offered Every Other Year.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

COM 4130 Communication Ethics Cr. 3
Issues of responsible communication in a variety of contexts including public relations, organizational, and interpersonal communication. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

COM 4140 Popular and Celebrity Culture Cr. 3
Increasing significance of pop and celebrity culture in shaping cultural and political affairs. Modes of production and consumption of pop culture; understanding pop culture and its effects. Offered Every Other Year.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

COM 4150 Communication and Conflict Cr. 3
Examination of the dynamics and processes of conflict across contexts with a focus on communicative theories and practices. Focus on developing and applying assessment and management knowledge and skills to real-world situations. Offered Every Other Year.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

COM 4170 Public Relations Writing Cr. 3
Writing for public relations purposes: backgrounders, fact sheets, press releases; brochures and newsletters. Offered Fall.
Prerequisites: COM 2030 with a minimum grade of C and COM 3170 with a minimum grade of C

COM 4190 Rhetorical Criticism Cr. 3
An introduction to various methods of rhetorical criticism through analysis of texts and artifacts in terms of persuasion and adaptation to audiences. Offered Fall.
Prerequisite: COM 2000 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

COM 4200 Nonverbal Communication Cr. 3
Channels and functions of nonverbal communication; contexts include: gender, culture, adult-infant interaction, therapy. Methods of study. Offered Every Other Year.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

COM 4210 Data Analysis and Research Cr. 3
Quantitative and qualitative research methods designed to advance knowledge about human communication across applied settings and diverse contexts. Offered Fall, Winter.
Prerequisite: COM 1700 with a minimum grade of C or COM 2000 with a minimum grade of C

COM 4240 African Americans in Television Cr. 4
Historical overview of African Americans in radio and television with emphasis on three areas of study: news and documentary; entertainment and advertising; and ownership, employment and access. Offered Yearly.
Equivalent: AFS 4240

COM 4250 Reporting Race, Gender, and Culture Cr. 3
Issues of gender, culture and race in media coverage with emphasis on neutral writing and some content analysis. Preparation for students to report on this content with sensitivity and accuracy. Offered Fall.
Prerequisites: COM 2100 with a minimum grade of C

COM 4270 Group Communication Cr. 3
Theory, research, and practice in group processes and problem-solving in small groups within professional contexts. Offered Every Other Year.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

COM 4310 Audio Production Cr. 3
Theory and practice in sound production techniques and experimentation with creative audio production. Offered Every Term.
Prerequisites: COM 1600 with a minimum grade of C and (COM 2210 with a minimum grade of C or COM 2230 with a minimum grade of C)
Restriction(s): Enrollment is limited to students in the Department of Communication.
Fees: $90

COM 4410 Television Production Cr. 4
Theory and practical application of techniques used in television production; use of graphic materials, design and staging concepts, lighting techniques and studio operation; the role of the television producer-director. Offered Every Term.
Prerequisites: COM 1600 with a minimum grade of C and (COM 2210 with a minimum grade of C or COM 2230 with a minimum grade of C)
Restriction(s): Enrollment is limited to students in the Department of Communication.
Fees: $90

COM 4500 Leadership Communication Cr. 3
Theory and application of leadership processes in for-profit and nonprofit organizations. Offered Every Other Year.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

COM 4510 Immersive Media Production Cr. 3
Foundations of storytelling through the use of immersive technology. This course incorporates techniques and project development in 360/VR still photography, ambisonic sound and 360/VR video production. Emphasis is also placed on group moderating, immersive storytelling, concept development, historical and theoretical analysis of simulation technologies. Offered Winter.
Prerequisites: COM 1600 with a minimum grade of C and (COM 2210 with a minimum grade of C or COM 2230 with a minimum grade of C)
Restriction(s): Enrollment is limited to Undergraduate level students.

COM 4560 Telecommunications Policy: A Political Economy Approach Cr. 3
Introduction to government and corporate policies that govern telecommunication networks. Critical approaches to the study of emerging legal and policy issues pertaining to the dynamic and evolving communication networks and technologies, including surveillance practices and privacy issues. Offered Winter.
Prerequisites: COM 1500 with a minimum grade of C or COM 1700 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

COM 4680 WAYN Radio Cr. 2
Participation in WAYN on-line radio. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

COM 4990 Directed Study Cr. 1-3
Supervised individual research. Offered Every Term.
Prerequisite: COM 2100 with a minimum grade of C
Repeatable for 4 Credits

COM 4996 Senior Honors Thesis Cr. 3
Overview of theory and research in communication; closely supervised research project that results in a paper of approximately twenty pages. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Senior.

COM 5010 History of Communication Technologies Cr. 3
Traces the historical development of communication technologies, industry players and government policies, and assesses impact of the technologies in their historical context. Offered Yearly.
Prerequisites: COM 1700 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Communication Studies, Communication, Film, Film Honors, Journalism, Journalism Honors, Media Arts and Studies, Media Arts and Studies Honors, Public Relations, Public Relations Honors or Radio and Television.

COM 5020 Studies in Film History Cr. 3
Analysis of the development of a specific film genre, a director, or other historical aspect of the motion picture. Topics to be announced in Schedule of Classes. Offered Yearly.
Prerequisites: COM 2010 with a minimum grade of C or ENG 2450 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Communication Studies, Communication, Film, Film Honors, Journalism, Journalism Honors, Media Arts and Studies, Media Arts and Studies Honors, Public Relations, Public Relations Honors or Radio and Television.
Fees: $20
Repeatable for 12 Credits

COM 5050 Special Topics Cr. 1-3
Selected topics in communication to be announced in the Schedule of Classes. No more than six credits may be elected in this special topics course in any graduate degree program Offered Intermittently.
Repeatable for 9 Credits

COM 5060 Documentary and Non-Fiction Film and Television Cr. 4
Study of the history and contemporary global landscape documentary film, video and digital media. Through screenings, readings and discussions, the course explores approaches to the analysis of documentary form and content including cinematic modes, social impact, ethical considerations and the processes of production, financing and distribution. Offered Yearly.
Prerequisites: COM 2010 with a minimum grade of C or COM 2450 with a minimum grade of C
Fees: $20

COM 5070 Culture, Communication, and Media Cr. 3
The purpose of this course is to engage students in an in-depth exploration of culture, communication, and media technologies and practices in everyday life. In essence, we will study how understandings of culture shape the world around us, even as it is shaped and mediated by everyday communication, often taken for granted. The course challenges students to rethink everyday representations of culture and social groups, unpack how power relations permeate cultural contexts, and identify alternative frames and openings through emerging media technologies. Offered Every Other Fall.
Restriction(s): Enrollment limited to students with a class of Senior.

COM 5080 History of Journalism and Mass Media Cr. 3
A historical examination of the changing role of the media professional and forms of media and communication as they have developed in relation to particular social, political, economic, and technological conditions. Offered Fall, Winter.

COM 5120 Public Address Cr. 3
Landmark moments of public address. What constitutes public address; relevance of public address studies. Offered Every Other Year.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

COM 5130 Communication and Social Marketing Cr. 3
Principles of social marketing; student-driven group project. Offered Fall, Spring/Summer.
Prerequisites: COM 4210 with a minimum grade of C

COM 5140 Social Media for Strategic Communication Cr. 3
Examines social media strategies and how they can be constructed, implemented and evaluated in the context of public relations planning. Offered for undergraduate credit only. Offered Winter.
Prerequisites: COM 4210 with a minimum grade of C

COM 5160 Public Relations Campaigns and Issues Management Cr. 3
Capstone course for public relations majors. Management functions of public campaigns: developing objectives, strategic planning, issues management, budgeting. Blends theoretical concepts with their professional and practical applications; emphasis on public relations planning and evaluation. Offered for undergraduate credit only. Offered Winter.
Prerequisite: COM 4170 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Senior.

COM 5190 Special Topics Cr. 1-3
This is a special topic course for upper-level undergraduates. Corresponding to the specific topic, students will analyze and synthesize knowledge from lived experience, professional best practices, and research. The overall goals of this course are to learn through lecture and discussion and by designing projects that inform/strengthen individuals and communities. Topics to be announced in schedule of classes. Offered Fall, Winter.
Prerequisite: COM 2000 with a minimum grade of C or COM 3400 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students in the Department of Communication.
Repeatable for 6 Credits

COM 5200 Special Topics in Advanced Reporting Cr. 1-3
Special areas of interest, such as sports writing, business writing, columns and editorials. Offered Yearly.
Prerequisites: COM 2100 with a minimum grade of C-
Repeatable for 9 Credits

COM 5250 Professional Issues in Journalism and Mass Media Cr. 3
Capstone course for journalism majors; must be taken in the last year of study. This course explores the issues and skill-set required to successfully enter the news media/media career field – either on staff or on your own. Media organizations and entrepreneurial opportunities are covered. Offered Fall, Winter.
Prerequisite: COM 2230 with a minimum grade of C or COM 4100 with a minimum grade of C

COM 5270 Screenwriting Cr. 4
Principles and techniques of writing for motion pictures. Analysis and study of professionally written scripts. Exercises in writing dramatic and non-fiction screenplays. This course fulfills the Writing Intensive Requirement for the Film major. Offered Every Term.
Prerequisites: COM 2210 with a minimum grade of C
Restriction(s): Enrollment is limited to students in the Department of Communication.
Fees: $10
Repeatable for 8 Credits

COM 5300 Layout and Design Cr. 3
Practical skills course in publishing newsletters, magazines, newspapers and books; emphasis on new computer technology, desktop publishing; business aspects of publishing, including printing, promotion and marketing; skills in use of personal computer for publishing. Offered Intermittently.
Fees: $30

COM 5310 Investigative Reporting Cr. 3
Advanced reporting techniques involving use of Freedom of Information Act and computer-assisted data base searches; accessing public records. Offered Intermittently.
Prerequisites: COM 2100 with a minimum grade of C

COM 5320 Health Communication Cr. 3
Communication demands of health care and health promotion; current communication issues and problems in modern health care systems; identification of communication strategies for health care consumers and providers. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisites: COM 2000 with a minimum grade of C or COM 3400 with a minimum grade of C

COM 5330 Rhetoric of Visual Culture Cr. 3
Influence that vision and visual texts have in our culture. Critical examination of such texts, including photography, museums, monuments, the fashion industry, tattoos and body marking. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisites: COM 2000 with a minimum grade of C or COM 3400 with a minimum grade of C

COM 5350 Media Arts Production Cr. 3
Key components of production for electronic media (field, audio, and television production). Production techniques, aesthetic understanding, directing skills. No credit after COM 5380 or COM 5400. Offered for graduate credit only. Offered Fall.
Fees: $100

COM 5360 Gender and Communication Cr. 3
Analysis of gender communication issues within interpersonal, group, organizational, intercultural, public, and mass mediated contexts. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisite: COM 2000 with a minimum grade of C

COM 5380 Video Field Production and Editing Cr. 3
Theory and practical application of digital film/video location production and post-production techniques. Non-linear editing and post-production software as used in creative development of original content. Offered Winter.
Prerequisites: COM 5350 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Communication.
Fees: $100

COM 5381 TV News Reporting and Digital Editing Cr. 3
Theory and practical application of aesthetics and journalistic values of TV news and feature storytelling. Emphasis on planning, location video and sound protection, editing, interviewing, writing skills, on-camera presentation. Offered Fall, Winter.
Prerequisite: COM 2230 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Journalism, Journalism Honors, Media Arts and Studies or Media Arts and Studies Honors.
Fees: $125

COM 5390 Digital Animation Cr. 3
Introduction to animation techniques, 2D to 2-1/2D to 3D; includes use of Adobe products such as After Effects. Discussion of alpha channels, masks, rotoscoping, layering, keyframe and behavioral-based animation. Offered Winter.
Prerequisites: COM 1600 with a minimum grade of C or COM 5350 with a minimum grade of C

COM 5400 Techniques of Film and Video Production Cr. 4
Capstone course option for majors in Media Arts and Studies; should be taken in last 21 credits of program. Experience with the preparation, shooting and editing of video projects in film-style production. Offered Fall, Winter.
Prerequisite: COM 3380 with a minimum grade of C or COM 5380 with a minimum grade of C
Restriction(s): Enrollment is limited to students in the Department of Communication.
Fees: $150

COM 5410 Producer's Workshop Cr. 3
Examination of the business, managerial, and creative considerations and process of producing media programming from conception through distribution. Offered Yearly.
Prerequisites: COM 3380 with a minimum grade of C, COM 3390 with a minimum grade of C, COM 5380 with a minimum grade of C, COM 5381 with a minimum grade of C, or AIN 3220 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Communication Studies, Communication, Film, Film Honors, Journalism, Journalism Honors, Media Arts and Studies, Media Arts and Studies Honors, Public Relations, Public Relations Honors or Radio and Television.
Fees: $35

COM 5420 Director's Workshop Cr. 3
Organization and execution of the film and video director's tasks through production of a major creative project. Offered Yearly.
Prerequisite: COM 5400 with a minimum grade of C
Fees: $125
Repeatable for 6 Credits

COM 5440 Film, Cinematography and Lighting Cr. 3
An immersion into the cinematic practices and applied theory of film and digital cinema including the art and technology of cinematography, lighting design, and non-linear post-production. Students will apply an understanding of exposure and color temperature control, workflow management, NLE systems and color grading to the creation of short cinematic works designed for their portfolios and for exhibition. Offered Yearly.
Prerequisites: COM 3380 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Communication Studies, Communication, Film, Film Honors, Journalism, Journalism Honors, Media Arts and Studies, Media Arts and Studies Honors, Public Relations or Public Relations Honors.
Fees: $125

COM 5460 Magazine Writing Cr. 3
Advanced feature writing: preparation of magazine features. Students focus on limited number of in-depth articles. Research, structure and writing techniques to produce publishable magazine-length articles. Offered Yearly.
Prerequisite: COM 4100 with a minimum grade of C

COM 5500 Journalism and New Media Cr. 3
Theory and practical application of publishing journalistic works via new media. Emphasis on best practices and techniques of using social media for news coverage. Offered Fall, Winter.
Prerequisite: COM 2100 with a minimum grade of C
Fees: $30

COM 5510 Societal Effects of New Technologies Cr. 3
Capstone course; must elect in last 21 credits prior to graduation. Discusses the societal impact of traditional mass media and the evolving interactive technologies of computers and mobile networks as well as emerging technologies such as robotics. Offered Yearly.
Prerequisite: COM 1500 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Communication, Journalism, Journalism Honors, Media Arts and Studies, Media Arts and Studies Honors or Radio and Television.

COM 5520 International Communications Cr. 3
Examination of the complex issues pertaining to international telecommunication, broadcasting and satellite systems within the broader political, economic and sociocultural contexts of globalization. Offered Yearly.

COM 5540 Film Criticism and Theory Cr. 3
Introduction to the major classical and contemporary theoretical and critical approaches to the study of film and screen arts, inclusive of Third Cinema theory, in a globalized, multi-screen media environment. Offered Fall.
Prerequisites: 2 of (COM 2010 with a minimum grade of C, COM 2020 with a minimum grade of C, COM 3010 with a minimum grade of C, COM 3230 with a minimum grade of C, AFS 3200 with a minimum grade of C, or COM 3400 with a minimum grade of C)

COM 5610 Advanced TV Production Cr. 3
Students work on producing live, recorded TV programs and work on a professional-style TV production crew. Positions include technical director, teleprompter operator, producers, audio, lighting, staging/set construction personnel, camera operators, editors. Offered Fall, Winter.
Prerequisite: COM 4410 with a minimum grade of C or COM 5381 with a minimum grade of C
Fees: $135
Repeatable for 6 Credits

COM 5710 Law and Ethics in Journalism and Mass Media Cr. 3
Covers legal and ethical issues in Journalism and Mass Media. It is designed to help students in journalism, public relations, advertising, and other media professions understand the practical application of law and ethics in their working lives. Offered Fall, Winter.

COM 5900 Senior Project Cr. 3
Combination of lectures and workshops to assist students in carrying out a service learning or individual research project. Offered for undergraduate credit only. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students in the Department of Communication.

COM 5993 Writing Intensive Course Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. No degree credit. Required for all Film Studies majors. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

COM 6050 New Media Practices Cr. 3
Examination of principles of emerging communication practices — including mobile, social, AR, VR, MR, and AI — across personal, cultural, and institutional settings. Offered Fall.

COM 6090 Digital Screen Media Cr. 3
Foundational techniques of creating transmedia content. Students explore basic interactivity, and gain experience designing and implementing sites for multimedia platforms. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $85

COM 6100 Speech Writing Cr. 3
Preparation and presentation of speech manuscripts. Emphasis on style of writing, use of supporting materials and factors of interest. Special problems of ghost-writing considered. Offered Every Other Year.

COM 6140 Public Relations Theory Cr. 3
This course provides a foundational grounding in public relations theories and examines them in different communication contexts, including mediated, crisis, and international. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 6180 Principles of Health Communication Cr. 3
Graduate survey of theory, research and practice in communication; emphasis on collaborative patient-provider interactions and health campaigns. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 6190 Internship Cr. 1-3
On-the-job observations and work experience in business, service, social, governmental, and industrial organizations. Emphasis on journalism, public relations, and organizational communication. Offered Every Term.
Repeatable for 6 Credits

COM 6250 Organizational Communication Cr. 3
Theoretical review of the structure process and function of communication within and between organizations. Analysis of current and emerging issues in the theory and research of organizational communication. Offered Fall.

COM 6270 New Media Theory Cr. 3
Exploration of a wide range of theoretical approaches central to the study of new media, including media ecology, computational approaches, cultural studies, media convergence, posthumanism, and ethical considerations. Offered Yearly.

COM 6280 Reporting on Diversity Cr. 3
Focus on journalistic writing with sensitivity on the language and framing used when reporting on race, ethnicity, culture, gender identity or gender expression. For students intending careers in fields that require writing that can reach diverse public audiences, such as news media, public relations, and strategic communications. Offered for graduate credit only. Offered Fall, Winter.

COM 6310 Allesee Lectures in Media Cr. 1-3
Through public lectures, screenings and discussion sessions, this course provides critical and analytical approaches to the study of work by leading artists, professionals and/or scholars in the fields of film, media arts, or broadcast journalism. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Unranked Grad, Junior or Senior; enrollment limited to students in the Fine, Performing & Comm. Arts.
Repeatable for 3 Credits

COM 6350 Communication, Culture, and Conflict Cr. 3
Overview of communication theory and practice as it relates to issues of culture, conflict and dispute resolution. Offered Fall.

COM 6390 Documentary Storytelling I Cr. 3
Research practices, production techniques and ethical considerations vital to documentary storytelling; camera, sound recording and digital workflow techniques employed in small-crew documentary production; interview and narrative construction techniques. Emphasis on the development of research, conceptualization, visualization, and preproduction skills required for documentary filmmaking. For graduate students, this is the first of a two-semester sequence in documentary filmmaking. Graduate students should plan to register for COM 7390 upon successful completion of this course. Offered Winter.
Prerequisites: COM 5060 with a minimum grade of C (may be taken concurrently) and (COM 3380 with a minimum grade of B+, COM 5380 with a minimum grade of B+, COM 5381 with a minimum grade of B+, or COM 6090 with a minimum grade of B+)
Fees: $125

COM 6410 Allesee Master Class Cr. 1-3
The Allesee Master Class provides students the opportunity to work with leading artists, professionals, and/or scholars in the fields of film, media arts, or broadcast journalism develop and refine professional and creative skills in a production environment. Offered Yearly.
Repeatable for 6 Credits

COM 6530 Audience Measurement and Survey Techniques Cr. 3
Theory and application of quantitative and qualitative research techniques in surveying audiences for electronic media. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

COM 6680 Directed Projects in Film and Media Cr. 1-3
Advanced individual projects. Offered Every Term.
Prerequisite: COM 5400 with a minimum grade of C
Repeatable for 3 Credits

COM 7000 Introduction to MA Studies in Communication Cr. 3
The foundational course providing a comprehensive overview of the field of communication, including: key theories, themes, subdisciplines, and research methodologies commonly used within the discipline. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7010 Special Topics Cr. 1-3
Selected topics in communication to be announced in the Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

COM 7040 Language and Power Cr. 3
Ways in which language is used as a device of oppression and liberation. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7140 Public Relations Campaigns and Issues Management Cr. 3
Management functions of public relations campaigns: developing objectives, strategic planning, issues management, budgeting. Blends theoretical concepts with their professional and practical applications; emphasis on prominent critical rhetorical approaches to public relations planning and evaluations. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7150 Micro-level Organizational Communication Cr. 3
Communicative processes, behaviors and relationships that affect individuals, dyads and small groups at the workplace. Topics covered include leadership, small group communication, mentorship, co-worker relationships, identity management, civility and workplace bullying. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7160 Crisis Communication Cr. 3
Theoretical and case-study approach to communicative aspects of organizational crisis management. Topics include post-crisis response, crisis sensing, crisis planning. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7162 Risk Communication: Theoretical and Practical Approaches Cr. 3
Introduces students to the theoretical approaches to risk communication. In addition, students will be introduced to research methods that may be used to conduct evaluation research on the impact of mediated risk communication. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7170 Health and Risk Communication Cr. 3
Theory and research in health and risk communication. Role of communication in hindering and promoting health under situations of health risk such as disasters and other public health emergencies. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7172 Risk Communication: Disasters, Hazards, and the Media Cr. 3
Introduces students to the role of mass media in communicating about disasters and hazards, public opinion and cultural understanding of risk as expressed through popular culture, individual and public policy response to risk messages, and some introduction to the ethical issues embedded in the concept of risk. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7200 Visual Communication Cr. 3
Analysis of symbolic and performative dimensions of visual communication from a variety of perspectives (rhetorical, social scientific, critical/cultural), reflective of the instructor's expertise. Students may analyze political communications, data visualizations, films, ad campaigns, or other types of media across various modes of conveyance (i.e. print, television, and/or digital platforms). Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7210 New Media and Strategic Communication Cr. 3
Fundamental theories and practical applications of social media, and its strategic use in public relations and professional communication. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7220 Professional Issues in Applied Communication Cr. 3
Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7250 Rhetorical Criticism Cr. 3
Principles of criticism as applied to public address; analysis of standards and methods of evaluation; readings in modern criticism of public address. Research project. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7260 Quantitative Research Methods in Communication Cr. 3
Methods of quantitative research in communication such as experimental design, surveys, content analysis, measurement, descriptive and inferential statistical analysis. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7270 Advanced Screenwriting Cr. 4
Research and writing for creation of full-length dramatic or documentary film and television scripts. Offered Every Term.
Prerequisite: COM 5270 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10

COM 7290 Contemporary Rhetorical Theory Cr. 3
Exploratory analysis of a broad spectrum of recent works relevant to the art of discourse. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7340 Interviewing Cr. 3
Theory and research on interviewing across a range of contexts. Topics include: constructing questions and protocols, listening, role, self-presentation, social understanding. Contexts may include screening, counseling, legal, journalism and research. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7360 Qualitative Research Methods in Communication Cr. 3
Methods of qualitative research in communication such as participant interviews, focus groups, ethnography and analysis. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7365 Ethnographic Methods for Communication Research Cr. 3
Design, implementation and evaluation of ethnographic and participant/observation research studies in communication. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7380 Advanced Media Editing Cr. 3
Principles of video and film editing; exercises and assignments covering pace, meaning, special effects; styles of editing related to genres; non-linear editing software programs. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $30

COM 7410 Communication Theory Cr. 3
Systematic analysis of major theories of communication including historical/philosophical foundations, current applications, and recent developments. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7420 Seminar in Directing Cr. 3
Provides the advanced media production student the opportunity to devote an entire semester to producing, directing, and editing a significant cinematic or interactive work. It focuses on creative approaches to cinematic visualization, character development, dramatic structure, scene construction, sound design and the direction of performances (actors, talent and production teams) in the crafting of compelling motion picture stories. Students work to establish their artistic voices as they create significant films or interactive digital media projects for professional exhibition and distribution. A completed script or detailed treatment is required prior to registration. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $125
Repeatable for 6 Credits

COM 7500 Seminar in Mass Media Cr. 3
Advanced topics in mass communication theory and research. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

COM 7520 Theories of Media Effects Cr. 3
Survey of research and theory regarding cognitive, emotional, and behavioral effects of mass media on individuals and society. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 998.99 Credits

COM 7530 Critical Mass Communication Theory Cr. 3
Foundational readings and concepts; theoretical perspectives of critical theory and cultural studies. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7580 Content Analysis Cr. 3
Theory and practice in quantitative techniques for analyzing texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7610 Feminist Media Theory Cr. 3
Overview and discussion of feminist theories, women studies theories, and gender studies theories and their intersections with and applications to theories in communication studies, journalism studies, and media studies. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7700 Political Communication Cr. 3
Theory and methods of political communication. Studied and applied topics such as campaigns, messages, public opinion, news coverage will be analyzed from a variety of perspectives (rhetorical, social scientific, critical/cultural), reflective of the instructor's expertise. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7810 Seminar in Communication Education Cr. 3
Philosophy and approaches to teaching communication on the college level. Topics include objectives, evaluation, motivation and teaching strategies. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 7990 Directed Study: MA Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

COM 7991 Directed Study: PhD Cr. 1-4
Research in major field for advanced graduate students. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

COM 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

COM 8000 Introduction to PhD Studies Cr. 3
Introduction to perspectives, approaches and methods of communication research. Required during first term of Ph.D. study in the Communication Department. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

COM 8140 Public Relations Theory Cr. 3
This course provides a foundational grounding in public relations theories and examines them in different communication contexts, including mediated, crisis, and international. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

COM 8250 Organizational Communication Cr. 3
Theoretical review of the structure process and function of communication within and between organizations. Analysis of current and emerging issues in the theory and research of organizational communication. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.

COM 8340 Communication, Culture, and Conflict Cr. 3
Overview of communication theory and practice as it relates to issues of culture, conflict and dispute resolution. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.

COM 8530 Audience Measurement and Survey Techniques Cr. 3
Theory and application of quantitative and qualitative research techniques in surveying audiences for electronic media. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.

COM 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

COM 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

COM 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

COM 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: COM 9991 with a minimum grade of Y
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

COM 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Yearly.
Prerequisite: COM 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

COM 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Yearly.
Prerequisite: COM 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

COM 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

CRJ - Criminal Justice

CRJ 1010 Introduction to Criminal Justice Cr. 3
Satisfies General Education Requirement: Social Inquiry
Scientific method and multidisciplinary approach to administration, procedures, and policies of agencies of government charged with enforcing the law, adjudicating crime, and correcting criminal and deviant conduct. Response of justice system to social norms and trends; reciprocal relationship to social behaviors and values. No credit after former CRJ 2000. Offered Every Term.

CRJ 2130 Introduction to Forensic Anthropology and Human Rights Cr. 3
Introduction to forensic anthropology and its intersections with human rights issues and investigations in criminology, law, anthropology, and related fields. Forensic anthropology is a subfield of biological anthropology, but interdisciplinary cultural theories in justice, violence, and human rights influence how forensic anthropology is practiced in the US and abroad. The course introduces the basic scientific methodologies used by forensic anthropologists to analyze biological and material remains. It then applies forensic anthropological casework to the examination of human rights investigations and humanitarian concerns to understand how culture influences forensic science and vice versa. Offered Yearly.
Equivalent: ANT 2130

CRJ 2204 Outsiders and Deviants Cr. 3
Provides an overview of the sociological study of deviance, emphasizing crime and other deviant behaviors and conditions. Offered Yearly.
Equivalent: SOC 2204

CRJ 2550 Race, Crime and Justice Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Introduces students to sociological and legal analysis of the American justice system as a form of race based social control. The class will discuss data, theoretical approaches, and current research about the ways in which race and ethnicity are connected with criminal involvement and criminal justice processing. In doing so, we will learn about the complex ways in which the race-crime-criminal justice connection is both a product of societal forces and affects broader social relations. Offered Yearly.

CRJ 2650 Gender and Crime Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Critical examination of gender-related issues in criminal justice; impact on defendants, inmates, victims, and criminal justice personnel; relation to policy issues. Offered Yearly.
Equivalent: GSW 2650

CRJ 2750 Diversity Issues in Criminal Justice Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Critical examination of gender, race, class, and ethnicity issues in criminal justice; impact on defendants, inmates, victims, and criminal justice personnel; relation to policy issues. No credit after CRJ/GSW 3750. Offered Yearly.
Equivalent: GSW 2750

CRJ 2995 Special Topics in Criminology Cr. 3
Special criminology topics. Offered Every Term.
Repeatable for 6 Credits

CRJ 2999 Human Trafficking Cr. 3
This course will focus on domestic human trafficking. Human trafficking victims include men, women and children who are subjected to force, fraud, or coercion for the purpose of sexual exploitation or forced labor. This course will define and analyze human trafficking through academic research, policies and laws, modern cases and debates, and the abolition debate. You will also learn about the physical, emotional, psychological, and spiritual trauma experienced by victims of human trafficking and the methods used to recruit and control them. Offered Yearly.
Prerequisites: CRJ 1010 with a minimum grade of D-

CRJ 3050 Mental Health and Crime Cr. 3
Provides a comprehensive overview of the issues and challenges located at the intersection of mental health/illness and the criminal justice system. Attention will be focused on a range of topics, including, but not limited to, the definition of mental illness, deinstitutionalization and criminalization of the mentally ill, the impact of mental illness on criminal proceedings, treatment/intervention effectiveness, and the reentry/reintegration of mentally ill individuals. Offered Intermittently.
Equivalent: PH 3050

CRJ 3110 Domestic Violence and Criminal Justice Cr. 3
Emotional, physical, and sexual abuse in domestic relationships. Topics include: theories of violence, law, and the response of the justice system. No credit after former CRJ 4750. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

CRJ 3120 Politics of the Criminal Justice Process Cr. 3
Satisfies General Education Requirement: Civic Literacy
Political aspects of criminal justice; politics of crime legislation, police function, prosecution, adjudication, and corrections; Federal role in criminal justice. Offered Intermittently.
Equivalent: PS 3120

CRJ 3200 Police and Society Cr. 3
Overview of policing. Topics include: social and historical origins of policing, police culture, organizational structure of policing, future of policing. No credit after former CRJ 4600. Offered Fall, Winter.

CRJ 3260 Investigation Cr. 3
Overview of the history of criminal investigation, the functions of police investigators, crime scene search and evidence processing, an introduction to criminalistics, locating and interviewing witnesses, examining the elements of proof required in specific criminal offenses and interrogation techniques (pre- and post-Miranda). Offered Every Term.
Prerequisites: CRJ 1010 with a minimum grade of D-

CRJ 3270 Public Safety: sUAS (Drone) Technology Programs Cr. 3
This class focuses on the use of small uncrewed aerial systems (sUAS), generally referred to as drones, within public safety and criminal justice settings. It will examine the evolution of this technology and the types of uses for which sUAS can be employed in public safety and criminal justice settings, as well as the legal, ethical, and privacy issues surrounding the adoption of sUAS programs in criminal justice agencies. Students will also have an opportunity to operate a sUAS / drone in controlled settings. Additionally, students will be prepared to take the FAA's Part 107 Unmanned Aircraft General exam to receive their certificate to become a commercial drone pilot. Offered Yearly.
Fees: $85

CRJ 3350 Corrections Cr. 3
Description and analysis of legal, social and political issues affecting contemporary correctional theory and practice. Topics include: history of corrections, function and social structure of correctional institutions, institutional alternatives including diversion, probation and parole. Field trips to institutions and community correctional settings normally required. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: SOC 3840

CRJ 3400 Juvenile Delinquency and Justice Cr. 3
Overview of the theoretical background, structure, and processes of contemporary juvenile justice, as well as the correlates and characteristics of delinquency. No credit after former CRJ 4410. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

CRJ 3550 Research Methods in Criminal Justice Cr. 3
Overview of research design and methodology; criminal justice data sources; designs for research; and introduction to descriptive and inferential statistics in criminal justice. No credit after former CRJ 4860. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

CRJ 3700 The Judicial Process Cr. 3
Structure, powers, doctrines and judicial processes including origin, nature and functions of judicial review in the criminal justice system. Offered Yearly.
Prerequisite: CRJ 1010 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

CRJ 3710 Legal Writing for Criminal Justice Cr. 3
This course will introduce students to the basic elements of legal writing and research in the American legal system, including use of the law library, case analysis, statutory analysis, constitutional analysis, writing legal memorandum, writing legal briefs, and persuasive writing. Offered Yearly.

CRJ 3800 Criminological Theories Cr. 3
Delineation, review, and critical analysis of major explanations of criminality including biological, psychological, deterrence, rational choice, learning and integrated theories. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

CRJ 3900 Comparative Criminal Justice Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Topics include: the foundation of criminal justice system, crime on the world scene, legal traditions, law enforcement, courts and criminal procedure, corrections, and juvenile justice around the world. Offered Yearly.

CRJ 4220 Criminalistics Cr. 3
Application of the physical and biological sciences to criminal investigation; ballistics, fingerprints, DNA, trace evidence, drugs, arson and explosives, questioned documents, introduction to forensic anthropology, courtroom testimony, ethics. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.

CRJ 4230 Child Abuse and Neglect Cr. 3
Dynamics and psychopathology of child abuse: its incidence and impact on delinquent/criminal behavior, family, community, and the criminal justice system. Offered Intermittently.

CRJ 4700 Criminal Law Cr. 3
This course will offer an examination of the substantive law, or the actual laws that govern the people. Substantive law includes common law and statutory rules, doctrines, and principles of substantive criminal law. Students will learn about development of criminal law, general elements of crime, general defenses, principles of accountability, and particular elements of specific crimes. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

CRJ 4705 Wrongful Conviction and Justice System Error Cr. 3
Covers the criminal justice system correlates, incidence, definitions, and psychological and social consequences of wrongful convictions; exoneree compensation; cognitive biases; wrongful convictions as sentinel events. Topics include mistaken eyewitness identification; false confessions; forensic science issues; incentivized informants; error, misconduct and problems with police, defense attorneys, prosecutors, judges; shortcomings of pre-trial, trial, appellate & post-conviction processes; innocence reforms. Offered Winter.
Prerequisite: CRJ 1010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

CRJ 4740 Constitutional Criminal Procedure Cr. 3
Topics include: constitutional safeguards, role of the Supreme Court, due process, search and seizure of persons and property, self-incrimination and confessions, right to counsel, and pre-trial and trial processes. Offered Yearly.
Prerequisite: CRJ 1010 with a minimum grade of D-
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

CRJ 4970 Internship in Criminal Justice Cr. 3
A program of participation and study designed to give students the opportunity to interact with criminal justice professionals in the workplace. Internship opportunities are available in the courts, corrections, law enforcement, and other agencies. Offered Every Term.
Prerequisites: CRJ 1010 with a minimum grade of D-
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major in Criminal Justice; enrollment is limited to Undergraduate level students.

CRJ 4990 Directed Study Cr. 1-3
Independent reading or research in a particular facet of criminal justice, culminating in an extended paper or research report prepared under direct supervision of faculty. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 3 Credits

CRJ 4998 Honors Thesis in Criminal Justice Cr. 3-6
Research problem to be completed under the direction of a faculty member. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Criminal Justice or Criminal Justice Honors; enrollment is limited to Undergraduate level students.

CRJ 5993 Writing Intensive Course in Criminal Justice Cr. 0
Disciplinary writing assignments under the direction of the instructor for CRJ 3800. Satisfies the University General Education Writing Intensive Course in the Major requirement. Students must submit and endorse the Writing Intensive (CRJ 5993) Contract stating the departmentally-approved requirements of the research writing project. Offered Every Term.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and CRJ 3800 with a minimum grade of D- (may be taken concurrently)
Restriction(s): Enrollment is limited to Undergraduate level students.

CRJ 5994 Dispute Resolution Cr. 3
Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. Offered Yearly.
Equivalent: PCS 5000, PS 5890, PSY 5710

CRJ 5995 Special Topics in Criminal Justice Cr. 3
Selected topics in criminal justice issues. Offered Every Term.
Repeatable for 9 Credits

CRJ 7010 Contemporary Criminal Justice Cr. 3
Survey of classic literature and important contemporary studies of all major facets of criminal justice system, including law, police, prosecution, defense, judiciary, probation, corrections, and parole. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7020 The Nature of Crime Cr. 3
Definition and measure of crime, crime statistics, types of criminal behavior; focus on causes of crime in context of various theoretical perspectives. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7030 Research Methods for Professionals Cr. 3
This course covers research issues in field settings, collecting primary data, utilizing secondary data, policy analysis and program evaluation, writing a research proposal or grant proposal, and the ethics of research. It is designed for students who are looking to understand the fundamentals of research process and activities, including evaluation studies as part of their own professional practice. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7040 Evidence-Based Practices in Criminal Justice Cr. 3
This course covers research and evaluation into what types of interventions and practices used by the police, court, and corrections that have an effect on crime. It is designed for students who are looking to understand the most up-to-date evidence on what works and what doesn't work in criminal justice practices, and the promises and challenges of criminal justice reforms. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7060 Administration in Criminal Justice Cr. 3
This course covers organizational theories and administrative behaviors in criminal justice agencies. It is designed for students who want to learn the latest theory, research and innovative practices related to leadership and management in criminal justice settings. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7200 Public Policy and Criminal Justice Cr. 3
Analysis of interrelationship of criminal justice system components and the political setting surrounding the formulation and administration of public policies for crime control. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7220 Delinquency and Justice Cr. 3
Empirical research on institutions which influence delinquency, including families, peers, and schools. Empirical and conceptual evaluation of delinquency theories; focus on their relationship to juvenile justice and policy. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7230 Policing and Society Cr. 3
Critical examination of role of police in contemporary society. Seminar topics include: history, culture, and social and organizational context of policing; current issues and future directions. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7240 Corrections Cr. 3
Legal, social, and political issues in both institutional and community corrections. Topics may include incarceration trends, penal philosophy, sanctions, community-based corrections, overcrowding, and related issues. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7400 Data Management and Analysis for Criminal Justice Cr. 3
Basic techniques for accessing and managing criminal justice-related data, introduction to quantitative analysis, and introduction to program evaluation. Contemporary data analysis tools in criminal justice. Offered Intermittently.
Prerequisite: CRJ 7860
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7405 Wrongful Conviction Cr. 3
Causes and incidence of wrongful convictions; innocence movement; psychological and social consequences for exonerees and crime victims; exoneree compensation; legal and policy reforms to reduce wrongful convictions in policing, forensic science, prosecution, and adjudication. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7860 Research Methods in Criminal Justice Cr. 3
Focus on logic of research designs, sampling techniques, data collection, instrument construction, available data sources in the field of criminal justice. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7870 Master's Capstone Seminar in Criminal Justice Cr. 3
Students write essays demonstrating their knowledge and critical analysis of criminological and criminal justice theory, research methods, and public policy issues. Offered Fall, Winter.
Prerequisite: CRJ 7010 with a minimum grade of B- and CRJ 7020 with a minimum grade of B- and CRJ 7860 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 7990 Directed Study Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 3 Credits

CRJ 7995 Special Topics in Criminal Justice and Criminology Cr. 3
Specialized topics in criminal justice. Topics may vary from semester to semester. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CRJ 7999 Master's Essay Direction Cr. 3
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

CRJ 8999 Master's Thesis Research and Direction Cr. 3,6
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

CSC - Computer Science

CSC 1000 Introduction to Computer Science Cr. 3
Provides an overview of current computing technology, organization, and use. Topics surveyed include data representation and storage, hardware and software organization, communications technologies, ethical and security issues. Provides hands-on training in common application software, such as word processing, spreadsheets, presentation, as well as in electronic telecommunications, such as e-mail, Internet and database searches. The University database and Internet pages are emphasized. Offered Fall, Winter.
Fees: $35

CSC 1001 Artificial Intelligence Literacy Cr. 3
This course introduces students to the fundamentals of artificial intelligence (AI), including how AI systems work, their applications, and their ethical implications. No prior programming experience is required. Topics will include Introduction to AI; Machine Learning Basics; Generative AI; Applications of AI; Ethics and Society and Future of AI. Offered Every Term.

CSC 1002 Personal Digital Security Cr. 3
Students learn how to reduce exposure to risks and how to identify, assess and repair infected devices. Offered Every Term.

CSC 1050 Introduction to C and Unix Cr. 2
Introduction to Unix, Unix editor, and C Programming Language. Unix development tools and fundamentals of C language discussed. No credit for computer science students after CSC 1100. Offered Every Term.
Prerequisites: MAT 1800 with a minimum grade of C- or MAT 2010-6999 with a minimum grade of C- (may be taken concurrently)
Fees: $35

CSC 1100 Problem Solving and Programming Cr. 4
Problem solving with algorithms, and their realization as computer programs using a structured, general purpose programming language; data types, operators, expressions, assignment, input and output, selection and repetition control structures; modularity and procedural abstraction using functions with parameters; structured data types, arrays, pointers and strings. No credit after CSC 2000. Offered Every Term.
Prerequisites: BE 1600 with a minimum grade of C- and (MAT 1800 with a minimum grade of C- or MAT 2010-6999 with a minimum grade of C- (may be taken concurrently))
Fees: $35

CSC 1500 Fundamental Structures in Computer Science Cr. 4
Introduction to fundamental control and data structures in computer science such as algorithms and complexity; recursive algorithms; program correctness using the predicate calculus; reasoning about algorithms using mathematical induction; divide and conquer algorithms; recurrence relations; set properties and their computation; and computing with relations. Graph properties and their computation, and tree properties and their computation, will be covered if time permits. Offered Every Term.
Prerequisites: CSC 1100 with a minimum grade of C and MAT 2010 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Computer Technology, Computer Science, Computer Science Honors, Computer Technology Honors, Information Systems Technology or Information Technology.
Fees: $35

CSC 2000 Introduction to C++ Programming Language Cr. 3
Elements of C++; arrays, pointers and references; operators; classes and objects. No credit after CSC 1100 and CSC 1101. Offered Every Term.
Fees: $35

CSC 2110 Computer Science I Cr. 4
Rigorous introduction to fundamental object-oriented concepts and techniques of computer programming using an object-oriented language. Introduction to data abstraction; design of abstract data types. Introduction to recursion; programming with generic data types; inheritance; polymorphism; and exception handlers. Concepts applied to console programs and event-driven programming using a simple graphics API. Offered Every Term.
Prerequisites: CSC 1100 with a minimum grade of C and MAT 2010 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Computer Technology, Computer Science, Computer Science Honors, Computer Technology Honors, Information Systems Technology, Information Technology or Information Technology Honors.
Fees: $35

CSC 2200 Computer Science II Cr. 4
Design and implementation of fundamental abstract data types of computer science (such as stacks, queues, trees, lists, hashing, and graphs), using an object-oriented language. Programming requirements include the implementation of abstract data types using arrays and dynamic links; recursion; sorting and searching; hashing; and string processing. Introduction to algorithm analysis. Offered Every Term.
Prerequisites: CSC 1500 with a minimum grade of C, CSC 2110 with a minimum grade of C, MAT 2010 with a minimum grade of C-, and BE 1200 with a minimum grade of C-
Fees: $35

CSC 3010 Ethics in Computer Science Cr. 3
Students will study the ethical and legal issues that arise with the usage and development of computing technology. Students will learn the responsibilities of the computer professionals and how to make appropriate decisions when faced with legal and ethical issues in computing. Offered Every Term.
Prerequisites: CSC 2110 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Computer Science, Computer Science Honors, Information Technology or Information Technology Honors.

CSC 3020 Java Programming Cr. 3
Introduction to the fundamentals of programming using Java. Topics include: object-oriented programming, classes, constructors, flow control statements, data types, methods, inheritance, data hiding, abstraction, exceptions, file I/O, Java GUI, and Java packages. Offered Every Term.
Prerequisites: (MAT 1800 with a minimum grade of C-, MAT 2010 with a minimum grade of C-, or MAT 2020 with a minimum grade of C-) and CSC 2110 with a minimum grade of C

CSC 3100 Computer Architecture and Organization Cr. 4
Organization and architecture of computer systems. Topics include: digital logic and digital systems; machine-level representation of data and programs; assembly level machine organization and programming; register-level description of computer execution and the functional organization of a computer; role and function of programming languages, libraries and operating systems; performance evaluation; systems programming. Offered Every Term.
Prerequisites: CSC 2200 with a minimum grade of C and MAT 2010 with a minimum grade of C-
Fees: $35

CSC 3110 Algorithm Design and Analysis Cr. 3
Formal techniques to support design and analysis of algorithms: underlying mathematical theory and practical considerations of efficiency. Topics include asymptotic complexity bounds, techniques of analysis, algorithmic strategies, advanced data and file structures, and introduction to automata theory and its application to language translation. Offered Every Term.
Prerequisites: BE 2100 with a minimum grade of C-, CSC 1500 with a minimum grade of C, CSC 2200 with a minimum grade of C, MAT 2250 with a minimum grade of C-, and MAT 2020 with a minimum grade of C-

CSC 3200 Programming Languages Cr. 3
History and overview of programming languages, virtual machines, representation of data types; sequence control; data control, sharing and type checking; run-time storage management; language translation systems; programming language semantics; programming paradigms. Offered Yearly.
Prerequisites: CSC 2200 with a minimum grade of C- and MAT 2010 with a minimum grade of C-

CSC 3400 Human-Computer Interaction Cr. 3
User interface design, usability, evaluation, user-centered design. Offered Intermittently.
Prerequisites: CSC 2110 with a minimum grade of C
Fees: $10

CSC 3750 Introduction to Web Technology Cr. 3
Understanding the Internet using several access methods; required software and tools. Topics include: e-mail, FTP, Telnet, Gopher, Archie, Newsgroups, WWW, HTML, CGI and PHP scripting and how to create an active web site. Laboratory exercises required. No credit after CSC 5750. Offered Fall, Winter.
Prerequisites: CSC 1100 with a minimum grade of C

CSC 4110 Software Engineering Cr. 4
Software life cycle; software requirement analysis; software system design; software implementation and testing; software maintenance; team programming; ethics and programmers. Offered Every Term.
Prerequisites: CSC 2200 with a minimum grade of C, CSC 3020 with a minimum grade of C-, and (MAT 2010 with a minimum grade of C- or MAT 3430 with a minimum grade of C-)
Fees: $45

CSC 4190 Computer Network Systems and Applications Cr. 3
With no prior networking knowledge required, this course provides a full overview of computer networking from a systems perspective. The lectures will be organized in a bottom-up approach to cover different layers of network design, from low-level operational functions to high-level applications, including physical layer, LAN, wireless, routing, TCP/IP and HTTP, etc. Moreover, you will learn socket programming for data communication. Offered Yearly.
Prerequisite: CSC 2110 with a minimum grade of C and CSC 4320 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Information Technology or Information Technology Honors.

CSC 4290 Introduction to Computer Networking Cr. 3
Introduction of topics such as network architecture, multiple access control, packet switching, routing and flow control, congestion control and quality-of-service, Internet protocols, and elements of distributed computing. Offered Yearly.
Prerequisites: CSC 2200 with a minimum grade of C- and CSC 3100 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

CSC 4310 IT Software Management Cr. 3
Covers 12 disciplines of systems management in the approximate order in which they became prevalent and integral to an infrastructure's operation. In doing so, it will cover the people, process, and technology aspects of systems management. The people discussion shows the importance of executive support, customer service, and other management aspects of delivering and supporting IT services. The process issues of systems management are addressed through study of IT infrastructure library (ITIL) processes. The technology aspect covers several key developments that enable these disciplines to be implemented more productively including process automation. Offered Every Term.
Prerequisites: CSC 2110 with a minimum grade of C

CSC 4320 Systems Administration Cr. 3
Deployment and maintenance of modern computer systems in an operational environment. Conceptual knowledge and practical experience. Topics include: architectures, heterogeneous systems, authentication and security, network services including firewalls, storage services, performance analysis and tuning, management and configuration of services and system resources, system initialization, drivers, cross-platform services, policies and procedures. Offered Every Term.
Prerequisites: CSC 2110 with a minimum grade of C

CSC 4330 Mobile Application Development Cr. 3
Covers the primary aspects of application development for mobile devices running the Android operating system. Offered Every Term.
Prerequisites: CSC 2110 with a minimum grade of C and CSC 3020 with a minimum grade of C-

CSC 4420 Computer Operating Systems Cr. 4
Operating system services; file systems; CPU scheduling; memory management; virtual memory; disk scheduling; deadlocks; concurrent processes. Offered for undergraduate major credit only. Offered Every Term.
Prerequisites: CSC 2200 with a minimum grade of C and CSC 3100 with a minimum grade of C-
Fees: $35

CSC 4500 Introduction to Theoretical Computer Science Cr. 3
Finite automata and regular expressions; context-free grammars; pushdown automata; Turing machines; hierarchy of formal languages and automata; computability and decidability. Offered Every Term.
Prerequisites: (CSC 2200 with a minimum grade of C or CSC 5050 with a minimum grade of C) and MAT 2010 with a minimum grade of C-

CSC 4710 Introduction to Database Management Systems Cr. 3
Topics include: database concepts, ER modeling, schemas and constraints, SQL and relational algebra, web-based database applications, triggers and views, physical organization and indexing, query processing, query optimization, NoSQL databases. Offered Every Term.
Prerequisites: CSC 2200 with a minimum grade of C and CSC 3020 with a minimum grade of C-

CSC 4760 Introduction to Deep Learning Cr. 3
In this course, we will first introduce some machine learning principles, which can help us to understand how computer systems can learn something from experience. Based on this, we will discuss the topics related to deep neural networks including the basic concepts and advanced techniques. We will introduce deep learning based applications, such as representations learning for high-dimensional data, such as 3D shapes, images, and text. Moreover, we will discuss recent models for both supervised and unsupervised learning. Special emphasis will be on convolutional architectures, recurrent architectures, and different kinds of losses, unsupervised learning strategies and optimization. Offered Winter.
Prerequisites: CSC 2200 with a minimum grade of C and BE 2100 with a minimum grade of C-

CSC 4860 Introduction to Computer Vision Cr. 3
This course provides an introduction to computer vision, including fundamentals of image formation, camera imaging geometry, feature detection and matching, object detection, stereo, motion estimation and tracking, image classification, scene understanding, and some deep learning with neural networks. Offered Yearly.
Prerequisites: CSC 2200 with a minimum grade of C

CSC 4990 Directed Study Cr. 1-4
Individual study as agreed on by student and supervising faculty. Primarily for material not covered in regular courses. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 8 Credits

CSC 4992 Special Topics in Computer Science Cr. 1-3
Topics to be announced in the Schedule of Classes. Maximum of six credits may be applied toward satisfying the computer science elective, in any computer science degree program. Offered Yearly.
Prerequisite: CSC 2110 with a minimum grade of C
Fees: $35
Repeatable for 12 Credits

CSC 4995 Professional Practice in Computer Science Cr. 1
Review of computer science practical experiences resulting from participation in the cooperative work-study program. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.
Repeatable for 4 Credits

CSC 4996 Senior Capstone Project Cr. 4
Development of skills for planning, managing, implementing, and documenting complex software projects. Project management techniques; software development teams; data management, privacy, and security. Offered Fall, Winter.
Prerequisites: CSC 3110 with a minimum grade of C-, CSC 4110 with a minimum grade of C-, CSC 4420 with a minimum grade of C- (may be taken concurrently), CSC 4710 with a minimum grade of C-, and ENG 3060 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Computer Science, Computer Science Honors or Information Systems Technology.
Fees: $35

CSC 4999 Honors Thesis Cr. 3-6
Independent study under supervision. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Senior.

CSC 5050 Algorithms and Data Structures Cr. 3
Introduction to problem solving methods and algorithm development; data abstraction for structures such as stacks, queues, linked lists, trees, and graphs; searching and sorting algorithms and their analysis. Not for CSC major credit. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CSC 5100 Introduction to Mobility Cr. 3
Introduces mobility through giving students a comprehensive understanding of state-of-the-art engineering practices used in the autonomous vehicle industry. Students will get to interact with real data sets from an autonomous vehicle, all through hands-on projects using the open source autonomous driving simulator. Students will hear from industry experts, who work at companies like Ford and GM as they share insights about autonomous technology and how that is powering job growth within the field. Students will also be introduced to the general terminology, design considerations and smart infrastructures on mobility. Offered Winter.
Prerequisites: CSC 3100 with a minimum grade of C- and CSC 3110 with a minimum grade of C-

CSC 5120 Foundations of Artificial Intelligence Cr. 3
This course introduces the foundational concepts of artificial intelligence (AI) for students without a computer science background. Topics include AI history, terminology, major paradigms (machine learning, generative AI), and applications across disciplines. The course emphasizes understanding capabilities, limitations, and responsible use of AI technologies. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

CSC 5172 Programming Foundations for Cyber Security Cr. 3
This course is designed to help students understand how various programming languages are used to support cybersecurity across Linux, macOS, and Windows. The main languages used will be Shell Scripting, PowerShell, and Python. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Post Masters, Graduate Certificate, Specialist, Junior, Senior or Post Bachelor.

CSC 5250 Network, Distributed, and Concurrent Programming Cr. 3
Fundamental concepts and skills of developing networked, distributed, and concurrent applications. Topics include: inter-process communication, TCP/IP sockets programming, remote method invocation, multithreading, concurrency and synchronization. Offered Yearly.
Prerequisites: CSC 4420 with a minimum grade of C-

CSC 5270 Computer Systems Security Cr. 3
Fundamental technologies for enabling an e-society which is more predictable, more accountable, and less vulnerable to attacks. Covers three components: security requirements and protocols, cryptography algorithms, and case studies. Offered Fall.
Prerequisites: CSC 5250

CSC 5272 Principles of Cyber Security Cr. 3
This course addresses the broad range of industry's best practices, knowledge, and skills expected of an IT security manager or officer. Students will learn both the theory and the requirements for practical implementation of core security concepts, practices, monitoring, and compliance. Students will also learn to identify and implement cost-effective security controls that align closely with business requirements and industry standards. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Post Masters, Graduate Certificate, Specialist, Junior, Senior or Post Bachelor.

CSC 5276 Unix Security and Shell Programming Cr. 3
This course will feature advanced Linux shell scripting which will show students how to automate specific tasks within the system while also safeguarding against bad actors from compromising the environment. This class will focus on the BASH and Bourne shells with an emphasis on learning SED, AWK and other powerful tools. The class will analyze system threats utilizing the latest in log management. Offered Yearly.
Prerequisites: CSC 5272 with a minimum grade of C-

CSC 5278 Web Security: Hacking and Defense Cr. 3
This course introduces students to web application threats both internally and externally. Malicious code can enter a system from many avenues and attackers. The students will learn both offensive and defensive strategies to thwart a verity of attacks like an SQL Injection, Cross-site Scripting (XSS), Cross Site (CSRF) and Server Side Request Forgery(SSRF). The student's will be using industry best practices tools like BurpSuite, Wireshark, wpscan, sqlmap, RainbowCrack and Zap. The goal of the course is to learn how to make the target surface as small as possible while not impeding the throughput of the data while keeping critical infrastructure operational. Offered Yearly.
Prerequisites: CSC 5272 with a minimum grade of C-

CSC 5280 Introduction to Cyber-Physical Systems Cr. 3
Modeling, design, analysis, and implementation of cyber-physical systems; dynamic behavior modeling, state machine composition, and concurrent computation; sensors and actuators; embedded systems and networks; feedback control systems; temporal logic and model checking. Offered Yearly.
Prerequisites: CSC 2200 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: ECE 5280

CSC 5290 Cyber Security Practice Cr. 3
This course introduces students to a broad range of security challenges in real-world computer and networked systems, with a strong emphasis on hands-on practice. Students will work directly with industry-relevant security tools to see how real-world attacks are carried out and how effective defenses are built. In a controlled laboratory environment, they will experiment with both offensive and defensive techniques using real-world exploits and protection mechanisms. Through a sequence of lab assignments and a focused term project, students will develop practical, in-depth expertise in modern cybersecurity applications. Offered Every Term.
Prerequisites: CSC 5272 with a minimum grade of C- or CSC 4420 with a minimum grade of C-

CSC 5372 Digital Forensics Cr. 3
Digital Forensics and Incident Response (DFIR) is essential for understanding how intrusions occur, uncovering malicious behavior, explaining exactly "what happened", and restoring integrity across digital environments. DFIR combines cybersecurity, threat hunting, and investigative techniques to identify, analyze, respond to, and proactively hunt cyber threats and criminal activity. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Post Masters, Graduate Certificate, Specialist, Junior, Senior or Post Bachelor.

CSC 5430 Game Programming and Design I Cr. 3
Fundamentals of game programming and game design using C++, DirectX, Windows, and C#. Offered Fall.
Prerequisites: CSC 2200 with a minimum grade of C or CSC 5250 with a minimum grade of C-
Corequisite: CSC 5431

CSC 5431 Game Programming and Design I: Lab Cr. 1
Laboratory for CSC 5430. Focus on modding, or making changes to existing programs to achieve specific results. Offered Fall.
Corequisite: CSC 5430
Fees: $25

CSC 5472 Ethical Hacking Cr. 3
This course will feature advanced Linux shell scripting and demonstrate its use. This course introduces hacking tools, techniques, and incident handling. Areas of instruction include an evolution of hacking and penetration testing; a review of Transmission Control Protocol/Internet Protocol (TCP/IP), the basics of cryptology for information security; footprinting; vulnerability scanning and exploits; web, database, and wireless attacks; malware and system exploits; traffic analysis; incident response; and defensive technologies and controls. In this course, students will learn how to discover vulnerabilities, attack and defend systems, respond to attacks, and identify and design controls to prevent future attacks. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Post Masters, Graduate Certificate, Specialist, Junior, Senior or Post Bachelor.

CSC 5750 Principles of Web Technology Cr. 3
History and development of the world-wide web. Techniques for authoring static and dynamic content for the world-wide web. Web security techniques. Electronic commerce on the web. Lab exercises required. Offered Fall, Winter.
Prerequisites: MAT 2010 with a minimum grade of C- and CSC 3750 with a minimum grade of C-

CSC 5800 Intelligent Systems: Algorithms and Tools Cr. 3
Introduction to basic algorithms and software tools for intelligent data representation and analysis, including: data pre-processing, data exploration and visualization, model evaluation, predictive modeling, classification methods, association analysis, clustering, anomaly detection, representing extracted patterns as expertise, tools for data mining and intelligent systems such as WEKA, CLIPS, and MATLAB. Offered Intermittently.
Prerequisites: (CSC 2200 with a minimum grade of C and MAT 2010 with a minimum grade of C-) or (CSC 5050 with a minimum grade of C and MAT 2010 with a minimum grade of C-)

CSC 5810 Introduction to Large Language Models Cr. 3
This course provides a fundamental understanding of the Large Language Models (LLMs). The course will be split into three parts. In the first part, we will cover the underlying architectures utilized in modern day LLMs starting from Transformers that later evolved to GPT models. In the second part, the students will learn techniques and algorithms utilized to pretrain and fine-tune LLMs for task-specific purposes. And in the third part, we will discuss inherent challenges and limitations of LLMs and how to circumvent some of them, including, bias and fairness issues, misinformation and hallucinations, ethical concerns and data privacy issues. The course will conclude with students working on a project on an advance topic pertaining to LLMs and presenting their findings to the class. Offered Winter.
Prerequisites: CSC 2200 with a minimum grade of C

CSC 5825 Introduction to Machine Learning and Applications Cr. 3
Through algorithmic investigation, brainstorming, and case analysis, students develop the skills and strategies that are necessary for effective leaning from data, including Big Data emerging from science and engineering. Offered Fall.
Prerequisites: CSC 2200 with a minimum grade of C

CSC 5830 Computational Modeling of Complex Systems Cr. 3
Introduction to computer methods useful for modeling complex systems which are refractory to traditional methods of analysis. Emphasis on problem formulation and concrete examples drawn from computer science, engineering, chemistry, and biology. Offered Yearly.
Prerequisites: CSC 2200 with a minimum grade of C or CSC 5050 with a minimum grade of C-

CSC 5870 Computer Graphics Cr. 3
This course gives a comprehensive overview of the field of computer graphics, and covers the basic concepts, mathematical foundations, fundamental theory and algorithms, software techniques, hardware and system issues, and application examples of computer graphics. The main topics will center on contemporary graphics hardware and APIs, geometric primitives, 2D and 3D transformations, viewing pipelines, clipping, modeling and rendering of 3D objects, camera and projection techniques, visibility and hidden-surface removal, shading, lighting, color theory, and texture mapping. Programmable graphics pipelines, shader-based rendering, and real-time graphics programming are introduced, with modern applications including interactive graphics, simulation, game rendering engines, and GPU computing. A brief overview of various advanced computer graphics research topics will be introduced. Offered Yearly.
Prerequisites: CSC 2200 with a minimum grade of C

CSC 5991 Special Topics in Computer Science Cr. 1-4
Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: CSC 2200 with a minimum grade of C
Repeatable for 9 Credits

CSC 6100 Essential Data Skills for Artificial Intelligence Cr. 3
This course introduces essential data skills required for working with artificial intelligence systems. Students learn how data is structured, cleaned, and analyzed using beginner-friendly tools such as Python, Jupyter Notebooks, Pandas, and basic visualization techniques. Emphasis is placed on data quality, interpretation, and practical use in AI applications. Offered Yearly.
Prerequisite: CSC 5120 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 6110 Software Engineering Cr. 3
Software process models; advanced software system design; software project management; software analysis; testing and performance analysis; software maintenance; reverse engineering; software reuse; software metrics; object-oriented development. Offered Yearly.
Prerequisites: (CSC 2200 with a minimum grade of C and MAT 2010 with a minimum grade of C-) or (MAT 2010 with a minimum grade of C- and CSC 5050 with a minimum grade of C-)

CSC 6200 Generative AI and Large Language Models Cr. 3
This course introduces generative AI and large language models (LLMs), focusing on practical use and application. Students learn prompt engineering, retrieval-augmented generation (RAG), and AI-assisted workflows using modern tools such as Hugging Face and PyTorch (at a conceptual level). Offered Yearly.
Prerequisite: CSC 6100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 6220 Parallel Computing I: Programming Cr. 3
Parallel computing concepts, examples of parallel computers, parallelism in algorithms / data / programs, experiences with state of the art parallel computers. Offered Yearly.
Prerequisites: (CSC 2200 with a minimum grade of C and CSC 5050 with a minimum grade of C) or CSC 3100 with a minimum grade of C-

CSC 6272 Malware and Reverse Engineering Cr. 3
This course will equip students with the necessary background knowledge to become effective Malware Analysis and Reverse Engineering practitioners. The students will learn techniques on how to detect and dissect code with the goal of finding out exactly what the program is doing down to the byte level. The students will gain knowledge on how to handle Command and Control type of Ransomware along with viruses that are intended to take down critical infrastructure. The students will learn how to combat malware and viruses by using tools like Olydbg, Ghidra, Radare2 and NASM Shell. These programs will allow the students to view the payloads of the latest real-world malware. The students will also and gain an understanding of how industry best practices on how an attacker has spread the code and most of all, eradicate them. Offered Yearly.
Prerequisites: CSC 5272 with a minimum grade of C-

CSC 6274 Certified Penetration Testing Cr. 3
The ethical behavior expected of a cyber penetration tester is emphasized. Several applicable codes of ethics will be reviewed. Students are expected to abide by these codes of ethics, both during this course, and after the course is completed. The student will learn the business skills needed to identify protection opportunities, to justify testing activities, and to help the client organization better combat cyber threats. The student will gain deeper insight into industry best practices. Offered Yearly.
Prerequisites: CSC 5272 with a minimum grade of C-

CSC 6280 Real-Time and Embedded Operating Systems Cr. 3
Operating system design for real-time and embedded systems. Focus on scheduling, synchronization, communication, and process and memory management for time-critical and resource-constrained applications. Offered Every Other Year.
Prerequisites: CSC 4420 with a minimum grade of C-

CSC 6290 Data Communication and Computer Networks Cr. 3
Data communication fundamentals and principles governing computer communication networks. Components of networks, how they are connected; basics of design and implementation of network protocols. Offered Yearly.
Prerequisites: CSC 5250

CSC 6430 Game Programming and Design II Cr. 3
Game design methods, team development, languages for game design, debugging and testing, game platforms, memory management and I/O, game physics, character animation, AI agents, AI path programming, networking, online and multiplayer gaming. Offered Yearly.
Prerequisites: CSC 5430 with a minimum grade of C- and CSC 5431 with a minimum grade of C-
Corequisite: CSC 6431

CSC 6431 Game Programming and Design II: Lab Cr. 1
Architecture and tools for modern game platforms. Game development environment; basic aspects of game engine design, graphics engine design, use of shaders. Offered Yearly.
Corequisite: CSC 6430
Fees: $25

CSC 6500 Theory of Languages and Automata Cr. 3
Recursive and recursively enumerable languages; decidability and computability; Rice's theorem; time complexity; space complexity. Offered Fall, Winter.
Prerequisites: CSC 4500 with a minimum grade of C-

CSC 6580 Design and Analysis of Algorithms Cr. 3
Best case, worst case, and expected case complexity analysis; asymptotic approximations; solutions of recurrence equations; probabilistic techniques; divide-and-conquer; the greedy approach; dynamic programming; branch and bound; NP-completeness; parallel algorithms. Offered Fall, Winter.
Prerequisites: CSC 3110 with a minimum grade of C-

CSC 6620 Matrix Computation I Cr. 4
Background matrix algebra; linear system sensitivity; basic transformations; Gaussian elimination; symmetric systems; positive definite systems; Householder method for least squares problems; unsymmetric eigenvalue problems; the QR algorithm. Offered Yearly.
Prerequisites: (CSC 2200 with a minimum grade of C and MAT 2250 with a minimum grade of C-), ECE 3440 with a minimum grade of C-, or BE 2550 with a minimum grade of C-

CSC 6710 Database Management Systems I Cr. 3
Data models, normal forms, relational systems and SQL, query optimization, object-oriented systems, object-relational systems, student Oracle project. Offered Yearly.
Prerequisites: CSC 4710 with a minimum grade of C-

CSC 6800 Artificial Intelligence I Cr. 3
Basic concepts; topics include: recursive problem solving, knowledge representation using semantic networks and frames, state space search methods, planning and problem solving, game playing and adversarial search methods, rules and production systems (RETE networks), constraint satisfaction techniques and applications, optimization algorithms including genetic algorithms, logic programming. Implementation in Lisp and Prolog. Offered Yearly.
Prerequisites: CSC 3110 with a minimum grade of C-

CSC 6860 Digital Image Processing and Analysis Cr. 3
Review of image formation and acquisition; image transformation; image enhancement and restoration; image compression; morphological image processing; edge detection and segmentation; architecture for image processing. Offered Intermittently.
Prerequisites: CSC 3110 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.

CSC 6991 Topics in Computer Science Cr. 1-4
Current topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: CSC 2200 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.
Repeatable for 9 Credits

CSC 6995 Internship in Computer Science Cr. 1-3
Experience in industry using tools from the computer science curriculum. Students provide a written report based on the internship experience. Offered Every Term.
Repeatable for 6 Credits

CSC 7120 AI Strategy, Deployment, and Ethics Cr. 3
This course examines how AI is deployed in organizations and the associated ethical, legal, and strategic considerations. Students learn how to evaluate AI use cases, understand governance frameworks, and communicate AI-related risks and outcomes. Offered Yearly.
Prerequisite: CSC 6200 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7220 Parallel Computing II: Algorithms and Applications Cr. 3
Problems in parallel algorithms: design, analysis, complexity. Cluster and grid computing: tools, programming, and applications. Offered Yearly.
Prerequisite: CSC 6220 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7260 Distributed Systems Cr. 3
Models of distributed systems, distributed synchronization, algorithms, consistency and replication models and algorithms, fault-tolerance in distributed systems. Offered Every Other Year.
Prerequisite: CSC 5250 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7270 Advanced Computer Security Cr. 3
Advanced topics in protecting information computer systems and data. Topics include, but are not limited to, crypto-algorithms and protocols (e.g., IDEA, Elliptic Curve Cryptosystems, and the Byzantine Generals Problem), and secure system design principles. Hands-on design project will reinforce the material. Offered Winter.
Prerequisite: CSC 5270 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

CSC 7272 Malware and Reverse Engineering Cr. 3
This course will equip students with the necessary background knowledge to become effective practitioners in Malware Analysis and Reverse Engineering. The students will learn techniques for detecting and dissecting code to determine exactly what the program is doing at the byte level. The students will learn how to handle Command-and-Control ransomware and viruses intended to take down critical infrastructure. The students will also gain an understanding of industry best practices for how an attacker has spread the code and, most of all, eradicate it. Offered Yearly.
Prerequisite: CSC 5472 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7290 Advanced Computer Networking Cr. 3
Foundations of computer networking (e.g., performance evaluation and analysis, protocol specification and verification), latest development in network architecture and technology (e.g., wireless networks, sensor networks, peer-to-peer networks, vehicular networks). Offered Yearly.
Prerequisite: CSC 6290 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

CSC 7300 Bioinformatics I: Biological Databases and Data Analysis Cr. 3
Concepts of bioinformatics; tools for storing and analysis of bioinformatics data. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7301 Bioinformatics I: Programming Lab Cr. 1
Hands-on experience and exercises for CSC 7300/MBG 7300 lectures. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

CSC 7410 Bioinformatics II Cr. 4
Biology of bioinformatics, DNA and protein sequencing, introduction of systems biology, mRNA expressions analysis, pathway and molecular machines analysis. Offered Winter.
Prerequisite: CSC 7300 with a minimum grade of C and CSC 7301 with a minimum grade of C and MGG 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7710 Database Management Systems II Cr. 3
Concurrency control, transaction processing, crash recovery, security, distributed and heterogeneous databases, data warehousing, data mining, multimedia systems, student Oracle project. Offered Yearly.
Prerequisite: CSC 6710 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7760 Deep Learning Cr. 3
Covers the basics of deep neural networks and their applications in various AI tasks. Students will gain a considerable understanding regarding the subject and be able to apply Deep Learning to a range of problems. They will also be positioned to understand the current literature on the topic and extend their knowledge through further study. The following topics will be covered: Feed-forward Deep Neural Networks, Regularizations, Optimization methods, Convolutional Neural Networks, Sequence Modeling: Recurrent and Recursive Networks, Autoencoders and Generative Adversarial Networks and Applications in Object Detection, Natural Language Processing, Relational Reasoning, and Spatial-temporal and Graph Modelling. Programming tutorials on Python, Jupyter, TensorFlow, and Keras will also be provided. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7800 Artificial Intelligence II Cr. 3
Advanced topics from these areas: machine learning techniques (inductive and deductive), neural networks and perceptrons, genetic algorithms, advanced concepts in knowledge-based system design, inexact inference, constraint satisfaction techniques and applications, object-oriented programming. Implementation in Lisp and Prolog. Offered Yearly.
Prerequisite: CSC 6800 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7810 Data Mining: Algorithms and Applications Cr. 3
Application of various basic/advanced data mining techniques to real-world problems. Offered Winter.
Prerequisite: CSC 5800 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IE 7811

CSC 7825 Machine Learning Cr. 3
Supervised learning including regression, kernel-based, tree-based, probability model based and ensemble learning; unsupervised learning including distance based and model based; Markov Chain Monte Carlo (MCMC) methods; graphical models; current topics from literature. Offered Winter.
Prerequisite: CSC 5825 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 7990 Directed Study Cr. 1-5
Provides students with an opportunity to explore topics or areas of interest not covered in the standard curriculum. Provides more flexible and personalized instruction, allowing students to work closely with a faculty member. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CSC 7991 Advanced Topics in Computer Science Cr. 1-4
Topics to be announced in the Schedule of Classes. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CSC 8260 Seminar in Networking, Distributed Systems and Parallel Systems Cr. 3
Discussion of current research papers in the fields. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CSC 8710 Seminar in Database Management Systems Cr. 3
Discussion of current papers in the field. Offered Every Other Year.
Prerequisite: CSC 6710
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CSC 8800 Seminar in Machine Learning and Artificial Intelligence Cr. 3
Discussion of current papers in the field. Prospective students should have a solid understanding of machine learning models, optimization algorithms and the underlying mathematics/programming background. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CSC 8860 Seminar Topics in Computer Vision and Pattern Recognition Cr. 3
Discussion of current papers in the field. Offered Every Other Year.
Prerequisite: CSC 7860 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

CSC 8990 Graduate Seminar Cr. 1
Discussion of current research by faculty and visitors. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

CSC 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

CSC 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

CSC 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

CSC 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: CSC 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

CSC 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: CSC 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

CSC 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: CSC 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

CSC 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

CTE - Career and Technical Education

CTE 5401 Instructional Practices for the Career and Technical Education Classroom: Module 1 Cr. 1
The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews the history of CTE and its impact on industry. Offered Every Term.

CTE 5402 Instructional Practices for the Career and Technical Education Classroom: Module 2 Cr. 1
This is Module Two of a six (6) module series. The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews MCCTE Navigator standards and their relationship to industry expectations. Offered Every Term.

CTE 5403 Instructional Practices for the Career and Technical Education Classroom: Module 3 Cr. 1
This is Module Three of a six (6) module series. The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews mastery-learning, performance-based and project-based instructional strategies in the CTE classroom. Offered Every Term.

CTE 5404 Instructional Practices for the Career and Technical Education Classroom: Module 4 Cr. 1
This is Module four of a six (6) module series. The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews assessment strategies in the CTE classroom. Offered Every Term.

CTE 5405 Instructional Practices for the Career and Technical Education Classroom: Module 5 Cr. 1
This is Module five of a six (6) module series. The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews Career Technical Student Organization (CTSO) and industry partner relationships. Offered Every Term.

CTE 5406 Instructional Practices for the Career and Technical Education Classroom: Module 6 Cr. 1
This is Module six of a six (6) module series. The series is specifically for students seeking a vocational endorsement to teach in federally funded, secondary CTE classrooms. This module reviews strategies for remaining current with industry and teaching profession trends. Offered Every Term.

CTE 6010 History and Principles of Career and Technical Education Cr. 3
Overview of organization and administration at the federal, state, and local levels. Recent developments and their significance for school reform and improvement; business and industry linkages. Offered Yearly.

CTE 8998 Current Issues and Trends Cr. 3
Place, function, and evolving concepts of career and technical education. Economic, sociological, psychological, and technical factors. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

DNC - Dance

DNC 0512 Pilates Equipment Lab Cr. 0
Individual study in Pilates lab. Offered Fall, Winter.
Prerequisites: DNC 5110 or DNC 1305
Restriction(s): Enrollment is limited to students with a major in 2nd Dance, Dance or Dance Honors.

DNC 1010 Introduction to Contemporary Dance Cr. 2
Basic movement techniques and improvisational experiences in concert dance; films and concert viewing. Offered Every Term.
Fees: $85

DNC 1020 Contemporary Dance I Cr. 2
Draws from a broad range of classical Modern dance techniques, such as Horton and Graham, as well as from somatic practices and urban contemporary dance styles, in order to develop the vocabulary, skills, physical and mental awareness of a beginning dancer. Offered Every Term.
Fees: $60
Repeatable for 6 Credits

DNC 1210 Fundamentals of Classic Ballet I Cr. 2
Introduction to the fundamentals of classical ballet; emphasis on vocabulary, theory and practice, including films and concert viewing. Offered Every Term.
Fees: $60
Repeatable for 8 Credits

DNC 1220 Fundamentals of Classic Ballet II Cr. 2
Continuation of DNC 1210. Offered Every Term.
Fees: $60
Repeatable for 8 Credits

DNC 1300 Pilates Conditioning for Performing Artists Cr. 2
An Introduction to Pilates principles and conditioning methods for dance and theatre artists. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Dance, Dance Honors, Theatre or Theatre Honors.
Fees: $40
Repeatable for 4 Credits

DNC 1305 Pilates Reformer for Dancers Cr. 1
Continuation of DNC 1300; Pilates equipment training specifically for dancers. Offered Winter.
Prerequisites: DNC 1300 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Dance or Dance Honors.
Fees: $60

DNC 1330 Production Practicum Cr. 2
Introductory technical production experience supporting concert dance performances; skill development in stage management, lighting and sound operation, videography, and stage crew responsibilities; part of Digital Dance Literacy curriculum. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $85
Repeatable for 99 Credits

DNC 1810 Introduction to Dance Professions Cr. 3
Survey of dance professions in administration, teaching, arts management and advocacy, dance production and commercial sector. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $30

DNC 2000 Introduction to World Dance Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Global perspective on and definition of dance, through assigned readings, writing, field trips, and laboratory experience. Focus on multicultural diversity, interdependent nature of dance. Offered Every Term.
Fees: $50

DNC 2010 Contemporary Dance II: Part I Cr. 2
Modern dance technique of increasing difficulty and complexity; experiences in improvisation, problem solving, and compositional studies in dance. Offered Fall, Winter.
Prerequisite: DNC 1020 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $60
Repeatable for 12 Credits

DNC 2020 Contemporary Dance II: Part II Cr. 2
Continuation of DNC 2010. Modern dance technique of advancing difficulty; further experiences in improvisation, problem solving and composition; analysis and refinement of technique and performance skills. Offered Winter.
Prerequisite: DNC 2010 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $60
Repeatable for 12 Credits

DNC 2180 Anatomy of Human Movement Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
An introduction to the anatomy of human movement for non-science majors examining anatomy as the foundation of dance kinesiology. Content includes skeletal, nervous, and muscular systems in relationship to movement. Science students are welcome and will find the movement-oriented focus in DNC 2180 different from the focus of anatomy courses offered in Biology. Offered Every Term.

DNC 2250 Men's Ballet Cr. 1
Introduction to men's ballet including terminology, movement vocabulary, aesthetics and classroom etiquette. Offered Yearly.
Prerequisites: DNC 1220 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Dance or Dance Honors; enrollment is limited to Undergraduate level students.
Fees: $60
Repeatable for 6 Credits

DNC 2300 History of Dance to 1800 Cr. 3
Survey of dance in western civilization from pre-historic times through the eighteenth century; how dance evolved from expression of primitive cultures to independent theatrical entertainment in western Europe. Offered Every Other Winter.
Fees: $30

DNC 2310 History of Dance from 1800 to the Present Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to critical dance studies and dance history from 1800-present. Impact of vernacular dance and historical ballet and modern concert dance on contemporary dance, examined formally and socio-culturally. How dance circulates globally as mediated and embodied history. Offered Fall, Winter.
Fees: $30

DNC 2311 Issues and Trends in Contemporary Dance Cr. 2
Discussion of current events, trends and issues; includes technology component as part of Digital Dance Literacy curriculum. Offered Every Other Fall.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $30

DNC 2400 Introduction to African Dance Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Exploration of African and African derived dance forms, together with their integrated philosophy, music, art and theatre forms. Lectures, videos, concert attendance and reading assignments to learn and perform dances from selected African societies. Offered Every Term.
Fees: $60

DNC 2410 Music and Dance Relationships Cr. 3
Study of the basic elements common to dance and music including rhythm, dynamics, and form. Examples of music especially composed for dance will be examined along with dance styles of historical periods; includes technology component as part of Digital Dance Literacy curriculum. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $30

DNC 2460 Dance Improvisation Cr. 2
Introduction to dance improvisational techniques and performance skills as applied to movement invention, performance, and choreography. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors; enrollment is limited to Undergraduate level students; enrollment limited to students in the Fine, Performing & Comm. Arts.

DNC 2500 Choreography I Cr. 2
Construction of motifs and dance studies based on nonliteral and literal thematic materials; emphasis on form and structural concepts. Offered Winter.
Prerequisites: DNC 2460 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.

DNC 2600 African Dance II Cr. 2
Intermediate technique and theory. Offered Fall, Winter.
Prerequisite: DNC 2400 with a minimum grade of C-
Fees: $60
Repeatable for 8 Credits

DNC 2610 African Diasporic Dance Technique I Cr. 2
An introduction to the technique and theory of one of the following African Diasporic dance forms: Roots of Jazz, Hip-Hop, Tap, Afro-Brazilian, Afro-Caribbean, or Afro-Beat. Through introducing the culture, history, movement, and theories of dances with Africana roots, the aim of this course is to expand students' embodied global and cultural knowledge. Highlighting technical foundations of Africana dance aesthetics, style, and musical accompaniment will emphasize the role of dance as expression of socio-cultural experience. Some reading required. Offered Fall, Winter.
Fees: $60
Repeatable for 8 Credits

DNC 2620 Tap Dance Cr. 1
Study and practice of tap dance technique and choreography. Offered Yearly.
Fees: $50
Repeatable for 3 Credits

DNC 2630 Hip Hop Dance Styles Cr. 1
Study and practice of hip hop dance styles. Offered Yearly.
Fees: $50
Repeatable for 2 Credits

DNC 3010 Contemporary Dance III Cr. 2
Continuation of DNC 2020; contemporary dance technique at the intermediate level. Offered Fall, Winter.
Prerequisites: DNC 2010 with a minimum grade of C- or DNC 2020 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $60
Repeatable for 8 Credits

DNC 3180 Dance Science Cr. 3
Continued examination of dance movement from an anatomical and mechanical point of view. Relationships between neuroscience, psychology, nutrition, injury prevention and overall wellness are examined in relationship to dance technique and performance. Offered Winter.
Prerequisite: DNC 2180 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.

DNC 3190 Movement Analysis Cr. 3
Continuation of anatomical and mechanical analyses of dance; emphasis on somatic and dance science approaches. Offered Every Other Winter.
Prerequisites: DNC 3180 with a minimum grade of C-

DNC 3200 Ballet III Cr. 2
Continuation of DNC 1220 on a more advanced technical level with emphasis on complex movement phrases and selections from classical repertory. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $60
Repeatable for 16 Credits

DNC 3220 Ballet Pointe Technique Cr. 1
Technical skill development on pointe. Offered Fall.
Prerequisite: DNC 1220 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $60
Repeatable for 4 Credits

DNC 3300 Pilates Equipment Lab Cr. 1
Continued study in Pilates conditioning. Offered Fall.
Prerequisite: DNC 1300
Fees: $30
Repeatable for 8 Credits

DNC 3310 Dance Production Cr. 3
Concentration on selected types of dance production including an examination of purpose and content; technical considerations such as costumes, makeup, lighting and decor; the management of performance-related matters, and the use of technology, computer and video to support production work; part of Digital Dance Literacy curriculum. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $30

DNC 3410 African Diasporic Dance Technique II Cr. 2
A continued exploration of the technique and theory of one of the following African Diasporic dance forms: Roots of Jazz, Hip-Hop, Tap, Afro-Brazilian, Afro-Caribbean, or Afro-Beat. Offered Yearly.
Prerequisite: DNC 2610 with a minimum grade of C-
Fees: $60
Repeatable for 8 Credits

DNC 3500 Choreography II Cr. 2
Exploration of time, space, and design tools for choreography; focus on formal construction of small group studies and dances. Offered Fall.
Prerequisites: DNC 2410 with a minimum grade of C- and DNC 2500 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $50

DNC 3600 Choreography and Digital Media Design Cr. 2
In this class, students will learn how to design and create digital media within the choreographic process for live and virtual performances. This will include: 1) filming, editing, and projecting screendance media; 2) devising with dynamic lighting; and 3) working with novel and emerging technologies. Students will learn new design skills and then integrate media into student choreographic processes. Coursework will include software/hardware skills building, readings/viewings, and choreographic design explorations. All coursework will be organized around projects crafted to teach students how to work with and implement digital media and technologies within their own devising process for virtual and live dance performances. This is an applied studio class in which the focus is on devising and creating new work. Readings and viewings will be incorporated into the course throughout the course based on student interests and desires. Offered Fall.
Prerequisites: DNC 3500 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major, minor, or concentration in Dance or Dance Honors.
Fees: $30

DNC 3810 Dance Pedagogy Cr. 3
Theory and practice of dance teaching in arts education; foundational emphasis on social and cultural aspects of pedagogical theory in multiple settings. Offered Winter.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $30

DNC 4000 Performance Tour Cr. 2
Development and performance of touring dance performances off campus including regional, national, and international festivals; productions for elementary, middle and secondary school audiences. Offered Winter.
Prerequisites: DNC 4710 with a minimum grade of C-
Repeatable for 8 Credits

DNC 4010 Contemporary Dance IV Cr. 2
Continuation of DNC 3010. Contemporary dance technique, advanced level. Offered Fall, Winter.
Prerequisites: DNC 3010 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $60
Repeatable for 16 Credits

DNC 4200 Ballet IV Cr. 2
Continuation of DNC 3200 with emphasis on advanced knowledge of classical ballet vocabulary. Offered Every Term.
Prerequisite: DNC 3200 with a minimum grade of C- or DNC 2210 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $60
Repeatable for 16 Credits

DNC 4410 Student Teaching and Seminar I Cr. 2-6
First experience in student teaching. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

DNC 4420 Student Teaching and Seminar II Cr. 2-6
Second experience in student teaching. Offered Fall, Winter.
Prerequisite: DNC 4410 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

DNC 4500 Qualitative Research in Dance and Theatre Arts Cr. 3
A survey of qualitative research design and methodology in dance and theatre arts with particular emphasis on empirical and exploratory research drawn from descriptive, ethnographic, case study, participatory action research, interpretive and critical approaches, among others. Offered Every Other Fall.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students in the Department of Theatre and Dance.
Equivalent: THR 4500

DNC 4710 Dance Company Cr. 3
Performing company. Open to students interested in performing and/or choreographing. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $80
Repeatable for 18 Credits

DNC 4800 Repertory Cr. 2
Learning, for performance, of dance repertory, dances previously choreographed by faculty, or work of artist-in-residence. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $60
Repeatable for 30 Credits

DNC 4810 Dance Teaching Methods Cr. 3
Analysis of instructional methods and materials in dance teaching including
creative movement, western concert dance, social and urban dance forms; special attention to community, recreational, private studio settings, and classroom management. Offered Every Other Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Dance or Dance Honors.

DNC 4820 Assisting in Dance Cr. 1
Assigned field work in assisting under faculty supervision. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 4 Credits

DNC 4910 Dance in Community Cr. 3
Survey of dance in community settings, with emphasis on sociocultural aspects and social inclusion of disenfranchised or underrepresented populations; includes theoretical and applied experience in community dance practice. Offered Fall.
Prerequisite: DNC 3810 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Dance or Dance Honors.

DNC 5560 Choreography III Cr. 2
Continuation of DNC 3500; more advanced experience in choreographic forms and exploration of collaborative and technological approaches to choreography; part of Digital Dance Literacy curriculum. Offered Fall.
Prerequisite: DNC 2500 with a minimum grade of C- and DNC 3500 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Fees: $30
Repeatable for 6 Credits

DNC 5600 Contact Improvisation and Partnering Cr. 2
Exploration of weight sharing, supporting and use of momentum in dance; equal emphasis on choreographic and performance applications. Offered Winter.
Prerequisite: DNC 2460 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major, minor, or concentration in Dance or Dance Honors.
Fees: $50

DNC 5810 Teaching Creative Dance for Children Cr. 3
Approaches to creative dance experiences for children stressing the development of aesthetic and kinesthetic awareness. Focus on comprehensive arts and curriculum related materials. Offered Fall.

DNC 5830 Field Work in Creative Dance Cr. 2-8
Supervised professional study in field settings. Offered Every Term.
Prerequisite: DNC 5810 with a minimum grade of C-

DNC 5990 Independent Study in Dance Cr. 1-4
Independent work in dance under faculty guidance. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors.
Repeatable for 12 Credits

DNC 5993 Writing Intensive Course in Dance Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a course designated as a corequisite. See Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required of all majors. Offered Every Term.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and (DNC 2300 (may be taken concurrently), DNC 2310 (may be taken concurrently), DNC 3310 (may be taken concurrently), DNC 3810 (may be taken concurrently), or DNC 4910 (may be taken concurrently))
Restriction(s): Enrollment is limited to Undergraduate level students.

DNC 5995 Dance Education Teacher Standards Cr. 3
Study of Professional Teaching Standards in Dance Arts (PTSDA), culminating in student documentation in evidence-based portfolio. Offered Winter.
Prerequisites: DNC 4910 with a minimum grade of C-

DNC 5996 Senior Capstone Research Cr. 1-2
Group and solo choreography, concert production, publicity and promotion; research component includes digital dance portfolio. Offered Every Term.
Prerequisite: DNC 3500 with a minimum grade of C-
Fees: $50
Equivalent: DNC 5560
Repeatable for 3 Credits

DNC 5997 Departmental Honors Thesis Cr. 3
Group and solo choreography, concert production, publicity and promotion; research component includes digital dance portfolio. Offered Winter.
Prerequisite: DNC 3500 with a minimum grade of D-
Restriction(s): Enrollment is limited to students with a major in Dance Honors; enrollment is limited to Undergraduate level students; enrollment is limited to students in the Department of Theatre and Dance.

DNC 5998 Professions Capstone Research Cr. 3
Advanced inquiry and study of dance professions in applied settings within an approved internship or fieldwork context. Serves as capstone experience for BS dance majors. Offered Winter.
Prerequisite: DNC 5910 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Dance or Dance Honors; enrollment limited to students in a Bachelor of Science degree.

DR - Dispute Resolution

DR 7100 Roots of Social Conflict Cr. 3
Background and immediate causes of social conflict, from interpersonal to national to international settings, from ethnic to gender conflict; review of destructive and constructive aspects of conflict. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

DR 7210 Workplace Negotiations Cr. 3
The purpose of this course is to examine the process of negotiations. It focuses on the skills, strategies, and techniques behind effective negotiating. The course content is applicable to a broad spectrum of work- or business-related relationship challenges faced by managers and professionals. This course embraces an active experiential approach to learning in an effort to bridge the theoretical and pragmatic aspects of negotiations. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: MGT 7780

DR 7220 Concepts and Processes of Dispute Resolution II: Neutral Intervention Theory and Practice Cr. 3
Dispute resolution growth and methods; mediation, facilitation, conciliation, fact-finding, arbitration; hybrids; dispute resolution institutions and practitioners. Offered Winter.
Prerequisite: MGT 7780 with a minimum grade of C or DR 7210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

DR 7310 Practicum in Dispute Resolution Cr. 3
This course was designed to teach students the skills required as third party neutrals (mediators) in the facilitative mediation process. The curriculum includes discussion and lectures on other alternative dispute resolution (ADR) processes, but the main focus of the class will be facilitative mediation. Role play opportunities, observation, and practice experience will be provided as part of the class in order to provide students opportunity to work on practical skills in addition to learning mediation theory. Elements of the subject matter taught include the nature of conflict, how mediation fits within the ADR structure, understanding values and relationships embedded within the dispute resolution process, ethical standards of practice, mediation techniques, role and task of the mediator, and stages of the mediation process. Offered Yearly.
Prerequisite: DR 7210 with a minimum grade of C and DR 7220 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $225
Equivalent: LEX 7660

DR 7890 Final Seminar in Dispute Resolution Cr. 3
Capstone seminar for Dispute Resolution program. Critical issues and assumptions in the practice and research spheres. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

DR 7990 Directed Study in Dispute Resolution Cr. 1-4
Advanced independent readings and writing under supervision of graduate faculty member, in areas of special interest. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

DSA - Data Science and Analytics

DSA 6000 Data Science and Analytics Cr. 3
Basic data science and analytics concepts covered through case studies, success stories, and a semester project that cuts across all course modules. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business, Industrial AI or Statistics.

DSA 6100 Statistical Learning for Data Science and Analytics Cr. 3
A fundamental course covering statistical learning techniques required for data science and analytics applications through methods, case studies, and a semester project that cuts across all course modules. This course focuses on both statistical learning methods and the life-cycle of a statistics-driven data science and analytics project. Students will be exposed to a variety of tools and technologies. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business, Industrial AI or Statistics.
Fees: $50

DSA 6200 Operations Research Cr. 3
Mathematical optimization models that come into play in data science and analytics applications covered through case studies and a semester project. Heuristic solution approaches will also be addressed along with sensitivity analysis techniques. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business, Industrial AI or Statistics.

DSA 6300 Decision Analysis and Simulation Cr. 3
Coherent approach to decision making, developing rules of thought to transform complex decisions into simpler decision situations covered through case studies, success stories, and a semester project that cuts across all course modules. Discusses role of discrete-event simulation for improving decision support. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSA 7500 Data Science and Analytics Practicum Cr. 6
Apply theoretical knowledge and skills acquired throughout the Data Science and Business Analytics MS program to a challenging project involving real-world business problems/opportunities and data analytics in a reliable, scalable, distributed computing environment for optimal outcomes. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics; enrollment is limited to Graduate level students.
Fees: $50
Equivalent: DSB 7500, DSE 7500, STA 7800

DSB - Data Science for Business

DSB 6000 Data Science Strategy & Leadership Cr. 3
Provides an understanding of how organizations can leverage data science and analytics to gain competitive advantage and how to use the data to align with a company's mission and goals. Students will learn how organizations derive business value/impact, and return on investment, and the importance of interpreting and communicating the business case. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSB 6100 Marketing Analytics Cr. 3
Application and synthesis of marketing methods and modeling approaches to design, analyze, and optimize digital marketing campaigns and to understand customer segments, customer life cycles, and lifetime values. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSB 6200 Manufacturing & Supply Chain Analytics Cr. 3
Discussion of the strategic and tactical issues surrounding the design and operation of supply chains through effective information collection, sharing, and collaboration, an understanding of applied analytical tools and methods that can be used to make better supply chain decisions and practical application of supply chain advanced planning and optimization solutions. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSB 6300 Social and Collaboration Networks Cr. 3
Leveraging data science tools & technologies for network analysis with practical applications to support and provide a structure for fact-based decision making for individuals working to gain insight into complex organizational problems. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSB 7500 Data Science and Analytics Practicum Cr. 6
Apply theoretical knowledge and skills acquired throughout the Data Science and Business Analytics MS program to a challenging project involving real-world business problems/opportunities and data analytics in a reliable, scalable, distributed computing environment for optimal outcomes. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics; enrollment is limited to Graduate level students.
Equivalent: DSA 7500, DSE 7500, STA 7800

DSE - Data Science for Engineering

DSE 5070 Introduction to Data Computing and Programming Cr. 3
Not for CSC major credit. Background in calculus and linear algebra is necessary. This course introduces students to the foundation of data computing problem solving using programming languages of Python and R. It provides students with skills that will enable them to make productive use of “data science” techniques to model and interpret data. The course covers the following topics: 1) Basic concepts of probability and statistics; 2) Python and R basics; 3) Data pre-processing, modeling, and visualizing with Python/R. Offered Yearly.

DSE 6000 Computing Platforms for Data Science Cr. 3
Covers an overview of various computing platforms for developing, deploying, configuring a wide range of data science applications for different domains. The programming models, characteristics of supported workload, and management of performance, cost and scalability will be compared side by side. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSE 6100 Data Modeling and Management Cr. 3
Covers both traditional data modeling and big data modeling from conceptual design, logical-to-physical mapping, to physical schema optimization. Provenance management, which concerns about the linage and history of a data product, is important for the repeatability of data analysis. The course will present various concepts of provenance and its relationships to data quality and trust. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSE 6200 Modern Databases Cr. 3
Covers an overview of databases, tools, and computing platforms. One focus is basic SQL, NoSQL, and NewSQL programming skills and a comparison of their cons and pros. In particular, the students will learn the criteria to choose a database system, either SQL or NoSQL, based on the requirements of an application domain. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSE 6300 Data Science Applications Development Cr. 3
Focuses on the software engineering cycle of developing a comprehensive data science application. Students will have the freedom to choose a computing platform, or a NoSQL database as the underlying infrastructure for developing a data science application. Students will also choose a particular domain and problem in which one needs to address one of the big data challenges: volume, velocity, or variety. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics.

DSE 7500 Data Science and Analytics Practicum Cr. 6
Apply theoretical knowledge and skills acquired throughout the Data Science and Business Analytics MS program to a challenging project involving real-world business problems/opportunities and data analytics in a reliable, scalable, distributed computing environment for optimal outcomes. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics; enrollment is limited to Graduate level students.
Equivalent: DSA 7500, DSB 7500, STA 7800

ECE - Electrical and Computer Engineering

ECE 2050 Object-Oriented Programming for Electrical and Computer Engineering Cr. 3
Rigorous project-based, object-oriented programming course in C++ for ECE with an overview of computer engineering and systems. Covered topics include: problem-solving principles; object-oriented programming (classes and objects, control statements, functions, pointers, arrays, vectors, inheritance, polymorphism, exception handling, file processing, dynamic memory allocation); software engineering principles; basic data structures and algorithms: linked lists, recursion, sorting, and basic analysis of algorithms. Offered Every Term.
Prerequisites: MAT 2010 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Engineering.

ECE 2610 Digital Logic Design Cr. 4
Data representation in digital computer; boolean algebra; logic gates; minimization and implementation of boolean functions; arithmetic circuits; combinational circuits; sequential circuits: latches and flip-flops; counters; finite state machines; memories; and Verilog programming. Laboratory experiments provide hands-on experience using state-of-the-art FPGA setup to simulate, implement, and test combinational and sequential logic circuits. Offered Every Term.
Prerequisites: (CSC 2000 with a minimum grade of C- (may be taken concurrently) or ECE 2050 with a minimum grade of C- (may be taken concurrently)) and PHY 2180 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $10

ECE 3040 Numerical Methods for Engineers Cr. 3
Developing numerical algorithms to provide solutions to engineering problems. Derivation of numerical algorithms and investigation of their stability, accuracy, efficiency and scalability. Programming numerical algorithms in Matlab. Topics include: Machine Round-off error, truncation error, root finding, solution of systems of linear and nonlinear algebraic equations, Taylor and Chebyshev series and rational function approximation, interpolation, regression, numerical differentiation, numerical integration, numerical solution of ordinary differential equations, and Monte Carlo methods. Offered Every Term.
Prerequisites: BE 1200 with a minimum grade of C-, BE 1500 with a minimum grade of C-, MAT 2030 with a minimum grade of C-, and (MAT 2150 with a minimum grade of C- (may be taken concurrently) or (MAT 2250 with a minimum grade of C- (may be taken concurrently) and MAT 2350 with a minimum grade of C- (may be taken concurrently)))
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $15

ECE 3300 Introduction to Electrical Circuits Cr. 4
Electrical quantities and waveforms; resistance and Ohm's law; networks and Kirchhoff's laws; network equivalents; nodal and mesh analysis; Thevenin's theorem and other network theorems. Analysis of First- and second-order systems in the time domain (employing differential equations) and in the s-domian (employing the Laplace transform method). Offered Every Term.
Prerequisites: PHY 2180 with a minimum grade of C- and (MAT 2150 with a minimum grade of C- (may be taken concurrently) or (MAT 2250 with a minimum grade of C- (may be taken concurrently) and MAT 2350 with a minimum grade of C- (may be taken concurrently)))
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $25

ECE 3320 Introduction to Electrical Circuits Cr. 4
Electrical signals and waveforms; resistance and Ohm's law; networks and Kirchhoff's laws; network equivalents; nodal and mesh analysis; Thevenin's theorem; energy storage systems; Introduction to sinusoidal steady-state response; complex frequency concepts; Frequency responses. No credit towards B.S. EE degree. Offered Every Term.
Prerequisites: PHY 2180 with a minimum grade of C- and MAT 2150 with a minimum grade of C- (may be taken concurrently)

ECE 3330 Electrical Circuits II Cr. 3
Sinusoidal steady-state response; AC steady-state power; three-phase systems; complex frequency concepts; frequency responses; resonant and coupled circuits; application of Fourier transforms, and Laplace transform to electrical circuits, and filter circuits. Offered Every Term.
Prerequisites: (MAT 2150 with a minimum grade of C- or (MAT 2250 with a minimum grade of C- and MAT 2350 with a minimum grade of C-)) and ECE 3300 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

ECE 3570 Electronics Cr. 4
DC and small signal analysis of diodes, MOSFETs, and BJTs circuits; operational amplifiers, single-stage amplifiers, differential pair, gain, input resistance, output resistance, and bandwidth of amplifiers. Offered Fall, Winter.
Prerequisites: ECE 3300 with a minimum grade of C- and ECE 3330 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students in the College of Engineering.
Fees: $15

ECE 3620 Introduction to Microcomputers Cr. 4
Basics of digital systems, number systems, functional blocks of microcomputers, assembly language and machine code, applications of microcomputers and experimental demonstrations. Introduction to digital logic. Offered Fall, Winter.
Prerequisites: BE 1200 with a minimum grade of C- and (ECE 2610 with a minimum grade of C- or ECE 3610 with a minimum grade of C-)
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $25

ECE 4050 Algorithms and Data Structures Cr. 3
Introduction to problem solving methods and algorithm development; data abstraction for structures such as stacks, queues, linked lists, trees, and graphs; searching and sorting algorithms and their analysis. Offered Fall, Winter.
Prerequisites: (CSC 2000 with a minimum grade of C- or ECE 2050 with a minimum grade of C-) and MAT 2860 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

ECE 4330 Linear Systems and Signals Cr. 4
Content includes: continuous-time and discrete-time linear systems and signals; properties of linear systems; classical analysis methods and convolution; system analysis method for zero-state and zero-input response; Laplace transform and its application to linear system analysis; Fourier series expansion of periodic signals; Fourier transform and the steady-state response; application to analog filters, control and communication systems; solution of linear difference equations; z-transform analysis method; sampling theory; discrete-time Fourier transform and its application in digital filter design. Offered Fall, Winter.
Prerequisites: ECE 3330 with a minimum grade of C- and ECE 3040 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students in the College of Engineering.

ECE 4331 Systems and Signals Laboratory Cr. 2
Experiments cover signal generation, signal manipulations and signal measurements, electronic oscillators, steady-state, zero-state and zero-input responses of linear circuits, harmonic sinusoidal content (Fourier Series) of periodic signals, low-pass, high-pass, band-pass and notch filter circuits, network functions, solution of differential equations using operational amplifier circuits, amplitude modulation and demodulation of speech signals, signal sampling and reconstruction. Offered Fall, Winter.
Prerequisites: ECE 4330 with a minimum grade of C- (may be taken concurrently)

ECE 4340 Microcomputer-Based Instrumentation Laboratory Cr. 2
Multipurpose personal-computer-based approach to real time instrumentation. Current interfacing and software used for data acquisition, transmission, analysis and report writing. Offered Fall, Winter.
Prerequisites: (ECE 2610 with a minimum grade of C- or ECE 3610 with a minimum grade of C-), ECE 3570 with a minimum grade of C-, and ECE 3330 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.
Fees: $10

ECE 4470 Control Systems I Cr. 3
System representations; feedback characteristics; time-domain characteristics; Routh-Hurwitz criteria; Root Locus Plots; Nyquist criteria, Bode plots; PID, controller design. Offered Fall, Winter.
Prerequisite: ECE 4330 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

ECE 4570 Fundamentals of Microelectronic Devices Cr. 3
Fundamental aspects of semiconductor materials, nature of charge carriers in semiconductors, aspects of electrical properties of semiconductors, the physical electronics of P-N junction, MOSFET and bipolar field effect transistors, and device fabrication technology essential to understanding semiconductor active devices and integrated circuits. Introduction to optoelectronic devices including photovoltaic cells, light emitting devices, photodetectors, and solid-state lasers. Offered Every Term.
Prerequisites: ECE 3300 with a minimum grade of C- and (MAT 2150 with a minimum grade of C- or (MAT 2250 with a minimum grade of C- and MAT 2350 with a minimum grade of C-))
Restriction(s): Enrollment limited to students in the College of Engineering.

ECE 4600 Capstone Design I Cr. 4
Design principles, subsystems of microcontrollers; designing products using microcontrollers, sensors and actuators. Offered Fall, Winter.
Prerequisite: ENG 3050 with a minimum grade of C- and ECE 3620 with a minimum grade of C- and ECE 4330 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Senior; enrollment limited to students in the College of Engineering.

ECE 4680 Computer Architecture Cr. 3
An introduction to computer architecture. Instruction set architecture; performance analysis of computer systems; basic processor design and implementation techniques; pipelined processor design; design of the control unit, memory hierarchy and cache design; I/O. Offered Fall, Winter.
Prerequisites: BE 2100 with a minimum grade of C-, ECE 2610 with a minimum grade of C-, and ECE 3620 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.

ECE 4700 Introduction to Communication Theory Cr. 4
Basic information transmission concepts. Spectral analysis. Transmission through linear networks. Sampling principles. Digital and analog communication signals and systems. The effect of noise in communication systems. Elementary decision theory. Offered Fall, Winter.
Prerequisite: (BE 2100 with a minimum grade of C- or BE 3220 with a minimum grade of C-) and ECE 4330 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.

ECE 4800 Electromagnetic Fields and Waves I Cr. 3
Fundamentals of electromagnetic engineering, static electric and magnetic fields using vector analysis and fields of steady currents, Maxwell's equations and boundary value problems. Basic principles of plane waves, transmission lines and radiation. Offered Fall, Winter.
Prerequisite: ECE 3330 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

ECE 4850 Engineering Optics Cr. 3
Topics include: lightwave fundamentals, optical sources and detectors, optical fibers and waveguides, optical instrumentation, optical sensors for self-driving vehicles and robotics, applications optical devices and systems. Offered Yearly.
Prerequisite: ECE 3330 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.

ECE 4990 Directed Study Cr. 1-4
Supervised study and instruction in a field selected by the student. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Repeatable for 4 Credits

ECE 5100 Quantitative Physiology Cr. 4
Basic principles of human physiology presented from the engineering perspective. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by mathematical models where feasible. Offered Every Term.
Equivalent: BME 5010, CHE 5100, ME 5100

ECE 5280 Introduction to Cyber-Physical Systems Cr. 3
Modeling, design, analysis, and implementation of cyber-physical systems; dynamic behavior modeling, state machine composition, and concurrent computation; sensors and actuators; embedded systems and networks; feedback control systems; temporal logic and model checking. Offered Yearly.
Prerequisites: CSC 2200 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: CSC 5280

ECE 5330 Modeling and Control of Power Electronics and Electric Vehicle Powertrains Cr. 3
This course will introduce basic methodologies for modeling, dynamic analysis, control system design, system coordination for electric vehicle powertrains. Course design projects will be required to develop design experience in the process of modeling, control design, and simulation involving batteries, power electronics, and electric machines. Offered Fall.
Prerequisites: ECE 4470 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students; enrollment limited to students in the College of Engineering.

ECE 5340 Advanced Energy Storage Systems for Electrification of Vehicles Cr. 3
The objective of this course is to learn fundamentals of energy storage systems for electric-based transportation and to provide basic knowledge in the multidisciplinary field of energy storage devices and their applications for land, space and marine vehicles. The focus of the course will be on advanced batteries, supercapacitors, and fuel cells for transpiration applications; battery sizing and integration to various land-marine-space vehicles; and the fundamentals of battery management systems including various methodologies in electrical control and thermal management modes. Offered Intermittently.
Prerequisites: PHY 2180 with a minimum grade of C

ECE 5350 Alternative Energy Sources and Conversions Cr. 3
Covers the fundamentals of alternative energy sources and conversion of these sources to electrical energy. The focus will be on solar and wind energy sources, covering design and operation of photovoltaic cells, solar thermal technologies, and design and operation of wind towers and wind farms. Other topics include: principle operations of geothermal energy, nuclear power plants, hydro-power, tidal and ocean waves and various methods of capturing and transforming these energy resources to electricity. Offered Intermittently.
Prerequisites: PHY 2180 with a minimum grade of C

ECE 5410 Power Electronics and Control Cr. 3
Control of electrical energy using solid state devices, diodes, thyristors, IGBTs, and new WBG devices; mathematical analysis of circuits containing these devices; power converters and control; applications of power converters in alternative energy systems and electric vehicles. Offered Winter.
Prerequisites: ECE 4330 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: EVE 5410

ECE 5415 Smart Grid and Smart Systems Cr. 3
This course provides a comprehensive introduction to the multi-disciplinary field of smart grid and smart systems. It covers the application of artificial intelligence (AI) in the control and optimization of these systems. The first part of the course focuses on smart grid topics, including smart grid energy management and control, distributed energy resources, and demand response. The second part introduces several key smart systems used in today's industry, such as microgrids, smart buildings and smart homes. The principles underlying operation and control of these systems are introduced using basic electrical engineering knowledge. Offered Yearly.
Prerequisites: ECE 3300 with a minimum grade of C-

ECE 5425 Robotic Systems I Cr. 4
Introduction to robot kinematics and control. Computational algorithms for robot movement, sensor fusion, and intelligent behavior, which are needed to build a system that performs actions and interacts with its environment. Offered Winter.
Prerequisites: BE 1500 with a minimum grade of C-, BE 1600 with a minimum grade of C-, BME 5020 with a minimum grade of C-, or ECE 3040 with a minimum grade of C-
Equivalent: BME 5425

ECE 5430 Electric Energy Systems Engineering Cr. 3
Transmission capacity, load characteristics, reactive power compensation. Energy system component analysis and modeling. Steady-state analysis, load-flow problem and algorithms. Balanced fault analysis, symmetrical components and unbalanced fault analysis, and power system protection. Offered Intermittently.
Prerequisites: ECE 4330 with a minimum grade of C-

ECE 5440 Traditional and Machine Learning-Based Computer-Controlled Systems Cr. 3
Introduction to z-transform and sampling theory. Digital controller design using both transfer function techniques and state space methods. Iterative learning control, neural networks for control, implementation aspects of computer-controlled systems. Offered Yearly.
Prerequisites: ECE 4470 with a minimum grade of C-, CHE 4600 with a minimum grade of C-, or ME 5540 with a minimum grade of C-

ECE 5470 Control Systems II Cr. 3
State space representation of systems; stability and Lyapunov methods, controllability and observability of linear time-invariant systems, pole placement design using state feedback, observer design, optimal control, linear quadratic regulators, Kalman filter. Offered Yearly.
Prerequisites: ECE 4470 with a minimum grade of C-

ECE 5550 Solid State Electronics Cr. 3
Physical basis for the opto-electric properties of solids with particular emphasis on semiconductors. Basic principles associated with solid-state devices. Charge carriers and mechanisms of current flow. Extrinsic and intrinsic semiconductors. Behavior of P-N junctions, field-effect, and bipolar transistors. Computer-aided simulation of device characteristics. Course project related to contemporary topics in semiconductors. Offered Fall.
Prerequisites: ECE 4800 with a minimum grade of C- and ECE 4570 with a minimum grade of C-

ECE 5560 Analysis and Design of Analog Integrated Circuits Cr. 3
The course provides students the fundamentals in Large-Signal/Small-Signal Transistor Modeling, Single-Stage Amplifier Design, Noise, Feedback, Current Mirrors, Differential Amplifiers, Stability, and Frequency Response, Mismatch and Nonlinearity, OpAmp Design, and CAD Tool. Cadence design suite will provide state-of-the-art hands-on experience to analyze, design, and simulate analog circuits. Advanced topics, including Analog and Mixed-Signal Artificial Neural Networks. Offered Fall.
Prerequisites: ECE 3330 with a minimum grade of C- and ECE 3570 with a minimum grade of C-

ECE 5575 Introduction to Micro and Nano Electro Mechanical Systems (MEMS/NEMS) Cr. 3
General and specialized micro/nanofabrication techniques; basic sensing and actuating mechanisms (piezoresistive, piezoelectric, capacitive, electrostatic, thermal pneumatic, etc.); and design and operation of various MEMS/NEMS devices for automotive and biomedical applications; fabrication and characterization of basic MEMS structures. Offered Fall.
Prerequisites: ECE 4570 with a minimum grade of C-

ECE 5580 Advanced Nanoelectronics Cr. 3
This course will provide an overview of next generation nanoelectronic devices, with a focus on device operation principles, technology scaling trends, and manufacturing techniques. Course will start with the evolution of MOSFET technology enabled by unprecedented advances in materials, manufacturing techniques and device architecture innovations. Different transistor technologies (i.e. HEMT, TFET) and novel electronic materials beyond Si (i.e. III-Vs, 2D materials, Carbon Nanotubes) will be covered. Following the overview of different memory device technologies, the focus will be shifted to novel computing paradigms. Device technologies that enable neuromorphic and quantum computing, associated fabrication challenges and innovative computation algorithms will be reviewed. Offered Winter.

ECE 5590 Characterization and Applications of Semiconductor Devices Cr. 1
This course focuses on (1) measuring and characterizing basic common semiconductor device components and (2) building and demonstrating simple circuits with them. Common devices studied include diode, transistor, LED, laser, solar cell, etc. The goals are to provide students with hands-on experience, understanding the applications of basic devices, and an overall knowledge of the semiconductor industry. This general semiconductor lab course is suited for a wide audience of all departments in engineering, both graduates and undergraduates. Offered Fall, Winter.

ECE 5610 Introduction to Parallel and Distributed Systems Cr. 3
Fundamentals of parallels and distributed systems. Programming experience in both computing environments. Offered Yearly.

ECE 5620 Embedded System Design Cr. 4
Microcontroller architecture and its subsystems. Wired and wireless protocols for vehicular networking applications. Design and implementation of real-time embedded systems. Offered Fall, Winter.
Prerequisites: ECE 3620 with a minimum grade of C-

ECE 5650 Computer Networking and Network Programming Cr. 3
Overview of networks and the Internet, the application layer, socket programming, the transport Layer, the network Layer, the link Layer: links, access networks, and LANs. Introduction to Software-Defined networking, OpenFlow, and wireless and mobile networks. Projects provide students with hands-on experience in developing network applications. Labs provides students with hands-on experience with network layers and protocols. Offered Every Other Winter.
Prerequisites: ECE 4050 with a minimum grade of C-

ECE 5675 Sensors and Sensor Instrumentation Cr. 3
Provides students both theoretical background and hands-on skills of sensors and sensor instrumentation, and to prepare students for researches and careers involving sensors and instrumentation. The topics include operating principles of typical sensors, sensing mechanisms (piezoresistive, piezoelectric, capacitive, etc.); sensor instrumentation, amplifiers, noise analysis, and frequency response of readout circuits. Offered Winter.
Prerequisites: ECE 3570 with a minimum grade of C-

ECE 5680 Computer-Aided Logical Design and FPGAs Cr. 4
Topics include: review of digital design; advanced applications of Boolean algebra techniques; Computer-Aided Logical Design for large Boolean functions and simplification; threshold function; linear sequential machines; design using Verilog and FPGAs; introduction to cadence. Offered Winter.
Prerequisites: ECE 4680 with a minimum grade of C-

ECE 5690 Introduction to Digital Image Processing Cr. 4
Provide college engineering seniors and graduate students with an introduction to basic concepts and methodologies appliable to digital image processing from an operational perspective with good exposure to theory, accessibility of DIP to engineering, and to develop a foundation that can be used as the basis for further study and research in this field. Includes a detailed review of current techniques in this field, and their applications to different aspects such as 2-D, 3-D information processing, storage, transmission, extraction of information, medical images, life science, automation, and various industrial sectors, etc. It is the basis for machine learning and AI related fields. Imaging sensors and imaging systems are also covered. Tools to be used include mathematical analysis, vectors, matrices, probability, statistics, sequences and series, and computer programming. Offered Fall.
Prerequisites: ECE 4050 with a minimum grade of C-, ECE 4330 with a minimum grade of C-, and BE 2100 with a minimum grade of C-

ECE 5700 Digital Communications Cr. 4
Digital modulators and demodulators, M-ary PSK, M-ary FSK, optimal receiver for AWGN channel. correlator receiver, matched filter receiver, analysis of probability of bit errors for digital communication systems, Shannon limit, simulation of digital communication system. Offered Fall.
Prerequisites: ECE 4700 with a minimum grade of C-

ECE 5770 Digital Signal Processing Cr. 4
Analysis of discrete signals and systems. Applications to digital filtering, active filters, digital communication and encoding. Offered Yearly.
Prerequisites: ECE 4700 with a minimum grade of C-

ECE 5880 Introduction to Microwave Engineering Cr. 4
Introduces students to microwave engineering and prepares them for careers in wireless communications, radars and remote sensing. Topics that will be covered include microstrip lines, coplanar waveguides, scattering parameters, impedance matching, microwave filters, power dividers and directional couplers, nonreciprocal devices, mixers and amplifiers. Offered Yearly.
Prerequisites: ECE 4800 with a minimum grade of C- (may be taken concurrently)

ECE 5960 Introduction to VLSI Systems Cr. 4
A very large scale integrated circuit component and design procedures. MOS fabrication, MOS gates, circuit architecture, device design, manufacturing and interface techniques. Offered Fall.
Prerequisites: ECE 2610 with a minimum grade of C-
Fees: $30

ECE 5990 Directed Study Cr. 1-3
Supervised study and instruction in the field selected by the student. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Electrical & Computer Engineer.
Repeatable for 3 Credits

ECE 5995 Special Topics in Electrical and Computer Engineering I Cr. 1-4
Special subject matter in electrical and computer engineering. Topics to be announced in Schedule of Classes . Offered Every Term.
Repeatable for 8 Credits

ECE 6570 Smart Sensor Technology I: Design Cr. 3
Introduction to various types of sensors and the design of basic analog VLSI circuit building blocks. Offered Winter.
Prerequisites: PHY 2185 with a minimum grade of C- or PHY 2180 with a minimum grade of C-
Equivalent: BME 6470, PHY 6570

ECE 6991 Industrial Internship Cr. 1-3
Internship experience that satisfies the curricular practical training requirements. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 3 Credits

ECE 6992 Industrial Internship Cr. 1-3
Internship experience that satisfies the curricular practical training requirements. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ECE 7030 Mathematical Methods in Engineering I Cr. 4
Introduction to functional analysis. Banach and Hilbert spaces. Fixed-point and projection theorem techniques. Approximation, estimation, and optimization theory. Applications to numerical and error analysis, non-linear equations, and modeling system identification. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7100 Mathematical Modeling in Impact Biomechanics Cr. 4
Review of models created for impact simulations. Regional impact simulation models. Human and dummy models subject to various restraint systems. Offered Intermittently.
Prerequisite: BME 5010 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7100, IE 7100, ME 7100

ECE 7420 Nonlinear Control Systems Cr. 3
This course will develop models for nonlinear dynamical systems, perform system analysis using phase plane analysis, and examine stability using Lyapunov's direct method and invariant set theorems (local and global stability). It will introduce describing function methods and design nonlinear robust controllers by using sliding mode control. Offered Fall.
Prerequisite: ECE 5470 with a minimum grade of B- or ME 6550 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ECE 7425 Robotics Systems II Cr. 4
Project-based class to understand technology that interfaces computer engineering, software design, electronics and sensors with robotics. We will cover Robot Operating System simulation and real. Advanced application areas of robotics will be covered including medical, military, space, vehicle robotics. Completion of ECE/BME#5425#Robotic Systems I is recommended prior to registering for this course. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: BME 7425

ECE 7430 Discrete Event Systems with Machine Learning Cr. 4
Discrete event systems and fuzzy discrete event systems; automata and fuzzy automata; supervised learning; languages and operations; supervisory control; controllability, observability, and co-observability, modular control and decentralized control, supervisor synthesis. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7440 Optimal Control with Machine Learning and Applications Cr. 3
This course will develop competence in analysis and design of optimal control systems with machine-learning algorithms and applications. Formulation of optimization and optimal control problems. Traditional and machine-learning algorithms for optimization. Optimal control design methods in continuous-time systems. Optimal control with boundary constraints. Offered Intermittently.
Prerequisite: ECE 5440 with a minimum grade of B- or ECE 5470 with a minimum grade of B- or ME 5550 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ECE 7500 Artificial Intelligence for Natural Language Processing Cr. 3
Natural Language Processing (NLP) is a field in Artificial Intelligence (AI) devoted to creating computer systems that understand and produce human languages. This course will present a broad graduate-level introduction to NLP. We will focus on fundamental methods and algorithms/techniques in NLP. We will also explore several NLP applications, such as sentiment analysis, information extraction, syntactic parsing, and semantic analysis. Additionally, the course will introduce state-of-the-art transformer models, which have revolutionized NLP by enabling advanced language understanding and generation. We will discuss their architectures, training methodologies, and real-world applications, providing hands-on experience with cutting-edge techniques in deep learning for NLP. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7530 Advanced Digital VLSI Design Cr. 4
Topics include: review of VLSI Design processes; CADENCE tools used to simulate and generate the schematic and layout of the synthesized hardware description language codes; and chip fabrication. Offered Winter.
Prerequisites: ECE 5680 with a minimum grade of C and ECE 5960 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7566 Advanced Mixed Signal Integrated Circuits Cr. 3
the course presents advanced topics in CMOS mixed signal integrated circuits including analysis and design of low power digital to analog (D/A) and analog to digital converters (A/D) , comparators, sample and hold circuits, band gap references and switched-capacitor circuits. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7570 Smart Sensor Technology II: Characterization and Fabrication Cr. 4
Integration of ongoing research in integrated technology of smart sensors. Design of smart sensor devices using computer simulation. Fabrication of smart sensor. Offered Spring/Summer.
Prerequisite: ECE 6570 with a minimum grade of B- or BME 6470 with a minimum grade of B- or PHY 6570 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $50
Equivalent: BME 7470, PHY 7580

ECE 7610 Advanced Parallel and Distributed Systems Cr. 3
Advanced topics in parallel and distributed computing, multicore and parallel architecture, communication, synchronization, parallel algorithms and programming, load balancing and scheduling, security. Offered Winter.
Prerequisite: ECE 5610 or ECE 5650
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7640 Online and Adaptive Methods for Machine Learning Cr. 3
Introduction to state-of-the-art online and adaptive algorithms with an emphasis on algorithm design and theoretical analysis. It will cover graduate-level advanced topics including online convex optimization, bandits, reinforcement learning as well as applications in training large language models like ChatGPT. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7650 Scalable and Secure Internet Services and Architecture Cr. 3
Advanced principles of distributed and cloud computing systems, Internet servers and data centers, content delivery networks, software-defined networking, Internet of things, multimedia networking, performance scalability, energy-aware resource management, security, cost-effective engineering design. Offered Every Other Year.
Prerequisite: ECE 5610 with a minimum grade of C or ECE 5650 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7680 Advanced Digital Image Processing and Applications Cr. 4
Advanced aspects, algorithms, methods in digital image processing and their corresponding applications in different fields, and key elements for machine learning and AI. Students develop comprehensive skills and knowledge in digital image processing. Offered Yearly.
Prerequisite: ECE 5690 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7690 Fuzzy Systems and Machine Learning Cr. 3
Major topics covered in this course include: fuzzy sets, fuzzy logic, fuzzy inference, fuzzy rule-based systems, fuzzy model identification, fuzzy control, fuzzy data clustering algorithms, optimization, genetic algorithms, neural networks, supervised learning algorithms, adaptive neuro-fuzzy inference systems, deep learning, convolutional neural networks, long short-term memory models, Markov decision processes, reinforcement learning. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7700 Statistical Communication Theory Cr. 4
Decision theory, binary decisions with single and multiple observations, signals in additive Gaussian noise, sequential decision theory, estimation theory, Kalmon filtering. Offered Yearly.
Prerequisite: ECE 5700 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7730 Telematics Cr. 4
Introduction to automotive telematics, mobile communication channels, error correction, automatic crash response, vehicle diagnostics, vehicle tracking, vehicle safety, navigation, and current topics in telematics. Offered Winter.
Prerequisite: ECE 5700 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7820 Electricity Market Cr. 3
Advanced electric energy system economics. Principles of energy system modeling and analysis. Electric energy industry structure and the economic issues concerning electricity generation, transmission, and distribution. Emphasis on renewable energy and smart grids, and consumer empowerment as market architecture drivers. Offered Fall.
Prerequisites: ECE 3330 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7850 Photonics Cr. 4
Topics include: light-matter interaction using the concepts of rays, electromagnetic waves, and quanta of light; electronic and photonic properties of materials; photonic devices for applications in communication, signal processing, data storage, and sensing; photonic solutions for quantum technologies in cryptography, communication, and computing. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7860 Operation and Control of Modern Power Systems Cr. 3
Topics include power system optimal dispatch; power system stability analysis and control; smart grid technologies and applications, covering modeling and control of renewable energy systems; distributed generation; microgrid architecture and control; demand response; energy storage for power grids; grid interface and integration of renewable sources; and electricity market fundamentals. Offered Fall.
Prerequisite: ECE 5430 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECE 7990 Directed Study Cr. 1-8
Supervised study and instruction in an advanced topic. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ECE 7995 Special Topics in Electrical and Computer Engineering II Cr. 1-4
A consideration of special subject matter in electrical and computer engineering. Topics to be announced in Schedule of Classes . Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ECE 7996 Research Cr. 1-8
Design, investigation and experimental work on some phase of electrical and computer engineering. Written report required. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ECE 8999 Master's Thesis Research and Direction Cr. 1-6
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ECE 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ECE 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ECE 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: ECE 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

ECE 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ECE 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ECE 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

ECE 9997 Doctoral Seminar Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

ECO - Economics

ECO 1000 Survey of Economics Cr. 4
Satisfies General Education Requirement: Social Inquiry
Scope of economics and the task of the economist in modern society; the market economy, its evolution and development; non-market economies; economic problems and prospects in the contemporary world. Not for ECO major or minor credit. Offered Every Term.

ECO 1400 Economic Inequality Cr. 4
Provides students with a broad survey of economic inequality. Covers conceptual debates on inequality, starting with varying theories that explain inequality. A unit will focus on inequality in the United States and in industrially developed nations, and a unit will focus on the tension between global inequalities as well as the emerging global middle class. Examines the divergent outcomes for the middle and working class in industrially developed (wealthy) nations as well as the growing global middle class, especially from emerging nations such as China and India. Offered Fall, Winter.

ECO 1600 Introduction to Economic Thought Cr. 4
Provides students with a broad historical survey of the field of economics, starting from the pre-industrial era. The course looks at economic ideas starting from the classical thinkers (Smith, Bentham, Malthus, Ricardo, Mill, and Marx) to the emergence of modern classical economics and institutional (Marshal and Veblin). It completes the survey by examining the development of macroeconomics of Keynes and his critics (Hayek, Schumpeter, and Friedman) and presents the modern contest of ideas, culminating with the economic consequences of the 2008 Financial Crisis. Offered Fall, Winter.

ECO 2010 Principles of Microeconomics Cr. 4
Satisfies General Education Requirement: Social Inquiry
Supply, demand, price at the level of the firm and industry; business institutions and their operation; determinants of wage and salary levels, interest rates, rent, profits, income distribution; public policy in relation to business and labor. This course satisfies Society of Actuaries Validation by Educational Experience (VEE) in Economics when taken with ECO 2020 with a B- or better in each course. Offered Every Term.

ECO 2020 Principles of Macroeconomics Cr. 4
Satisfies General Education Requirement: Social Inquiry
Determination of national income, consumption and saving, and investment; money, banking and the Federal Reserve; inflation and unemployment; monetary and fiscal policy; economic growth and productivity; the international sector. This course satisfies Society of Actuaries Validation by Educational Experience (VEE) in Economics when taken with ECO 2010 with a B- or better in each course. Offered Every Term.

ECO 2550 U.S. Health Care: Policy and Economics Cr. 4
Satisfies General Education Requirement: Social Inquiry
Provide students with a basic understanding of economics as applied to health, health care, and health policy. Covers economic factors relating to consumer, producer, and government behavior. Emphasis will be placed on analyzing issues currently affecting the U.S. health care system, using an international perspective to inform policy recommendations. Offered Fall, Winter.

ECO 3990 Directed Study Cr. 1
For the student who shows evidence of ability and interest in economic study and who desires opportunity for advanced reading in a special field. Arrange with advisor. Offered Every Term.
Prerequisites: ECO 1000-ZZZZ with a minimum grade of B
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Economics or Economics Honors; enrollment is limited to students in the Department of Economics.
Repeatable for 2 Credits

ECO 4991 Research in Economics Cr. 3-12
Economic research on an appropriate topic of the student's choice, conducted under faculty supervision. Does not count toward 32-credit requirement for the ECO major. Offered Every Term.
Prerequisites: ECO 1000-ZZZZ with a minimum grade of B
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Economics or Economics Honors; enrollment is limited to students in the Department of Economics.
Repeatable for 12 Credits

ECO 4997 Senior Honors Research Cr. 4
Individually arranged meetings with faculty member to discuss research methodology and readings in areas of research selected by instructor. A senior honors essay of a length proportionate to the selected topic will be required. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Economics Honors; enrollment is limited to Undergraduate level students; enrollment limited to students in a Bachelor of Arts degree; enrollment is limited to students in the Department of Economics.

ECO 5000 Intermediate Microeconomics Cr. 4
Theory of the firm and consumer. Analysis of a price system as a means to efficient allocation of productive resources. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ECO 2010 with a minimum grade of C and (MAT 1800 with a minimum grade of C, MAT 2010-6999 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4)

ECO 5020 Fundamentals of Economic Analysis I Cr. 4
This course assumes good knowledge of first semester calculus, and teaches additional mathematics necessary for Ph.D. study in economics, and (to a lesser extent) teaches some economic implications; course content includes: matrices, vectors and linear algebra; partial and total derivatives; scalar and vector functions; Jacobian derivative matrices and determinants; implicit function theorem; derivatives of implicit functions with one or more endogenous variables; unconstrained maximization with two or more variables; Lagrangians and constrained maximization; envelope theorem; differential and difference equations, and systems of differential and difference equations. Offered for undergraduate credit only. Offered Fall.
Prerequisites: ECO 5000 with a minimum grade of C and MAT 2010-6XXX with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5050 Intermediate Macroeconomics Cr. 4
Theory of national income determination. National output and income, saving and capital formation. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ECO 2020 with a minimum grade of C and (MAT 1800 with a minimum grade of C, MAT 2010-6999 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4)
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5100 Introductory Statistics and Econometrics Cr. 4
Elementary probability theory, discrete and continuous probability distribution, sampling distribution, interval estimation, hypothesis testing, and estimation and inference in simple and multiple regression models. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: ECO 2010 with a minimum grade of C, ECO 2020 with a minimum grade of C, and (MAT 1800 with a minimum grade of C, MAT 2010-6999 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4)
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5210 Market Power and Economic Welfare Cr. 4
Monopoly, oligopoly, and competition in U.S. industry; sources of market power and their effect on prices, profits, and technological progress. Case studies. Selected topics in antitrust policy. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: (MAT 1800 with a minimum grade of C, MAT 2010-6999 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4), ECO 2010 with a minimum grade of C, and ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5230 Environmental Economics Cr. 4
Externalities as the cause of environmental degradation and climate change. Externality in turn results from the failure of the market to develop prices that reflect the full global cost of production and consumption. The course also pays attention to normative issues. The population over which the normative issues are defined may include animals, plants and inanimate objects. Behavioral economics, in particular, will be brought to bear on the discussion throughout the course. Offered Fall, Winter.
Prerequisites: ECO 1000 with a minimum grade of D- or ECO 2010 with a minimum grade of D-

ECO 5250 Economic Analysis of Law Cr. 4
Economic analysis of property rights, torts, contracts, criminal law, the law of business organizations and financial markets, and the law of taxation. Economic analysis of litigation; the use of economics and statistics in litigation. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5260 Economic Analysis of Law II: Applications of Statistics and Econometrics Cr. 4
Examines applications of statistics and econometrics to legal issues that have been considered by the courts. Offered Winter.
Prerequisites: ((1 of (MAT 1800 with a minimum grade of C+, MAT 2010-6999 with a minimum grade of C+, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4) and ECO 2010 with a minimum grade of C+) or ECO 5100 with a minimum grade of C+)
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5270 Games of Strategy Cr. 4
Game theory studies how individuals, groups and firms make their decisions strategically when their actions affect each other. Introductory course with emphasis on applications to firms and markets. Standard concepts such as games with sequential moves, simultaneous moves, pure and mixed strategies, uncertainty, and repetition. Special topics include bargaining, strategic innovation, cooperative pricing, contract designs, incentive mechanisms, bidding, and auctions. Students do not need to know calculus to follow the lectures. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: MAT 1800 with a minimum grade of C, (MAT Permit to Reg ACT/SAT with a test score minimum of 4 and MAT 2010-6999 with a minimum grade of C), or MAT Permit to Reg ACT/SAT with a test score minimum of 4
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5300 International Trade Cr. 4
Factors in international relations; patterns of international specialization; balance of international payments; foreign exchange; commercial policy of United States and other countries; foreign investment and economic development; international economic cooperation. Offered for undergraduate credit only. Offered Fall.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5310 International Finance Cr. 4
Major policy issues in the field of international finance with emphasis on open economy macroeconomics. Topics include the balance of payments and the foreign exchange market; monetary and fiscal policies in open economies; the floating exchange rate system; international financial markets; and European monetary integration. Offered for undergraduate credit only. Offered Winter.
Prerequisites: (MAT 1800 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4), ECO 2020 with a minimum grade of C, and ECO 5050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5400 Labor Economics Cr. 4
Economics of labor markets. Determinants of earnings and methods of compensation, labor supply and demand, effects of taxes and subsidies on labor supply, choices of occupation and level of schooling, promotion and turnover, employment discrimination, economics of crime and punishment, regulation of professions, unions. Offered for undergraduate credit only. Offered Fall.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5410 Economics of Race and Gender Cr. 4
Theory and empirical evidence of race and gender differentials in the labor market. Topics include the difference in occupations and earnings, discrimination, poverty, and public policies. Offered for undergraduate credit only. Offered Fall.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5480 Economics of Work Cr. 3
Theoretical and empirical treatment of: labor market characteristics; labor demand and supply; issues of race, gender, and age; compensation and pay; issues of health and productivity; bargaining processes and the effects of unions; unemployment and job search; globalization. No economics major or minor credit. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C, ECO 2020 with a minimum grade of C, or ECO 1000 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BA in Labor Studies program; enrollment is limited to Undergraduate level students.

ECO 5490 American Labor History Cr. 4
Development of the American labor movement; its behavior in the contemporary scene. Labor's experiments with social, political, legal, and economic institutions. Comparisons with foreign labor movements. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: HIS 5290

ECO 5500 Public Finance Cr. 4
Role of government in a market economy: sources of market failure; public goods and externalities; principles of taxation and expenditures; tax incidence; federal tax structure; selected government expenditure programs. Offered for undergraduate credit only. Offered Fall, Spring/Summer.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5550 Economics of Health Care Cr. 4
Allocation of health care resources, with respect to demand and supply of health care. Role of hospitals, physicians, and health insurance; market imperfections and their role in the economics of health care. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: ECO 5000 with a minimum grade of C (may be taken concurrently)

ECO 5560 Pharmaceutical Economics Cr. 4
Introduces students to cost-effectiveness analysis and related economic tools used to determine the value of pharmaceuticals to society, tools which are increasingly being used by insurance programs to regulate access to drugs by patients. It will also cover the institutional landscape of the markets for development and sale of pharmaceuticals, with a focus on the features that have made pharmaceutical prices in the United States among the highest in the world, and policy options that are being considered to reduce these prices and that have become highly politically salient in recent years. Offered Yearly.
Prerequisite: ECO 5100 with a minimum grade of C or PH 3200 with a minimum grade of C or PH 3300 with a minimum grade of C or TIS 2300 with a minimum grade of C or TIS 3400 with a minimum grade of C or BIO 5040 with a minimum grade of C or BA 6090 with a minimum grade of C or STA 2210 with a minimum grade of C or PSY 2030 with a minimum grade of C or PSY 5100 with a minimum grade of C or SOC 3220 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5600 Introduction to Development Economics Cr. 4
National poverty and economic growth viewed from a historical and theoretical perspective; particular emphasis on national and international policies. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5700 Money and Banking Cr. 4
Role of the Federal Reserve System, the commercial banks, and the non-bank public (including financial intermediaries) in determining the money supply; central banking and techniques of monetary control; indicators and targets of monetary policy; and how money affects economic activity. Offered Fall, Winter.
Prerequisites: (MAT 1800 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4), ECO 2020 with a minimum grade of C, and ECO 5050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5720 Financial Economics Cr. 4
Fundamentals of investments: investment and financial markets, theoretical models of investment theory including efficient market hypothesis (EMH) and capital asset pricing model (CAPM); characteristics and analysis of stocks, bonds, and portfolios; equity evaluation through financial statements, industry analysis, and macroeconomic analysis; and advanced topics in either derivative assets (futures and options) or international investments. Offered for undergraduate credit only. Offered Winter.
Prerequisites: ECO 2010 with a minimum grade of C, ECO 2020 with a minimum grade of C, ECO 5050 with a minimum grade of C, and (MAT 1800 with a minimum grade of C, MAT 2010-6999 with a minimum grade of C, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4)
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 5800 Urban and Regional Economics Cr. 4
Introduction to the economic foundations of urban problems; land use, housing, poverty, transportation, local public finance; regional industry mix, income, growth and development; the national system of cities and location of firms. Offered Yearly.
Prerequisites: ECO 2010 with a minimum grade of C
Equivalent: UP 5820

ECO 5993 Writing Intensive Course in Economics Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisites: ECO 5000-9999 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment is limited to Undergraduate level students.

ECO 6000 Price and Allocation Theory Cr. 4
Introduction to the theory of consumer choice and the theory of production, and other selected topics. Primarily for M.A. students and for Ph.D. students who want to review. Offered Fall.
Prerequisite: ECO 5000 with a minimum grade of C and MAT 2010 with a minimum grade of C

ECO 6020 Causal Inference and Research Practice Cr. 4
This course has two parts: causal inference and research methods. Most questions in social and biomedical sciences are causal in nature: what would happen to individuals or groups if part of their environment were changed? The course will survey a range of statistical methods for answering such questions, and show how to implement them using statistical programming software. We will draw on research in the applied econometrics literature, though these methods also apply to topics in health, education, criminal justice, law, and political science. This second part of this course will introduce students to a set of productivity-boosting software tools for research, and engage students in a discussion on setting research agendas and choosing topics that will enable students to make rigorous causal claims for their findings and embark on fulfilling research careers. The course will also provide practical tips on research workflow, writing papers, and grant writing. Offered Yearly.
Prerequisite: ECO 6100 with a minimum grade of C or ECO 7100 with a minimum grade of C

ECO 6050 Macroeconomics Cr. 4
Determination of national income, unemployment and interest rates; theories of inflation; effectiveness of macroeconomic public policies. Primarily for M.A. students and for Ph.D. students who want to review. No credit after ECO 7050. Offered Winter.
Prerequisite: ECO 5050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6100 Introduction to Econometrics Cr. 4
Basic statistics, basic probability, hypothesis testing, and bivariate and multivariate regression analysis. Estimators studied are least squares, maximum likelihood and generalized least squares. Various model specification issues addressed: omitted variables, extraneous variables, category variables, multicollinearity, heteroscedasticity, and autocorrelation. Offered Fall.
Prerequisite: ECO 5100 and MAT 2010
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.

ECO 6230 Advanced Environmental Economics Cr. 4
This course examines the interaction between human economic activity and the natural environment. Much of economic production relies on extracting and processing natural resources, often resulting in environmental degradation that is not fully accounted for by market participants. The course explores how such activities disrupt ecological systems, who bears the associated costs, why these outcomes are frequently socially suboptimal, and what policy measures can be implemented to better align private incentives with social well-being. Particular attention is given to human-induced climate change, with additional forms of environmental impact considered as appropriate. Offered Winter.

ECO 6250 Advanced Economic Analysis of Law Cr. 4
Economic analysis of property rights, torts, contracts, criminal law, the law of business organizations and financial markets, and the law of taxation. Economic analysis of litigation; the use of economics and statistics in litigation. Advanced mathematical analysis of selected topics. No credit after ECO 5250. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6260 Economic Analysis of Law II: Applications of Statistics and Econometrics Cr. 4
Examines applications of statistics and econometrics to legal issues that have been considered by the courts. Offered Winter.
Prerequisites: (ECO 2010 with a minimum grade of C+ and MAT 1800-ZZZZ with a minimum grade of C+) or ECO 5100 with a minimum grade of C+
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6270 Advanced Games of Strategy Cr. 4
Game theory offers a tool for strategic thinking. It can be thought of as the art of maximizing your interest while competing with others when your and others' decisions affect with one another. Over the last few decades, game theory has been developed for the purpose of understanding social phenomena. It has become the major tool used by social scientists to understand, predict and regulate strategic interaction among agents who have conflicting interests. This course consists of a fairly comprehensive introduction to the game theory, and it will cover the standard game theory with introducing the principles and the equilibrium concepts to students. Offered Yearly.
Prerequisites: MAT 1800 with a minimum grade of C or MAT 2010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6300 Advanced International Trade Cr. 4
Factors in international relations; patterns of international specialization; balance of international payments; foreign exchange; commercial policy of United States and other countries; foreign investment and economic development; international economic cooperation. Advanced mathematical analysis of selected topics. No credit after ECO 5300. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6400 Advanced Labor Economics Cr. 4
Economics of labor markets. Determinants of earnings and methods of compensation, labor supply and demand, effects of taxes and subsidies on labor supply, choices of occupation and level of schooling, promotion and turnover, employment discrimination, economics of crime and punishment, regulation of professions, unions. Advanced mathematical analysis of selected topics. No credit after ECO 5400. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6415 Advanced Economics of Race and Gender Cr. 4
Theory and empirical evidence of race and gender differentials in the labor market. Topics include the difference in occupations and earnings, discrimination, poverty, and public policies. Advanced mathematical analysis of selected topics. No credit after ECO 5410. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6480 Advanced Economics of Work Cr. 3
Theoretical and empirical treatment of: labor market characteristics; labor demand and supply; issues of race, gender, and age; compensation and pay; issues of health and productivity; bargaining processes and the effects of unions; unemployment and job search; globalization. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment limited to students in the MA in Employ & Labor Relations program.

ECO 6510 Advanced Public Finance Cr. 4
Role of government in a market economy: sources of market failure--public goods and externalities; principles of taxation and expenditures; tax incidence; federal tax structure; selected government expenditure programs. Advanced mathematical analysis of selected topics. No credit after ECO 5500. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6550 Advanced Economics of Health Care Cr. 4
Allocation of health care resources, with respect to demand and supply of health care. Roles of hospitals, physicians, and health insurance; market imperfections and their role in the economics of health care. Advanced mathematical analysis of selected topics. No credit after ECO 5550. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6560 Pharmaceutical Economics Cr. 4
Introduces students to cost-effectiveness analysis and related economic tools used to determine the value of pharmaceuticals to society, tools which are increasingly being used by insurance programs to regulate access to drugs by patients. It will also cover the institutional landscape of the markets for development and sale of pharmaceuticals, with a focus on the features that have made pharmaceutical prices in the United States among the highest in the world, and policy options that are being considered to reduce these prices and that have become highly politically salient in recent years. Graduate students should have some coursework in statistics. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Professional level students.

ECO 6600 Advanced Development Economics Cr. 4
National poverty and economic growth viewed from a historical and theoretical perspective; particular emphasis on national and international policies. Advanced mathematical analysis of selected topics. No credit after ECO 5600. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6700 Advanced Money and Banking Cr. 4
Role of the Federal Reserve System, the commercial banks, and the non-bank public (including financial intermediaries) in determining the money supply; central banking and techniques of monetary control; indicators and targets of monetary policy; and how money affects economic activity. Advanced mathematical analysis of selected topics. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 2020 with a minimum grade of C and ECO 5050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 6800 Advanced Urban and Regional Economics Cr. 4
Introduction to the economic foundations of urban problems; land use, housing, poverty, transportation, local public finance; regional industry mix, income, growth and development; the national system of cities and location of firms. Advanced mathematical analysis of selected topics. No credit after ECO 5800. Offered for graduate credit only. Offered Yearly.
Prerequisite: ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ECO 7000 Microeconomic Theory I Cr. 4
Theory of choice; theory of cost and production; theory of the competitive firm. Price and output in non-competitive markets. General competitive equilibrium and welfare economics. Offered Winter.
Prerequisite: ECO 5000 with a minimum grade of C and ECO 7020 with a minimum grade of C and MAT 2010 with a minimum grade of C and MAT 2020 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7010 Microeconomic Theory II Cr. 4
Continuation of ECO 7000. Includes general equilibrium analysis and game theory. Offered Fall.
Prerequisite: ECO 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7020 Fundamentals of Economic Analysis I Cr. 4
This course assumes sound knowledge of first and second semester calculus, and teaches additional mathematics necessary for Ph.D. study in economics, and covers additional mathematics necessary for Ph.D. study in mathematics, and to a lesser extent some economic implications. Course content includes: matrices, vectors and linear algebra; partial and total derivatives; scalar and vector functions; Jacobian derivative matrices and determinants; implicit function theorem; derivatives of implicit functions with one or more endogenous variables; unconstrained maximization with two or more variables; Lagrangians and constrained maximization; envelope theorem; differential and difference equations, and systems of differential and difference equations. Offered for graduate credit only. Offered Fall.
Prerequisite: MAT 2010 with a minimum grade of C and ECO 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7021 Fundamentals of Economic Analysis II Cr. 4
Mathematical methods specific to macroeconomics and econometrics. Applications of matrix operations, distribution functions, estimation methods, difference equations, differential equations, inter-temporal optimization, calculus of variations, control theory. Offered Fall.
Prerequisite: MAT 2020 with a minimum grade of C and ECO 5000 with a minimum grade of C
Corequisite: ECO 7020
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7050 Macroeconomic Theory I Cr. 4
Determination of national income, employment, interest rates and the price level; static and dynamic models; cycle and growth models; classic, Keynesian and neo-Keynesian models. Offered Winter.
Prerequisite: ECO 5050 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7060 Macroeconomic Theory II Cr. 4
Mathematical and statistical methods: differential and difference analysis. Intertemporal economic theory: the household, the firm, and economic growth. Overlapping generations models and the Ricardian theory of government finance. Theories of the business cycle: real business cycle models, Keynesian and New Classical theories of the business cycle. Offered Fall.
Prerequisite: ECO 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7100 Econometrics I Cr. 4
Probability and statistics: moment generating functions, common families of statistical distributions, multiple random variables and properties of a random sample. Estimation and hypothesis testing: method of moments, generalized method of moments, maximum likelihood estimators, instrumental variable estimators, Bayes estimators, likelihood ratio tests, finite sample properties and asymptotic properties of OLS. Offered Fall.
Prerequisite: ECO 6100 with a minimum grade of C and ECO 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7110 Econometrics II Cr. 4
Modeling and estimation: generalized least squares, panel data models (fixed effects and random effects), system of equations (endogeneity, identification), models with discrete dependent variables (probit, logit), models with limited dependent variables (truncation, censoring), stationary time-series (ARMA), vector-autoregression (VAR, VMA), non-stationary time-series (unit roots, cointegration). Offered Winter.
Prerequisite: ECO 7100 with a minimum grade of C or ECO 6020 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7120 Econometrics III Cr. 4
Advanced economic techniques in microeconomics and macroeconomics. In the first half of the course, emphasis on specification, estimation, interpretation, and testing of microeconomic models. The second half will cover statistical models for the analysis of economic time series data, with applications in macroeconomics and finance. Offered Yearly.
Prerequisite: ECO 7100 with a minimum grade of C and ECO 7110 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7200 Industrial Organization I Cr. 4
Theories of competition and market power. Topics include concentration, scale economies, product differentiation, entry barriers, collusion, mergers, price discrimination, information, and advertising. Offered Every Other Year.
Prerequisite: ECO 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7210 Industrial Organization II Cr. 4
Economic analysis of antitrust policy and public regulation of industry. Rationale for regulation and mandates of various regulatory agencies. Problems in public utility rate-making. Misallocations induced by regulation. Role of competition in regulated industries. Offered Every Other Year.
Prerequisite: ECO 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7400 Labor Economics and Human Resources Cr. 4
Labor force participation and composition; factors affecting wage levels (money and real) and wage structure. Theoretical and empirical analyses of occupational choice, labor mobility, promotion, turnover, unemployment, the effects of taxation, retirement and income inequality. Offered Every Other Year.
Prerequisite: ECO 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7410 Economics of Human Resources Cr. 4
Theoretical and empirical analyses of labor supply and family allocation of time; the return to education; role of general and firm-specific human capital and job mobility in wage growth over a career; race and gender differences in the labor market; intergenerational transfers and mobility. Offered Every Other Year.
Prerequisite: ECO 6000 with a minimum grade of C and ECO 6100 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7550 Economics of Health Care I Cr. 4
Basic introduction to health care economics including allocation of health care resources, economics of information, and the role of advertising. No credit after ECO 5550. Offered Every Other Winter.
Prerequisite: ECO 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7560 Economics of Health Care II Cr. 4
Particular roles of hospitals, physicians, and health insurance in the economy. Analysis of government policies. No credit after ECO 5550. Offered Every Other Year.
Prerequisite: ECO 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.

ECO 7996 Research in Economics Cr. 1-8
Open to qualified students who desire opportunity for research and directed study. May be conducted as seminar. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Economics; enrollment is limited to Graduate level students.
Repeatable for 16 Credits

ECO 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ECO 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ECO 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: ECO 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

ECO 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ECO 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ECO 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ECO 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ECO 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

ED - Education

ED 3990 Directed Study Cr. 1-6
Offered Every Term.
Repeatable for 6 Credits

ED 4998 Education Honors Thesis Cr. 3-4
Independent research project, essay, or creative project. Students are responsible for identifying their own research project and full-time faculty mentor. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment limited to students in the College of Education.

ED 5998 Field Studies Cr. 1-8
Supervised professional study in field settings. Offered Every Term.
Equivalent: TED 5998
Repeatable for 8 Credits

ED 7990 Directed Study Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ED 7996 Directed Research Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: TED 7996
Repeatable for 16 Credits

ED 7998 Field Studies Cr. 1-8
Supervised professional study in field situations. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: TED 7998
Repeatable for 16 Credits

ED 7999 Terminal Master's Seminar and Essay or Project Cr. 3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Equivalent: TED 7999

ED 8999 Master's Thesis Research and Seminar Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ED 9989 Doctoral Dissertation Research and Direction Cr. 1-16
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 30 Credits

ED 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ED 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Doctoral Candidate; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ED 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: ED 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

ED 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ED 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ED 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ED 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ED 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

EDA - Educational Administration

EDA 7625 Leadership, Administration and the Principalship Cr. 4
Provides a conceptual framework of the administrative process; examines interrelationships between the person, the job, the organizational setting, and the wider social context of education; examines the ways in which political, social and economic factors influence administrative decision making and leadership. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership, Educational Leadership or Sports Administration; enrollment is limited to Graduate level students.

EDA 7660 Administrative Leadership in School-Community Relations and Public Relations Cr. 3
Relationships between the school and the community; special reference to social change, community needs and the total school program; demographic and public relations techniques for school improvement, program development in special area, and millage campaigns in the context of the structure, function, and organization of the total educational system in a multicultural and pluralistic society. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership, Educational Leadership or Sports Administration; enrollment is limited to Graduate level students.

EDA 7670 Economic Issues in Education Cr. 3
Economic issues in education at the local, intermediate, state, and federal levels. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership, Educational Leadership, Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EDA 7675 Public School Finance and Budgeting Cr. 4
Elementary and secondary public school finance and budgeting: legal foundations of school funding, how revenue is raised and distributed by states, the ways resources are allocated at the local district and school levels. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.

EDA 7690 Introduction to Michigan School Law Cr. 4
Constitutional and legal factors affecting Michigan public education. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.

EDA 7730 Intersectional Issues in Educational Leadership Cr. 3
Intersectional Issues in Educational Leadership examines how social identities and systems of power converge in schools to create differential experiences for students, teachers, administrators, and leaders. The course covers the historical and contemporary workings of such systems of domination as racism, sexism, classism, hetero-patriarchy, and ableism —particularly as they inform discourses, policies, and practices in education. The course also focuses on theories and praxis to advance equity and justice through educational leadership. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership, Educational Leadership, Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EDA 7735 Advanced Intersectional Issues in Educational Leadership Cr. 3
Advanced Intersectional Issues in Education will further students' understanding of the foundations and development of intersectional thought from the 1970s to the present, particularly as it relates to education and the social sciences. It will also support students in applying intersectional theory to their doctoral research. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EDA 7800 Administration and Supervision of Special Education Cr. 4
Professional problems; standards and procedures; references to history, development, philosophy, legal provisions, rules and regulations; major developments and trends at federal, state and local levels; services of other organizations and agencies. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.

EDA 7810 Michigan Special Education Law Cr. 4
Implications of statutes and regulations undergirding the education of the handicapped; educator's role in implementing, monitoring and influencing state and federal mandates for special education. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.

EDA 7820 Emergent Policies in Special Education Administration Cr. 2
Discussion of research and literature relating to changing and emergent policies. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.

EDA 7830 Practicum in Special Education Administration and Supervision Cr. 3-6
Supervised field-based experiences or individualized and contracted plan of supervised field study for special education administrators, curriculum resource consultants, supervisors, administrative consultants, and project directors. Offered Every Term.
Prerequisite: EDA 7800 with a minimum grade of C and EDA 7810 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

EDA 7997 Field Studies Cr. 1-8
Supervised professional study in the field of educational leadership. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership, Educational Leadership, Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.
Repeatable for 16 Credits

EDA 7999 Terminal Master's Seminar and Essay or Project Cr. 3
The objective of this course is to give students the opportunity to explore the process of action research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.

EDA 8620 School Personnel Administration Cr. 3
Analysis of the personnel function in educational administration. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EDA 8625 Introduction to School Human Resources Cr. 3
The purpose of this course is to introduce students to the legal, practical, and instructional aspects of school human resources. The approach to the topics will be through the lens of the building administrator. Particular attention is paid to topics including teacher evaluation, teacher coaching, staff recruitment, and building level human resources practices. The course includes a blend of legal and practical approaches to supporting the human capital needs of a school. The course recognizes that equity and access are key concepts in the school human resources environment. Particular focus will be placed on legal requirements in the State of Michigan. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.

EDA 8630 Supervision Cr. 3
Basic issues in motivation, job satisfaction, and goal attainment in educational and human service organizations. Establishing productive supervisor/staff relations. Monitoring employee performance. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership, Educational Leadership, Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EDA 8650 Staff Development and School Improvement Cr. 3
Planning, design, and implementation of in-service and of staff development programs. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

EDA 8990 Internship in Administration Cr. 1-8
Supervised experience in administration of public education, government, business, and social agencies. In person internship with online seminar. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership, Educational Leadership, Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

EDA 8995 Internship in Elementary and Secondary Administration Cr. 1-8
Supervised experience in administration at the Elementary and Secondary levels. In person internship in cooperating school system. Includes online seminar. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership or Educational Leadership; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

EDA 8997 Internship in Central Office Administration Cr. 1-8
Supervised experience in administration at the Central Office level. In person internship in cooperating school system. Includes online seminar. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

EDP - Educational Psychology

EDP 1000 Psychology of Human Happiness Cr. 3
Teaches students the underlying science and psychology of living a more satisfying and fulfilling life. This includes teaching students how to apply cutting edge findings in psychological science in their own personal and professional lives. Offered Every Term.

EDP 3101 Introduction to Applied Behavior Analysis Cr. 4
Students will become familiar with techniques used in implementing Applied Behavior Analysis with people with special needs including Autism. Offered Fall.

EDP 3102 Techniques of Applied Behavior Analysis Cr. 4
Students will expand their knowledge of techniques used in implementing Applied Behavior Analysis with people with special needs including Autism. Advanced topics of Behavior Analysis will be taught. Offered Winter.
Prerequisites: EDP 3101 with a minimum grade of C- and EDP 3105 with a minimum grade of C- (may be taken concurrently)

EDP 3103 Applied Behavior Analysis Assessment and Treatment Planning Cr. 4
Students will learn various assessment and treatment planning techniques utilized in Applied Behavior Analysis. Offered Fall.
Prerequisites: EDP 3102 with a minimum grade of C- and EDP 3106 with a minimum grade of C- (may be taken concurrently)

EDP 3104 Field Experience in Applied Behavior Analysis I Cr. 2
Accompanies in EDP 3101 - Introduction to Applied Behavior Analysis and exposes students to observation experiences of working with persons with Autism. Offered Fall.
Prerequisites: EDP 3101 (may be taken concurrently)

EDP 3105 Field Experience in Applied Behavior Analysis I Cr. 2
Accompanies EDP 3102: Techniques of Applied Behavior Analysis and provides students beginning opportunities to work within the ABA model with persons with Autism. Offered Winter.
Prerequisites: EDP 3102 with a minimum grade of C- (may be taken concurrently)

EDP 3106 Field Experience in Applied Behavior Analysis II Cr. 2
Accompanies EDP 3103: Applied Behavior Analysis Assessment and Treatment Planning and provides students increasing independence in assessing and treating persons with Autism within the ABA model. Offered Fall.
Prerequisites: EDP 3103 (may be taken concurrently)

EDP 3310 Educational Psychology Cr. 3
Introductory course in educational psychology. Topics include, but are not limited to: child and adolescent development, cognitive and behavioral learning theories, information processing, motivation and evaluation. Includes study of exceptional children and those with cultural differences. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.

EDP 5450 Child Psychology Cr. 2-3
Basic concepts, research findings and problems regarding child, pre-adolescent and early adolescent developmental needs as they apply to school and home environments; includes study of exceptional children and those with cultural differences. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.

EDP 5480 Adolescent Psychology Cr. 2-3
Basic concepts, research findings and problems regarding early adolescent and adolescent developmental needs as they apply to school and home environments; includes study of exceptional children and those with cultural differences. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.

EDP 6210 Foundations of Educational Psychology Cr. 3
Introduction to current issues in educational psychology. Topics include, but are not limited to: child and adolescent development, learning, motivation, information processing and evaluation. Includes study of the exceptional child and those with cultural differences. Offered Fall, Winter.

EDP 7101 Foundations of Applied Behavior Analysis Cr. 3
Principles and concepts of Applied Behavior Analysis (ABA), fundamental vocabulary, and methodology of the science of behavior management. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7102 Assessment Techniques in Applied Behavior Analysis Cr. 3
Overview of assessment techniques used in behavioral intervention planning, functional assessments, functional assessment interview, descriptive and functional analysis, data collection and interpretation, preference assessment, and interpretation of evaluation tools. Offered Yearly.
Prerequisite: EDP 7101 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7103 Applied Behavior Analysis Treatment Planning Cr. 4
Techniques used in behavioral intervention planning, data collection, interpretation of assessments, development of goals and objectives, overview and application of treatment interventions and considerations. Topics include social validity, reinforcement procedures, teaching procedures, behavior reduction procedures, and stimulus equivalence. Assignments include literature research and paper presentations, participation in discussions, and implementation of behavioral principles. Offered Yearly.
Prerequisite: EDP 7102 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7104 Research Methods in Applied Behavior Analysis Cr. 4
Course includes an overview of data methods used in Applied Behavior Analysis. Students will become familiar with using and analyzing various data collection and display methods. Students will be able to assess data through visual analysis and raw data, be able to identify various forms of experimental designs and become familiar with the contexts for using experimental designs and data collection methods. The majority of the course will be devoted to methods related to single-case research. Offered Yearly.
Prerequisite: EDP 7101 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7105 Ethical Practice in Applied Behavior Analysis Cr. 3
Responsibility, values, ethics, and practice principles of the field of behavior analysis. Offered Yearly.
Prerequisite: EDP 7111 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7106 Field Experience in Applied Behavior Analysis I Cr. 2
Students will spend supervised time in the field practicing skills learned in the BCBA (Board Certified Behavior Analyst) course sequence. Students will work directly with multiple clients using a variety of Applied Behavior Analysis techniques. Specific focus on supervised one on one behavioral intervention work with children. Course content will cover intensive behavior intervention service delivery models and the treatment components related to outcome gains. Offered Yearly.
Corequisite: EDP 7101
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7107 Field Experience in Applied Behavior Analysis II Cr. 2
Students will spend supervised time in the field practicing skills learned in the BCBA (Board Certified Behavior Analyst) course sequence. Students will work directly with multiple clients using a variety of Applied Behavior Analysis techniques. Offered Spring/Summer.
Prerequisite: EDP 7106 with a minimum grade of C
Corequisite: EDP 7102
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7108 Field Experience in Applied Behavior Analysis III Cr. 2
Students will spend supervised time in the field practicing skills learned in the BCBA (Board Certified Behavior Analyst) course sequence. Students will work directly with multiple clients using a variety of Applied Behavior Analysis techniques. Specific focus on development and writing of treatment plans, and other reports (supervision notes, programs, behavior plans, discharge reports). Offered Spring/Summer.
Prerequisite: EDP 7107 with a minimum grade of C
Corequisite: EDP 7103
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7109 Field Experience in Applied Behavior Analysis IV Cr. 2
Students will spend supervised time in the field practicing skills learned in the BCBA (Board Certified Behavior Analyst) course sequence. Students will work directly with multiple clients and staff using a variety of Applied Behavior Analysis techniques. The highest level of independent behavioral intervention work including managing all necessary assessment, treatment, case management, and intervention training and supervision of parents and technicians is expected in this semester. Offered Winter.
Prerequisite: EDP 7108 with a minimum grade of C
Corequisite: EDP 7111
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7110 Field Experience in Applied Behavior Analysis V Cr. 2
Students will spend supervised time in the field practicing skills learned in the BCBA (Board Certified Behavior Analyst) course sequence. Students will work directly with multiple clients and staff using a variety of Applied Behavior Analysis techniques. The highest level of independent behavioral intervention work including managing all necessary assessment, treatment, case management, and intervention training and supervision of parents and technicians is expected in this semester. Offered Winter.
Prerequisite: EDP 7109 with a minimum grade of C
Corequisite: EDP 7105
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7111 Advanced Applied Behavior Analysis Treatment Planning Cr. 4
Students will learn advanced application techniques of Behavior Analysis and corresponding considerations. Topics of discussion include management of severe behavior problems, reduction of stereotypic behavior, toilet training, feeding plans, and methods for cognitively delayed or highly skilled clients. Assignments include literature research and paper presentations, participation in discussions, and implementation of behavioral principles. Offered Yearly.
Prerequisite: EDP 7103 with a minimum grade of C
Corequisite: EDP 7109
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7112 Conceptual Analysis in Applied Behavior Analysis Cr. 3
History and Philosophy of Applied Behavior Analysis (ABA), theoretical approaches to understanding behavior, and interpretations of the concepts and principles of behavior. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7113 Organizational Behavioral Management in Applied Behavior Analysis Cr. 3
Concepts of time management and supervision based on principles of Applied Behavior Analysis (ABA), including behavioral skills training, techniques in providing feedback to staff, and performance management in clinical settings. Offered Yearly.
Prerequisite: EDP 7109 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7190 Couples Therapy Cr. 3
An introduction to the research, theories, skills and assessments related to couples therapy. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Counseling Psychology or School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.

EDP 7200 Systemic Theories and Family Therapy Cr. 3
Survey of systemic theories and family systems therapy. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7220 Psychotherapy with Children and Adolescents Cr. 4
Theory of psychotherapy, including stages of therapy, issues of therapy, and techniques of therapy with children and adolescents. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Counseling Psychology or School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.

EDP 7240 Systems of Psychotherapy Cr. 3
Survey and synthesis of leading systems of psychotherapies and interventions. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Counseling Psychology or School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.

EDP 7260 School-Based Consultation and Intervention Cr. 3
Consultation; academic and psychotherapeutic interventions. Emphasis on practical skills needed to work directly or indirectly with individuals and groups in the school setting. Offered Winter.
Prerequisite: EDP 7220 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7300 Ethics, Standards, and the Practice of Psychology Cr. 4
Legal, ethical, and professional issues confronting the practitioner. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.

EDP 7350 The Learning Process Cr. 2-3
Substantive issues involved in learning as they relate to school practice. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7370 Psychopathology and Diagnosis Cr. 3
Overview of descriptive psychopathology, diagnosis, treatment approaches and recovery. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7400 Foundations of Social Psychology Cr. 3
Systematic study of social psychology; implications for research and applied settings. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7410 Human Developmental Psychology Cr. 3-4
Survey of research from psychoanalytic and learning viewpoints on human development from birth to adulthood. Emphasis on school environment and community psychology practice. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7420 Introduction to Behavioral Psychology Cr. 4
Basic principles and theories of behavioral psychology. Theoretical aspects of both operant and respondent conditioning. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7430 Foundations in Cognitive, Behavioral, and Affective Therapeutic Methods Cr. 3
Cognitive, behavioral, and affective basis of behavior for therapeutic methods and interventions. Offered Fall.
Prerequisite: EDP 7370 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7520 Professional Ethics and Standards for Psychologists Cr. 3
An overview of scientific and professional ethics and standards related to the practice of psychology. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Counseling Psychology or School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.

EDP 7561 Assessment of Cognitive Functioning Cr. 4
Theory, administration, scoring use, and interpretation of objective assessments of intelligence, achievement, perceptual function, and personality. Eight full administrations of one of the assessments: Binet, Wechsler, Bayley or McCarthy Scales. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Counseling Psychology or School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.
Fees: $180

EDP 7562 Assessment of Personality and Social-emotional Functioning Cr. 4
Theory of personality development; administration, scoring, and interpretation of personality and social-emotional assessments; data integration and report writing. Offered Fall.
Prerequisite: EDP 7490 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Counseling Psychology or School and Community Psycholog; enrollment is limited to Graduate level students.
Fees: $75

EDP 7563 Assessment of Academic Achievement Cr. 3
Students will administer, score, and interpret various academic achievement measures, integrate data and write instruction-driven reports, and communicate test results verbally. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in School and Community Psycholog; enrollment is limited to Graduate level students.

EDP 7564 Assessment and Intervention for Academic Learning Difficulties Cr. 4
Students will learn about typical development of academic skills, historical and current methods of Specific Learning Disabilities evaluation, and linking academic assessment data to academic interventions for all levels of learning difficulties; emphasis on reading. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $125

EDP 7610 Child and Adolescent Psychopathology Cr. 3
Study of theories of psychopathology in children and adolescents and the application to these theories to practice. Differential diagnosis using currently acceptable classification systems. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Counseling Psychology or School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.

EDP 7991 Capstone Project in Applied Behavior Analysis: Introduction Cr. 1
Develop knowledge in the Institutional Review Board (IRB) application process and construct a research question to prepare for their Capstone project. Offered Yearly.
Prerequisite: EDP 7104 with a minimum grade of C
Corequisite: EDP 7103
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7992 Capstone Project in Applied Behavior Analysis I Cr. 2
Develop competence in defining a research problem, designing a method to address the problem, and reviewing expected outcomes and conclusions of the intervention. Use the Capstone research model, which answers questions of practical importance such as developing an evaluation method or evaluating an intervention, curriculum, or protocol within a particular agency or practice setting. Students will extend what they learned in EDP 7991 Capstone Project introduction and the methods for an intervention to use in a clinic setting and apply for approval from the Wayne State University Institutional Review Board. Offered Yearly.
Prerequisite: EDP 7991 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7993 Capstone Project in Applied Behavior Analysis II Cr. 2
Develop competence in defining a research problem, designing a method to address the problem, and reviewing expected outcomes and conclusions of the intervention. Use the Capstone research model, which answers questions of practical importance such as developing an evaluation method or evaluating an intervention, curriculum, or protocol within a particular agency or practice setting. Students will extend work from EDP 7992 Capstone Project I to include development of competence in conducting and reporting an investigation including evidence-based methods, analyzing data, and drawing and reporting on a conclusion. Offered Yearly.
Prerequisite: EDP 7992 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EDP 7996 Research in Educational Psychology Cr. 1-8
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

EDP 8250 Fundamental Studies in Educational Psychology IV Cr. 3-9
Advanced study of a specific area in psychology with application to educational practice. Topics to be announced in Schedule of Classes . Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Educational Psychology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Education or Doctor of Philosophy degrees.
Repeatable for 9 Credits

EDP 8318 Integrated Assessment Practicum Cr. 3
Building on prior assessment courses, in this practicum experience students will learn to integrate across assessment practices in the cognitive, visual-motor, adaptive behavior, academic achievement, and social-emotional-behavioral and personality domains. Emphasis will be on conceptualizing and conducting individual cases involving a variety of psycho-educational difficulties. Offered Fall.
Prerequisite: EDP 7563 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $100

EDP 8319 Pre-practicum in Clinical Procedures Cr. 1-8
Opportunity to provide psychological services (e.g., psychotherapy) to clients under supervision. Offered Winter.
Prerequisites: EDP 7240 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to students with a major in Counseling Psychology; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

EDP 8320 Practicum in Clinical Procedures Cr. 1-8
A clinical practicum experience in one of the organized health care settings cooperating with the University is required. Diagnostic testing/assessment and psychotherapy with supervision of not less than two hours per week is also required. Supervision must be provided by a licensed psychologist or approved supervisor through the Michigan Board of Psychology. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Counseling Psychology or School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.
Repeatable for 8 Credits

EDP 8330 Practicum/Field Experience in School Psychology Cr. 1-8
Internship as a school psychologist in an approved school with school-age pupils. Interns under supervision of person holding Michigan School Psychologist Certificate. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in School and Community Psycholog; enrollment is limited to Graduate level students; enrollment limited to students in a Education Specialist Cert or Master of Arts degrees.
Repeatable for 8 Credits

EDP 8360 Internship in School Psychology Cr. 1-8
Advanced internship as school psychologist for those holding a Preliminary School Psychologist Certificate. Internship in an approved school with school-age pupils; supervision by University faculty and person with Michigan School Psychologist Certificate. Offered Every Term.
Prerequisite: EDP 8330 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

EDP 9000 Doctoral Seminar in Counseling Psychology Cr. 3
The primary aim of this course is to offer a comprehensive review of counseling psychology as it relates to clinical practice, training and supervision, research, and advocacy. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 9310 Doctoral Seminar in Educational Psychology Cr. 3
An examination of psychological concepts relevant to the development and carrying forward of the work of the schools. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

EDP 9319 Advanced Practicum in Clinical Procedures Cr. 1-8
Practicum on campus or with a cooperating sites emphasizing advanced level skills in psychotherapy and psychological assessment, supervised a Licensed Psychologist and/or university faculty/staff. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Educational Psychology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Education or Doctor of Philosophy degrees.
Repeatable for 8 Credits

EDP 9320 Internship in Clinical Procedures Cr. 1-8
Placement as a pre-doctoral psychology intern in appropriate organized health care setting under the supervision of a licensed psychologist. Offered Every Term.
Prerequisite: EDP 8320 with a minimum grade of C or EDP 8330 with a minimum grade of C or EDP 8340 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

EED - English Education

EED 5200 Methods of Teaching English (7-12) Cr. 3
Introduction to the purposes and methods of teaching English language arts in grades seven through twelve. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.

EED 6120 Teaching Composition Methods (7-12) Cr. 3
Methods for composition instruction, grades 7-12, including writing processes, writing workshop, digital literacies, and the teaching of grammar and vocabulary in the context of writing instruction. Offered Fall.
Prerequisite: EED 5200 and EED 6330
Corequisite: TED 5600
Restriction(s): Enrollment limited to students in the College of Education.

EED 6125 Teaching Composition Clinical (7-12) Cr. 2
This course offers school-based English/composition clinical experience in the 7-12 grade band for pre-service teachers. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with clinical instructors and mentor educators. Offered Fall.
Prerequisite: EED 5200
Corequisite: EED 6120

EED 6210 Language, Literacy, and Learning Cr. 3
This course explores the teaching of language, grammar, and usage in English language arts classrooms, based in sociocultural and sociolinguistic approaches to teaching literacy and language. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.

EED 6310 Young Adult Literature Cr. 3
Standards for evaluating young adult literature. Selection of literature in relation to students' interests and reading abilities in grades 7-12. Analysis of literary and sociocultural factors affecting adolescent experiences with young adult texts. Offered Yearly.
Equivalent: INF 6530

EED 6330 Teaching Literature Methods (7-12) Cr. 3
Pedagogical approaches to the teaching of literature in grades 7-12. Structure of literary genres in relation to sociocultural and critical theories of teaching literature in grades 7-12. Offered Winter.
Prerequisite: EED 5200
Corequisite: TED 6620
Restriction(s): Enrollment limited to students in the College of Education.

EED 6335 Teaching Literature Clinical (7-12) Cr. 2
This course offers school-based English/literature clinical experience in the 7-12 grade band for pre-service teachers. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with clinical instructors and mentor educators. Offered Winter.
Prerequisite: EED 5200
Corequisite: EED 6330

EER - Educational Evaluation and Research

EER 1501 Quantitative and Qualitative Methodology Cr. 3
The rationale of quantitative methods applied to research design, sampling, instruments, and descriptive and inferential statistics via university supplied software; and qualitative methods for categorical data including nonrandom sampling, coding, and networks/displays. Applicable to all majors for solving real-world problems and defending the results. Offered Fall, Winter.

EER 4501 Quantitative and Qualitative Research, Measurement, and Program Evaluation Cr. 3
Provides an introduction to systematic disciplined inquiry and program evaluation. Topics in quantitative methods to be covered include : experimental, quasi-experimental, and survey research; instrument reliability and validity; descriptive and inferential statistics. Topics in qualitative methods to be covered include: grounded theory, ethnography, case study; trustworthiness, coding, and data networks/displays. Offered Fall, Winter.

EER 7410 Introduction to Program Evaluation Cr. 1
Introduces the fundamental processes of evaluation: clarification, design, implementation, and evaluation. Consists of lectures from the instructor of record and guest lectures from program faculty introducing the fundamentals of program evaluation and materials covered in-depth throughout the program. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

EER 7420 Culturally Responsive Program Evaluation Cr. 3
Examines ethical practice responsive to stakeholder rights, needs, and values tied to cultural contexts and the relevance of cultural practices as it pertains to ethical decision making in project design. Students will create and evaluate ethically produced project design goals by engaging with and in the methods of social science research. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

EER 7430 Organizational Theory for Evaluation Cr. 3
Designing, implementing, and evaluating a program through an understanding of the stakeholders making up an organization and their interact among themselves. Breaks down the fundamentals of organizational theory in the context of program evaluation to better determine whether or not a project is well designed and implemented, whether or not it meets the diverse needs of and adheres to the values of stakeholders. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

EER 7610 Evaluation and Measurement Cr. 2-3
Principles and practices of evaluation and measurement with special focus on behavioral goals. Informal and formal evaluational strategies. Problems of self-evaluation. Logical, philosophical, and linguistic problems of evaluational methods and devices. Metrical analyses and standards. Innovations in educational assessment and accountability. Teacher-made tests. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

EER 7630 Fundamentals of Statistics Cr. 3
Review of mathematics essential for statistics, sampling, computer use. Basic patterns of statistical inference, confidence estimation and significance testing regarding measures of averages, dispersion, correlation, and selected non-parametric statistics. One-way and two-way analysis of variance. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

EER 7640 Fundamentals of Quantitative Research Cr. 3
Basic skills in educational research; nomenclature, problem, theory, hypothesis formulation; bibliographical and documentary techniques; retrieval systems; development of data-gathering instrumentation; computer orientation and research uses; collection and organization of data; manuscript development; report writing; techniques, methodologies for descriptive and experimental inquiry. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

EER 7650 Computer Use in Research Cr. 3
Introduction to computer use in educational research with emphasis on using statistical packages (MIDAS and SPSS, BASIC programming language); writing statistical programs. Offered Every Term.
Prerequisite: EER 7630 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 7870 Qualitative Research I: Introduction Cr. 3
Explores frameworks that inform what knowledge is and how it is produced. Review of validity, reliability, positionality, and ethics in qualitative research. Overview of major research designs (ethnography, grounded theory, phenomenology, case study, and narrative analysis). Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

EER 7880 Fundamentals of Ethnographic Research Cr. 3
Collecting, analyzing, and writing up findings from ethnographic data (participant-observation field notes, interviews, and artifacts); issues of rigor in naturalistic research in education. Offered Fall, Winter.
Prerequisite: EER 7870 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 7910 Qualitative Methods for Diversity and Inclusion Cr. 3
Explores qualitative methodologies at the intersection of diversity and inclusion. Includes readings that address qualitative methodologies and theories that relate to race, ethnicity, gender, sexuality, dis/ability, age, class, language, and other aspects of diversity and inclusion. Examines the role of global communities in qualitative research. Offered Fall.
Prerequisite: EER 7870 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 7920 Qualitative Methods for Community and Classroom Research Cr. 3
Explores qualitative methodologies for community research in local contexts. Examines principles of, and considerations for, place-based research in nearby communities. Designs a community-based research project, includes a focus on participatory action research, and examines the role of local communities in qualitative research. Offered Winter.
Prerequisite: EER 7870 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8520 Qualitative Research II: Design and Data Collection Cr. 3
Examines approaches to qualitative data collection (interviews, focus groups, observations, documents, text, sound, video, and images). Readings in, and applications of, major qualitative research designs (ethnography, grounded theory, phenomenology, case study, narrative, and visual analysis). Offered Fall.
Prerequisite: EER 7870 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8530 Qualitative Research III: Data Analysis and Reporting Cr. 3
Examines approaches to qualitative data analysis and computer assisted qualitative data analysis software (CAQDAS). Readings in, and applications of, major forms of qualitative data analysis (ethnography, grounded theory, phenomenology, case study, narrative, and visual analysis). Also addresses discourse analysis and theoretical analysis. Offered Winter.
Prerequisite: EER 8520 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8550 Advanced Qualitative Inquiry: Innovations in Theory Cr. 3
Explores contemporary developments in theories of qualitative research. Examines recent theories in education and social sciences research and connects theory with methodological practice. Develops approaches to research design that are grounded in theoretical frameworks. Offered Fall.
Prerequisite: EER 8530 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8560 Advanced Qualitative Inquiry: Innovations in Practice Cr. 3
Explores contemporary developments in the practice of qualitative research, and situates recent trends within historical developments in the field. Offered Winter.
Prerequisite: EER 8550 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8700 Advanced Qualitative Program Evaluation Cr. 3
Create criteria for needs, standards and performances by assembling qualitative data on the activity, aspirations, problems, and accomplishments of stakeholders of a given program. Evaluation is presented as a process of decision making. Students will be able to practice and produce evaluations as a process specific to a particular program situation. Offered Fall.
Prerequisite: EER 7870 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8710 Advanced Ethnographic Research Cr. 4
Use of fieldwork to learn group interview, video collection and analysis, ethnographic survey, narrative and poetic analysis; deepening the understandings about culturally-sensitive research, rigor, and the politics of representation. Offered Winter.
Prerequisite: EER 7880 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8720 Advanced Quantitative Program Evaluation Cr. 3
Educational and school program evaluation: alternative approaches; students propose theory-based designs and strategies. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

EER 8760 Advanced Measurement I Cr. 3
Classical measurement theory including scaling, measurement error, reliability, validity. Review of strong statistics versus weak measurement debate. Empirical methods of psychometric applications in education and educational psychology. Offered Yearly.
Prerequisite: EER 7610 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8770 Advanced Measurement II Cr. 4
Modern measurement theory. Item response theory, including one and three parameter models, detecting item bias, multi-dimensional scaling. Offered Winter.
Prerequisite: EER 8760 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8800 Variance and Covariance Analysis Cr. 4
Multiple, partial, canonical correlation: variance and covariance analysis; Models I and II. Statistical analysis in experimental designs; Random Blocks, Latin Squares, Greco-Latin Squares, simple and complex factorials, confounding, fractional and split-plot designs. Supporting topics and techniques; missing observations; adjustment of means; probing the homogeneity of means and variances; study of contrasts; orthogonal polynomials and computer usage. Offered Yearly.
Prerequisite: EER 7630 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

EER 8820 Multivariate Analysis Cr. 4
Discriminant analysis, profile analysis; placement and classification problems; component and factor analysis. Supporting topics and techniques; transformation of variables, computer usage. Offered Yearly.
Prerequisite: EER 8800 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8840 Structural Equation Modeling Cr. 4
Application of structural equation methods to applied educational psychology research. Model specification, estimation, and fit. Confirmatory factor analysis and correlation. Offered Yearly.
Prerequisite: EER 8820 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8860 Nonparametric, Permutation, Exact, and Robust Methods Cr. 4
Application of nonparametric, permutation, exact and robust methods to social and behavioral science data. Techniques of estimation, location, and association for discrete and continuous data. Offered Fall, Winter.
Prerequisite: EER 7630 with a minimum grade of C and EER 8800 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8880 Monte Carlo Methods Cr. 1
FORTRAN 77/90/95 applied to Monte Carlo Methods for the development of new statistics and procedures and the comparison of existing methodologies. Solving data analysis problems via simulation techniques. Offered Fall, Winter.
Prerequisite: EER 7630 with a minimum grade of C and EER 8800 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8900 Qualitative Design for School Research Cr. 3
Field Placement. Integration of theory with practice for conducting, analyzing, and reporting qualitative research or evaluation in the schools. Offered Fall.
Prerequisite: EER 8700 with a minimum grade of C or EER 8710 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8910 Practicum in Evaluation Cr. 3
Offers practical experience for evaluation practitioners in clarification, design, implementation, and evaluation. Students will conduct an authentic evaluation using both qualitative and quantitative methodology to demonstrate mastery of the fundamentals of program evaluation and develop specific areas of expertise. Offered Spring/Summer.
Prerequisite: EER 8700 with a minimum grade of C and EER 8720 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EER 8992 Research and Experimental Design Cr. 3-4
Design of empirical research for students possessing basic knowledge of statistics. Topics include hypothesis construction, sampling theory, experimental and quasi-experimental designs, selection of statistical procedure, and construction of data gathering instruments. Offered Fall, Winter.
Prerequisite: EER 7630 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EET - Electrical/Electronic Engineering Technology

EET 2000 Electrical Principles Cr. 3
Kirchhoff's laws, D.C. and A.C. circuit analysis, impedance, phasors, power and power factor correction, mutual coupling. Power transformers, D.C. and A.C. generators and motors, motor controls. Offered Yearly.
Prerequisites: MAT 1800 with a minimum grade of C-

EET 2100 Principles of Digital Design Cr. 3
Applied Boolean algebra and number systems. Logic families, K-mapping; combinational logic, multiplexers and demultiplexers, readouts and displays, flip flops. Offered Yearly.

EET 2720 Microprocessor Fundamentals Cr. 3
Use of microprocessors as interface devices, including software, interfaces, memory, registers, and microcomputer system architecture, computer programming design projects. Offered Yearly.
Prerequisites: CSC 1050 with a minimum grade of C- or ET 2160 with a minimum grade of C-
Fees: $25

EET 3100 Advanced Digital Design Cr. 3
System level design of digital logic circuits using hardwired and programmable logic devices. ROMs, PROMs, and PLAs. Synchronous and asynchronous circuit design and analysis. Offered Fall, Winter.
Prerequisites: EET 2100 with a minimum grade of C-

EET 3150 Network Analysis Cr. 4
Analysis of circuits with dependent sources, RL, RC, and RLC circuit transient and sinusoidal response, network functions, frequency response, and power analysis. Offered Fall, Winter.
Prerequisites: EET 2000 with a minimum grade of C-, ET 3450 with a minimum grade of C-, and PHY 2140 with a minimum grade of C-

EET 3180 Analog Electronics Cr. 4
Operational amplifiers, circuit and applications; summing and subtracting amplifiers; integrating and differentiating amplifiers; comparators. Design of active filters, oscillators and waveform generating circuits, and audio integrated circuits. Offered Fall, Winter.
Prerequisites: CHM 1020 with a minimum grade of C- and EET 2000 with a minimum grade of C-
Fees: $20

EET 3300 Applied Signal Processing Cr. 3
Continuous-time and discrete-time signals, frequency response and impulse response; transfer function of linear systems, data acquisition and sampling, continuous and discrete Fourier transform; spectrum analysis and filtering; digital filter design. Offered Fall, Winter.
Prerequisites: EET 3150 with a minimum grade of C- (may be taken concurrently)

EET 3500 Electrical Machines and Power Systems Cr. 3
Energy fundamentals. Physical and operating characteristics of D.C. and A.C. generators and motors, transformers. Electric power network. Transmission line stability. Power factor correction. Load sharing by transformers and generators. Per unit notation. Environmental impact of electric power generation. Offered Winter.
Prerequisites: EET 2000 with a minimum grade of C- and ET 3450 with a minimum grade of C-

EET 3720 Micro and Programmable Controllers Cr. 3
Microprocessors and Programmable logic controllers; on-chip I/O resources, interfacing; controls, instrumentation, and communication; data manipulation and sequencer instruction set; development and debugging tools. Offered Fall, Winter.
Prerequisites: EET 2720 with a minimum grade of C-
Fees: $20

EET 4100 Computer Hardware Design Cr. 3
Structural organization and hardware design of digital computers. Register transfer, micro-operations, and microprogram control. Processing and control units, arithmetic algorithms, input-output systems, and memory systems. Offered Yearly.
Prerequisites: EET 2720 with a minimum grade of C- and EET 3100 with a minimum grade of C-

EET 4200 Control Systems Cr. 4
Feedback control systems with topics in time response, stability criteria, system representation, frequency response, compensation. PID controller; simulation of electrical and mechanical systems. Offered Fall, Winter.
Prerequisites: ET 3450 with a minimum grade of C- and EET 3500 with a minimum grade of C-
Fees: $10

EET 4990 Guided Study Cr. 1-6
Supervised study and instruction in field selected by student. Offered Intermittently.
Repeatable for 6 Credits

EET 5720 Computer Networking Applications Cr. 4
Networking protocols, components, architecture, and standards. Data communication, data packet structure, data transmission methods and techniques, network topologies, and media access control methods. Offered Yearly.
Prerequisites: EET 2720 with a minimum grade of C- and EET 3100 with a minimum grade of C-
Fees: $25

EGR - Engineering: Special Topics

EGR 3995 College-to-Career Seminar Cr. 1
This seminar course introduces engineering students to a diverse spectrum of engineering careers through interactive discussions with industry professionals, academic experts, and accomplished alumni. The course aims to enhance student engagement and foster a strong sense of belonging in their chosen engineering majors by providing in-depth insights into various career paths, current industry demands, and future trends. Through a combination of guest lectures, panel discussions, and networking opportunities, students will gain valuable perspectives on the practical applications of their studies, potential career trajectories, and the skills necessary for success in the rapidly evolving field of engineering. This course is designed to help students align their academic focus with their career aspirations and develop a broader understanding of the engineering profession's impact on society. Offered Fall, Winter.

EGR 5000 Innovation and Entrepreneurship Cr. 3
This project-based course guides students through the process of developing an innovation idea from concept through iterative refinement, leveraging interdisciplinary expertise and industry mentorship. Students engage in ongoing dialogue with faculty and professionals to deepen understanding, improve feasibility, and advance their projects. The course features a strong emphasis on real-world application, communication, and documentation through midterm and final written reports. Successful completion enables students to join the Anderson Venture Institute community, offering further opportunities for funding, mentorship, and collaboration to accelerate their innovation’s impact. Offered Yearly.

EGR 5655 Innovation & Entrepreneurship I Cr. 3
Provides education and hands-on experience in innovation and entrepreneurship applied to enterprise, product and service design and delivery. The first of a 2-semester sequence, this course teaches methods and tools to find, formulate, and develop engineering innovation and entrepreneurship, leading to practical, relevant, and productive new commercial and social enterprises. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Engineering.

EGR 5656 Innovation & Entrepreneurship II Cr. 3
Provides education and hands-on experience in innovation and entrepreneurship applied to enterprise, product and service design and delivery. This course is the second of a 2-semester sequence. This course teaches methods and tools to find, formulate and develop engineering innovation and entrepreneurship, leading to practical, relevant, and productive new commercial and social enterprises. Offered Winter.
Restriction(s): Enrollment limited to students in the College of Engineering.

EGR 5657 Innovation & Entrepreneurship Lab Cr. 1
Provides hands-on application of Lean LaunchPad principles in innovation and entrepreneurship applied to enterprise, product and service and delivery. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Engineering.
Repeatable for 2 Credits

EGR 5658 Global Collaborative Projects Involving Sustainability, Innovation and Cultural Diversity Cr. 3
Participate in an authentic, global project experience that replicates how you will work in your career. This course, is designed for senior and graduate engineering students from diverse backgrounds. It aims to foster global collaboration, emphasizing sustainability, innovation, and building cross-cultural awareness and diversity. Students will engage in collaborative engineering projects, case studies, presentations, and discussions while gaining insights into different cultures, sustainable engineering practices, innovation, and global sustainability challenges. Offered Spring/Summer.

EGR 5990 Competition Team Cr. 2
This course is based on the students' contribution to a team participating in reputed regional/national/international competitions. Participation in the competition gives students a unique, multifaceted learning opportunity entirely led and run by students under the supervision of faculty member. Project teams collaboratively solve the complex engineering problems while gaining real-world experience. Participation in the competition provides students with hands-on laboratory learning experience and gives opportunities to hone leadership and professional skills. The faculty advisor is expected to provide technical and administrative support to the team and the overall program. Offered Every Term.
Repeatable for 4 Credits

EGR 5995 Special Topics in Engineering Cr. 1-4
State of the art research, development and practice topics from across the fields of engineering; emphasis on interdisciplinary topics. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Engineering.
Repeatable for 4 Credits

EHP - Educational History and Philosophy

EHP 3600 Introduction to the Philosophy of Education Cr. 3
Leading philosophies of education as they bear upon education as a profession and as a discipline. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.

EHP 7600 Philosophy of Education Cr. 2-3
Philosophic inquiry into educational theory and practice. For teachers, counselors, curriculum directors, administrators, and those in related professions. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

EI - Entrepreneurship and Innovation

EI 5000 Introduction to Entrepreneurship and Innovation Cr. 3
Introduces the integrative new venture development framework, processes and tools applied throughout the program, and explores opportunities, resources available and the local entrepreneurial ecosystem. You will work with a team of peers over the course of the term to apply core concepts around the entrepreneurial mindset, business model creation, customer validation, marketing, and delivering a pitch. This class provides an experiential and hands-on experiment in entrepreneurship that pushes students beyond the theoretical and intellectualization of starting a business. No credit after MGT 5650. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.

EI 5400 Management and Leadership for Entrepreneurs Cr. 3
Topics include: the essential attributes of a successful entrepreneur and innovation; development of effective networks and personal relationships; working with and blending the strengths and talents of others, group and team dynamics; effective leadership and management; the everyday challenges of creating, owning and running a new venture, and exploring the differences which arise due to the type and size of the new venture. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

EI 5900 Special Topics in Entrepreneurship and Innovation Cr. 3
Topics to be announced in the schedule of classes. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

EI 5950 Directed Study in Entrepreneurship and Innovation Cr. 3
Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.

EI 6000 Entrepreneurship and Innovation Capstone Cr. 3
Combines seminars with a project-intensive learning experience situated in the Detroit entrepreneurial ecosystem. Integrate and apply accumulated learning experiences from previous courses to the creation of a viable new venture and reach a decision whether or not to proceed, pivot, or terminate a new venture, and plan how to take these next steps. Offered Every Term.
Prerequisites: EI 5000 and 3 of (EI 5200, EI 5400, EI 5600, EI 5900, EI 5950, FPC 5010, or FPC 5660)
Restriction(s): Enrollment is limited to Undergraduate level students.

EI 7000 Introduction to Entrepreneurship and Innovation Cr. 3
Exploration of entrepreneurship and innovation, introduces an integrative new venture development framework along with processes and tools applied throughout the certificate program; explores opportunities, resources available and the regional entrepreneurial ecosystem. You will work with a team of peers over the course of the term to apply core concepts around the entrepreneurial mindset, business model creation, customer validation, marketing, and delivering a pitch. This class provides an experiential and hands-on experiment in entrepreneurship that pushes students beyond the theoretical and intellectualization of starting a business. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

EI 7400 Management and Leadership for Entrepreneurs Cr. 3
Topics include: the essential attributes of a successful entrepreneur and innovation; development of effective networks and personal relationships; working with and blending the strengths and talents of others, group and team dynamics; effective leadership and management; the everyday challenges of creating, owning and running a new venture, and exploring the differences which arise due to the type and size of the new venture. Offered Yearly.
Prerequisites: EI 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EI 7600 Marketing New Ventures Cr. 3
Topics include: product development vs. customer development; market types; customer types; diffusion and adoption life cycle theories and concepts; market opportunity analysis and product/ market fit, estimation of market size; value proposition; positioning statement; marketing strategy and plan to launch and sustain a new venture. Offered Yearly.
Prerequisites: EI 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EI 7800 Special Topics in Entrepreneurship and Innovation Cr. 3
Offered Yearly.
Prerequisites: EI 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EI 7850 Directed Study in Entrepreneurship and Innovation Cr. 3
Advanced independent readings and research under the supervision of a graduate faculty member in areas of special interest to student and faculty member. Offered Every Term.
Prerequisites: EI 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

EI 7900 Entrepreneurship and Innovation Capstone Cr. 3
Combines seminars and discussions with a project-intensive learning experience situated in the Detroit entrepreneurial ecosystem. Integrate and apply accumulated learning experiences from previous courses to the creation of a viable new venture; reach a decision whether or not to proceed, pivot, or terminate a new venture; plan how to take the next steps and/or continue to pursue funding and achieve venture success. Offered Every Term.
Prerequisite: EI 7000 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

ELE - Elementary Education

ELE 2000 Child Development: Birth-Age 8 Cr. 3
Explores processes and trajectories of child development from prenatal development through age 8 from a range of theoretical perspectives. Focus on cultural, linguistic, and socioeconomic contributions to development and fostering development through adult-child relationships. Applying knowledge of development through practical scenarios and video analysis of children's play and exploration. Offered Yearly.

ELE 2010 Equitable Partnerships with Families and Communities Cr. 3
Theory and research-based strategies that support equitable collaboration between professionals and families to best meet the needs of children. Explores family and community contexts as assets for learning. Emphasis on culturally and linguistically responsive approaches to learn about and leverage family strengths and priorities, as well as communication strategies for making shared decisions with families. Offered Yearly.

ELE 2015 Play: How Young Children Learn Cr. 3
Play as a critical component of children's development and learning. Addresses identifying different forms of play, how play fosters development and learning, embedding skills within play-based interactions, how children use play to understand their lives and the world around them, and theory and research-based strategies to facilitate play for all children. Offered Yearly.

ELE 2020 Foundations of Early Childhood Education and Clinical Experience Cr. 3
Foundational theories, policies, and practices of early childhood education with a focus on inclusive preschool contexts. Explores theory and research-based strategies related to child development, environmental design, play, family partnerships, and assessment. Emphasis on teaching strategies that are developmentally appropriate, culturally responsive, and reflective of universal design for learning. This course contains an integrated clinical experience, and students will complete focused observations in an approved early childhood center. Students must apply for the clinical experience and register for the course. Clinical experience applications are completed in Exxat; the deadline for fall placements is early in the Winter semester and the deadline for winter placements is early Fall semester. Students must complete all required background checks. A current TB test is required for this course. Offered Yearly.

ELE 2025 Social Emotional Learning: Birth-Age 8 Cr. 3
Examination of children's social emotional development from birth through age 8, with focus on how development is shaped by cultural and linguistic contexts, including structural inequities, stress, adverse childhood experiences, and trauma. Exploration of how culture contributes to adult perceptions of behavior. Application of environmental and instructional strategies for positive child guidance that build a caring community of learners, prevent and address challenging behaviors, and support children during social conflicts. Offered Yearly.

ELE 2035 Inclusion, Equity, and Justice in Early Childhood Cr. 3
Explores principles of inclusive teaching for all children across early childhood settings, with emphasis on equitable and meaningful access, participation, and supports. Examines developmentally appropriate and culturally and linguistically relevant, anti-bias, and evidence-based teaching approaches that reflect the principles of universal design for learning. Addresses foundational processes of early intervention and early childhood special education. Offered Yearly.

ELE 2050 Intentional and Inclusive Teaching: Infants and Toddlers Cr. 3
In-depth exploration of intentional and inclusive teaching strategies for infants and toddlers. Designing integrated and purposeful learning experiences through play and exploration for all infants and toddlers, including those with identified disabilities and/or developmental delays. How to enact planned and responsive learning experiences that foster infant and toddler development across all domains and address content areas of language and literacy, the arts, mathematics, social studies, science, technology, and engineering in developmentally appropriate ways. Offered Yearly.
Prerequisites: (ELE 2000 with a minimum grade of C or ELE 6000 with a minimum grade of C) and (ELE 2020 with a minimum grade of C or ELE 6020 with a minimum grade of C)
Corequisite: ELE 2055

ELE 2055 Intentional and Inclusive Teaching: Infants and Toddlers Clinical Experience Cr. 1
This course offers community-based clinical experience for candidates accepted into the Early Childhood Education certification program. Experience includes focused observation of home visiting or center-based infant and toddler care; lesson plan development and implementation; partnership with caregivers; and collaboration with course instructor and mentor educators. Candidates are required to attend an off-campus placement for 45 hours for an entire 15-week semester – 3 hours/week. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Corequisite: ELE 2050

ELE 2075 The Creative Arts in Early Childhood Education Cr. 3
Supporting the whole child's learning and development through the visual and performing arts and through creative movement from birth to kindergarten. Materials, techniques, and strategies to foster children's appreciation of the arts and their confident, creative participation in the arts. Focus on creative processes, rather than products. Offered Yearly.
Prerequisites: ELE 2000 with a minimum grade of C, ELE 2015 with a minimum grade of C, and ELE 2020 with a minimum grade of C

ELE 6000 Child Development: Birth-Age 8 Cr. 3
Explores processes and trajectories of child development from prenatal development through age 8 from a range of theoretical perspectives. Focus on cultural, linguistic, and socioeconomic contributions to development and fostering development through adult-child relationships. Applying knowledge of development through practical scenarios and video analysis of children's play and exploration. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ELE 6010 Equitable Partnerships with Families and Communities Cr. 3
Theory and research-based strategies that support equitable collaboration between professionals and families to best meet the needs of children. Explores family and community contexts as assets for learning. Emphasis on culturally and linguistically responsive approaches to learn about and leverage family strengths and priorities, as well as communication strategies for making shared decisions with families. Offered Fall.
Equivalent: PSY 6010, SW 6010

ELE 6015 Play: How Young Children Learn Cr. 3
Play as a critical component of children's development and learning. Addresses identifying different forms of play, how play fosters development and learning, embedding skills within play-based interactions, how children use play to understand their lives and the world around them, and theory and research-based strategies to facilitate play for all children. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ELE 6020 Foundations of Early Childhood Education and Clinical Experience Cr. 3
Foundational theories, policies, and practices of early childhood education with a focus on inclusive preschool contexts. Explores theory and research-based strategies related to child development, environmental design, play, family partnerships, and assessment. Emphasis on teaching strategies that are developmentally appropriate, culturally responsive, and reflective of universal design for learning. This course contains an integrated clinical experience, and students will complete focused observations in an approved early childhood center. Students must apply for the clinical experience and register for the course. Clinical experience applications are completed in Exxat; the deadline for fall placements is early in the Winter semester and the deadline for winter placements is early Fall semester. Students must complete all required background checks. A current TB test is required for this course. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.

ELE 6025 Social Emotional Learning: Birth-Age 8 Cr. 3
Examination of children's social emotional development from birth through age 8, with focus on how development is shaped by cultural and linguistic contexts, including structural inequities, stress, adverse childhood experiences, and trauma. Exploration of how culture contributes to adult perceptions of behavior. Application of environmental and instructional strategies for positive child guidance that build a caring community of learners, prevent and address challenging behaviors, and support children during social conflicts. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ELE 6030 Assessment of Young Children Cr. 3
Strategies for assessment of young children from birth through kindergarten within family, community, and school-based contexts. Addresses how to analyze, interpret, document, and share assessment information with families and other professionals. Emphasis on developmentally, linguistically, and culturally appropriate assessment tools as a means to make informed choices about planning instruction and intervention in early learning settings. This course contains integrated clinical experience hours students will complete through assignments and in-class experiences with materials of practice (e.g., work samples, child data, observational video, curricular materials). Offered Yearly.
Prerequisites: (ELE 2000 with a minimum grade of C or ELE 6000 with a minimum grade of C), (ELE 2015 with a minimum grade of C or ELE 6015 with a minimum grade of C), (ELE 2020 with a minimum grade of C or ELE 6020 with a minimum grade of C), (ELE 2025 with a minimum grade of C or ELE 6025 with a minimum grade of C), and (ELE 2035 with a minimum grade of C or ELE 6035 with a minimum grade of C)

ELE 6035 Inclusion, Equity, and Justice in Early Childhood Cr. 3
Explores principles of inclusive teaching for all children across early childhood settings, with emphasis on equitable and meaningful access, participation, and supports. Examines developmentally appropriate and culturally and linguistically relevant, anti-bias, and evidence-based teaching approaches that reflect the principles of universal design for learning. Addresses foundational processes of early intervention and early childhood special education. Offered Yearly.

ELE 6040 Intentional and Inclusive Teaching: The Content Areas (PK-K) Cr. 3
Exploration of intentional and inclusive teaching strategies for prekindergarten and kindergarten-age learners in the content areas of language and literacy, the arts, mathematics, social studies, science, technology and engineering, and physical education. Building from the central concepts and developmental progressions of each content area to design planned and responsive learning experiences. Offered Yearly.
Prerequisites: (ELE 2000 with a minimum grade of C or ELE 6000 with a minimum grade of C), (ELE 2020 with a minimum grade of C or ELE 6020 with a minimum grade of C), and (ELE 2035 with a minimum grade of C or ELE 6035 with a minimum grade of C)
Corequisite: ELE 6045
Restriction(s): Enrollment limited to students in the College of Education.

ELE 6041 The Content Areas in Early Childhood Curriculum Cr. 3
This course is designed for early childhood educators, including those seeking Birth-Kindergarten or PK-3 teaching certification. Exploration of intentional and inclusive teaching strategies for prekindergarten and kindergarten-age learners in the content areas of language and literacy, the arts, mathematics, social studies, science, technology and engineering, and physical education. Building from the central concepts and developmental progressions of each content area to design planned and responsive learning experiences. Offered Yearly.
Prerequisites: ELE 2020 with a minimum grade of C or ELE 6020 with a minimum grade of C

ELE 6045 Intentional and Inclusive Teaching: ECE Clinical Preschool Cr. 1
This course offers community-based clinical experience for candidates accepted into the Early Childhood Education certification program. Experience includes focused observation of prekindergarten teaching and learning; lesson plan development and implementation; data collection and analysis of child learning; and collaboration with cooperating teacher. Candidates are required to attend an off-campus placement for 45 hours for an entire 15-week semester – 3 hours/week. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Corequisite: ELE 6040

ELE 6050 Intentional and Inclusive Teaching: Infants and Toddlers Cr. 3
In-depth exploration of intentional and inclusive teaching strategies for infants and toddlers. Designing integrated and purposeful learning experiences through play and exploration for all infants and toddlers, including those with identified disabilities and/or developmental delays. How to enact planned and responsive learning experiences that foster infant and toddler development across all domains and address content areas of language and literacy, the arts, mathematics, social studies, science, technology, and engineering in developmentally appropriate ways. Offered Yearly.
Prerequisites: (ELE 2000 with a minimum grade of C or ELE 6000 with a minimum grade of C) and (ELE 2020 with a minimum grade of C or ELE 6020 with a minimum grade of C)
Corequisite: ELE 6055
Restriction(s): Enrollment limited to students in the College of Education.

ELE 6055 Intentional and Inclusive Teaching: Infants and Toddlers Clinical Experience Cr. 1
This course offers community-based clinical experience for candidates accepted into the Early Childhood Education certification program. Experience includes focused observation of home visiting or center-based infant and toddler care; lesson plan development and implementation; partnership with caregivers; and collaboration with course instructor and mentor educators. Candidates are required to attend an off-campus placement for 45 hours for an entire 15-week semester – 3 hours/week. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Corequisite: ELE 6050

ELE 6060 Community Contacts: Working with Families in Urban Settings Cr. 3
Programs and services within the community that assist families in improving educational services for the child. Offered Yearly.

ELE 6070 Family, Community and School Partnerships: Supporting Children's Learning Cr. 3
Theory and practice in joining families, communities, and schools in promoting children's learning, development and success in school. Strengths and needs of families in a diverse, multicultural society, teachers' roles in concert with other disciplines in supporting families and building partnerships, and connection with community resources. Offered Yearly.

ELE 6075 The Creative Arts in Early Childhood Education Cr. 3
Supporting the whole child's learning and development through the visual and performing arts and through creative movement from birth to kindergarten. Materials, techniques, and strategies to foster children's appreciation of the arts and their confident, creative participation in the arts. Focus on creative processes, rather than products. Offered Yearly.
Prerequisites: ELE 6000 with a minimum grade of C, ELE 6015 with a minimum grade of C, and ELE 6020 with a minimum grade of C

ELE 6080 Intentional and Inclusive Teaching: The Preschool Learning Environment Cr. 3
This class is a co-requisite with TED 6730, Preschool Apprenticeship, or TED 6735, Graduate Preschool Apprenticeship, and takes place at the College of Education Early Childhood Center. It is designed to reinforce and expand upon the apprentice's experiences in the classroom. Focus on developing strategies for intentional and inclusive preschool learning environments, including designing and evaluating environments based on learners' identities, strengths, interests, and support needs. Exploration of how to create safe and welcoming classroom communities through positive adult-child and child-child relationships and supportive classroom management. Offered Yearly.
Corequisite: TED 6730
Restriction(s): Enrollment limited to students in the College of Education.

ELE 6090 Introduction to Infant Mental Health Theory and Practice Cr. 3
Concepts of infant mental health theory and practice as a developmental framework for the observation, assessment and understanding of infant-parent behaviors and interactions as indicators of strengths and risks in the security of the attachment relationship. Offered Yearly.

ELE 6100 Planning and Implementing Preschool Curriculum Cr. 3
Planning, implementing, and evaluating all aspects of preschool curriculum: activities, routines, and working with staff and parents. Offered Yearly.
Prerequisites: ELE 6040 with a minimum grade of C

ELE 6110 Planning Infant and Toddler Curriculum Cr. 3
Planning effective relationship- and play-based curriculum, daily routines and experiences for infants and toddlers that are developmentally appropriate, culturally and linguistically relevant, anti-bias, and reflect principles of universal design for learning. Consideration of home-, community-, and classroom-based early learning settings for infants and toddlers. Offered Yearly.

ELE 6130 Early Childhood Advocacy, Leadership, and Administration Cr. 3
Becoming an early childhood professional who is ready to be an advocate, leader, and/or administrator. Examine policies, procedures, and systems necessary for high-quality early learning. Develop skills and strategies to ensure ethical and legal guidelines are met, including consideration of health and safety procedures and Michigan Department of Licensing and Regulatory Affairs. This course addresses Michigan Licensing and Regulatory Affairs requirements for Early Childhood Program Directors to have at least 2 semester hours in child care administration. Offered Yearly.
Prerequisites: ELE 2020 with a minimum grade of C or ELE 6020 with a minimum grade of C

ELE 6140 Developmentally Appropriate Practice in Early Childhood and Early Childhood Special Education Cr. 3
Explores key principles of developmentally appropriate practice for all young children from birth to age eight, highlighting strengths- and play-based teaching methods that promote joyful, engaged learning. Addresses how to recognize and support each child as a valued member of the learning community through interactional and environmental practices that honor children's and families' cultures, languages, and abilities. Offered Every Other Fall.

ELE 6200 Diverse Children's Literature for Elementary Teachers Cr. 3
This course is a survey of children's literature where we will explore, through reading and discussion, a wide range of genres and issues related to children's books with a focus on culturally responsive literature in the elementary school curriculum. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $17

ELE 6205 Literacy Foundations Cr. 3
This course is designed for undergraduate students seeking initial teacher certification. The focus is on theories and processes related to language and literacy development and the implications of these for curriculum and instruction in grades preK-6. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Education.

ELE 6210 Literacy Methods I (PK-3) Cr. 3
Theoretical and methodological understanding of teaching and assessing constructs of literacy appropriate for students in grades prekindergarten-3. Offered Every Term.
Prerequisites: ELE 6205 with a minimum grade of C
Corequisite: ELE 6211

ELE 6211 Literacy Clinical Experience (PK-3) Cr. 1
This course offers school-based, clinical experience for pre-service teachers seeking a prekindergarten-third grade teaching license. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with course instructor and mentor educators. Offered Every Term.
Prerequisites: TED 2205 with a minimum grade of C-
Corequisite: ELE 6210

ELE 6215 Literacy Methods I (3-6) Cr. 3
Theoretical and methodological understanding of teaching and assessing constructs of literacy appropriate for students in grades upper elementary grades 3-6. Offered Winter.
Prerequisites: ELE 6205 with a minimum grade of C
Corequisite: ELE 6380

ELE 6216 Literacy Clinical Experience (3-6) Cr. 1
This course offers school-based, clinical experience for pre-service teachers seeking a third through sixth grade teaching license. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with course instructor and mentor educators. Offered Every Term.
Prerequisites: TED 2205 with a minimum grade of S
Corequisite: ELE 6215

ELE 6225 Literacy Methods II (PK-6) Cr. 3
Advanced theoretical and methodological understanding of teaching and assessing multiple constructs of literacy appropriate for diverse students in grades PK-6. Offered Fall, Winter.
Prerequisites: ELE 6210 with a minimum grade of C or ELE 6215 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Education.

ELE 6350 Mathematics Foundations (PK-6) Cr. 3
Provides a coherent overview of the historical and foundations underlying the PK-6 mathematics content. Offered Every Term.
Prerequisites: MAT 1120 with a minimum grade of C

ELE 6370 Mathematics Methods (PK-3) Cr. 3
This course cultivates the mathematical knowledge, pedagogical skills and professional dispositions for teaching mathematics to children in grades PreK-3. It builds upon the foundational ideas about teaching mathematics in ELE 6375. Offered Fall, Winter.
Prerequisites: ELE 6350 with a minimum grade of C
Corequisite: ELE 6375

ELE 6375 Mathematics Clinical Experience (PK-3) Cr. 1
This course offers school-based, clinical experience for pre-service teachers seeking a prekindergarten-third grade teaching license. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with course instructor and mentor educators. Offered Fall, Winter.
Prerequisites: (TED 2205 with a minimum grade of C- or TED 6205 with a minimum grade of C) and (ELE 2020 with a minimum grade of C- or ELE 6020 with a minimum grade of C)
Corequisite: ELE 6370

ELE 6380 Mathematics Methods (3-6) Cr. 3
This course cultivates the mathematical knowledge, pedagogical skills and professional dispositions for teaching mathematics to children in grades 3-6. It builds upon the foundational ideas about teaching mathematics in ELE 6385. Offered Winter.
Prerequisites: ELE 6350 with a minimum grade of C
Corequisite: TED 6615
Restriction(s): Enrollment is limited to students with a major in Elementary Education or Special Education.

ELE 6385 Mathematics Clinical Experience (3-6) Cr. 1
This course offers school-based, clinical experience for pre-service teachers seeking a prekindergarten-third grade teaching license. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with course instructor and mentor educators. Offered Fall, Winter.
Prerequisites: TED 2205 with a minimum grade of C- and ELE 6350 with a minimum grade of C
Corequisite: ELE 6380

ELE 6390 Mathematics Instruction: P-8 Cr. 3
Developing mathematics skills in elementary and middle schools. Students plan, implement and evaluate learning experience with children under professional guidance. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $58

ELE 6500 Science Curriculum and Methods (3-6) Cr. 3
Role of learning in science in the curriculum. Objectives, plans of organization for learning, resources materials. Overview of balanced program. Experiences with appropriate experiments, field trips, reference materials, audio-visual resources. Offered Every Term.
Prerequisites: (SCE 2100 with a minimum grade of C- and SCE 2105 with a minimum grade of C-) or (SCE 5100 with a minimum grade of C and SCE 5105 with a minimum grade of C)
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $15

ELE 6550 Science Curriculum and Methods (PK-6) Cr. 2
This course provides a foundation for instructional strategies that promote phenomenon-based learning and with a focus on engineering design and technology performance expectations for PK-6 elementary instruction. Offered Every Term.
Prerequisites: (SCE 2100 with a minimum grade of C- and SCE 2105 with a minimum grade of C-) or (SCE 5100 with a minimum grade of C and SCE 5105 with a minimum grade of C)
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $15

ELE 6600 Social Studies Methods (PK-6) Cr. 3
In this course, teacher candidates explore and demonstrate knowledge and understanding of social studies with the incorporation of pedagogical knowledge. This includes lesson planning; development of objectives, outcomes, and assessments; curriculum content and organization; teaching strategies; and the implementation of instructional materials. Candidates also incorporate community resources in the planning process. Offered Fall, Spring/Summer.
Prerequisite: SSE 5720 with a minimum grade of D- and SSE 6720 with a minimum grade of D-
Restriction(s): Enrollment limited to students in the College of Education.

ELE 6800 Methods for Integrated Curriculum and Pedagogy (PK-6) Cr. 3
Develop unit/lesson plans within and across content areas in innovative and relevant ways. Understand socio-cultural and political contexts and factors that impact curriculum, teaching, and learning. Use effective, differentiated, and inclusive teaching strategies that attend to student strengths and needs. Utilize assessment approaches to inform instruction and student learning and advancement. Offered Fall, Winter.
Prerequisites: (ELE 6210 with a minimum grade of C or ELE 6215 with a minimum grade of C), (ELE 6370 with a minimum grade of C or ELE 6380 with a minimum grade of C), (ELE 6550 with a minimum grade of C or ELE 6600 with a minimum grade of C), and (TED 6660 (may be taken concurrently) or ELE 6805 (may be taken concurrently))

ELE 6805 Clinical Experience for Integrated Curriculum and Pedagogy (PK-6) Cr. 2
Offers school-based, clinical experience for pre-service teachers seeking a PK-3 and/or 3-6 grade teaching certificate. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation for integrated curriculum; and collaboration with course instructor and mentor educators. Offered Fall, Winter.
Prerequisites: (ELE 6210 with a minimum grade of C or ELE 6215 with a minimum grade of C), (ELE 6370 with a minimum grade of C or ELE 6380 with a minimum grade of C), (ELE 6550 with a minimum grade of C or ELE 6600 with a minimum grade of C), and ELE 6800 (may be taken concurrently)
Corequisite: ELE 6800

ELE 7020 Issues in Early Childhood Education Cr. 3
Current issues in early childhood care and education including theories, research, best practice, and historical philosophies. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ELI - English Language Institute

ELI 0300 Intermediate Speaking and Listening Cr. 2
The focus of this course is to develop students' emerging academic listening and speaking skills. Students will apply listening and speaking strategies. They will also give short presentations. Emphasis will be on generating compound and complex sentences using simple academic vocabulary. Students will pronounce English sounds accurately and follow intonation and stress patterns appropriately. Offered Every Term.
Restriction(s): Enrollment is limited to English Language Institute level students.

ELI 0310 Intermediate Writing and Grammar Cr. 2
The focus of this course is to produce well-developed paragraphs in a variety of rhetorical modes on academic topics. This course will culminate in an introduction to essay writing. Intermediate grammatical structures, such as complex sentences, adjective clauses, and the present perfect, will be introduced. Error-correction tasks, peer evaluations, and self-evaluations will develop self-editing skills. Offered Every Term.
Restriction(s): Enrollment is limited to English Language Institute level students.

ELI 0325 Intermediate Reading and Vocabulary Cr. 2
The focus of this course is to increase students' vocabulary and comprehension of longer and more varied reading passages and to increase students' reading fluency and speed by reading multiple books from ELI library. In intensive reading activities, students will be to identify the topic, main ideas, and details in a passage as well as recognize the writers' point of view, purpose, and tone in simple academic texts when guided by questions. Students will also be able to understand the structure of a text with transition words and the relationship between the main points and the supporting details. The focus of the extensive reading activities will be on identifying overall meaning of texts and increasing reading speed. Class Readers will give the teacher the opportunity to help students acquire the art of extensive reading, to improve their skills, and to monitor their progress closely. Offered Every Term.
Restriction(s): Enrollment is limited to English Language Institute level students.

ELI 0400 High-Intermediate Speaking and Listening Cr. 2
The focus of this course is to develop students' academic listening and speaking skills needed for successful extended academic discourse. Students will demonstrate detailed understanding of academic listening passages. Students will use speaking strategies for academic discussions and to summarize information. They will give speeches using visuals, transitions, and grammatically-correct sentences with academic vocabulary. Not awarded for degree credit. Offered Every Term.

ELI 0410 High-Intermediate Reading and Writing Cr. 2
The focus of this course is to develop students' critical thinking skills through reading, writing, and classroom discussion. Assigned readings will be used to check comprehension, analyze and synthesize information, write summaries, cite sources, and increase students' vocabulary. Students will write on a variety of topics using a range of rhetorical modes and include introductions, thesis statements, topic sentences, supporting details, conclusions, appropriate transitions, and academic vocabulary in their essays. Students will use a variety of sentence types and develop self-editing strategies to identify and correct errors. NOTE: Out-of-class work time (or homework) can be equivalent to or even more than in-class work time. Not awarded for degree credit. Offered Every Term.

ELI 0425 High-Intermediate Grammar Cr. 2
The focus of this course is to develop students' communicative competence, or their ability to communicate effectively and appropriately, in writing and speaking. Advanced grammar points will be studied and practiced in ways that simulate academic discussions, scenarios, and assignments. Students will engage in a variety of communicative activities that demand grammatical accuracy. NOTE: Out-of-class work time (or homework) can be equivalent to or even more than in-class work time. Not awarded for degree credit. Offered Every Term.

ELI 0500 Advanced Speaking and Listening Cr. 2
The focus of this course is to develop students' academic listening and speaking skills needed for successful extended academic discourse. Students will use listening strategies to show detailed understanding of lengthy academic listening passages. They will apply speaking strategies to share information and communicate with automaticity. Concentration will be on consistently speaking intelligibly and fluently. Not awarded for degree credit. Offered Every Term.

ELI 0510 Advanced Reading and Writing Cr. 2
Students will develop critical thinking skills through reading, writing, and classroom discussion. Students will write well-developed five- to eight-paragraph essays and relate assigned readings to their own experience. Students will learn how to incorporate outside sources into their essays and use appropriate citations. Advanced grammatical structures will be reviewed and expanded as necessary Offered Every Term.

ELI 0515 Research Skills Cr. 1
The focus of this course is to introduce skills essential to conduct academic research at the university level. Students will learn how to search for and evaluate academic sources in the library and online databases as well as how to read, analyze, and use the information gathered. The course also focuses on paraphrasing and summarizing. Offered Every Term.
Restriction(s): Enrollment is limited to English Language Institute level students.

ELI 0520 English for Teaching Assistants Cr. 1
American English language skills to improve teaching effectiveness of non-native speakers of English. Pronunciation, stress, intonation, speaking rate; oral presentation practice; cultural factors in U.S. university classroom. Not offered for degree credit. Offered Every Term.
Repeatable for 4 Credits

ELI 0535 Advanced Grammar Cr. 2
The focus of this course is to master students' communicative competence, or their ability to communicate effectively and appropriately, in writing and speaking. Advanced grammar points will be studied and practiced in ways that simulate academic discussions, scenarios, and assignments. Students will engage in a variety of communicative activities that demand grammatical accuracy. Note: out-of-class work time (or homework) can be equivalent to or even more than in-class work time. Not awarded for degree credit. Offered Every Term.

ELI 0699 Directed Study Cr. 1-4
Meets the needs of English as a Second Language (ESL) students in their last stages of preparation for matriculation. Based on students' particular needs, instruction will be provided to strengthen various academic preparation skills, including listening and note-taking practice in an academic context, extensive and intensive reading, and expository and research paper writing. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in English Language Institute; enrollment is limited to English Language Institute level students.
Repeatable for 8 Credits

ELR - Employment and Labor Relations

ELR 1110 Work and Democracy: An Introduction Cr. 3
Satisfies General Education Requirement: Civic Literacy
The course explores the role that labor and the labor movement have played in shaping democracy in the United States over the past two centuries and the limits of democracy in the workplace. It covers key political achievements of labor and workers' organizations and the contemporary challenges they face today. Key themes include labor and citizenship, industrial democracy, the role of the state in mediating labor relations, gender, race, sexuality and labor, the labor movement as a social movement, and power and politics in the workplace. Offered Every Term.
Equivalent: ANT 1110, HIS 1110, PS 1110

ELR 2400 Survey of the Music Business and Labor Cr. 3
Satisfies General Education Requirement: Social Inquiry
Overview of music business, intellectual property basics, and music business careers. Survey of the economic structure and social institutions of the music industry. Examination of problems in cultural careers. Offered Winter.
Equivalent: MUA 2400

ELR 2500 Introduction to Labor Studies Cr. 4
Introduction to labor and employment relations: the essential nature, evolution and purpose of the twenty-first century workplace. Offered Every Term.

ELR 2700 Labor Writing Studies Cr. 3
The Labor Writing Studies course introduces students to the rhetorical tactics of labor organizing through union literature and messaging campaigns. This is a survey course that covers an historical context of labor and organizing, a basic lexicon to decipher union messaging, and a review of current campaigns and union messaging. This course section specifically covers the impacts of social media on organizing and audience awareness of unions between 2016-2025. The purpose of this course is to identify and apply the rhetorical tools of organizing for social causes. The course requires students to understand and contextualize union literature, assess the rhetorical impact of labor campaigns from specific historical materials (pamphlets, newsletters, news articles, reports), and compare them with current social media artifacts (blog posts, memes, videos, streams, etc.). Offered Yearly.
Prerequisite: ELR 2500 with a minimum grade of C

ELR 3220 Labor in Media and Popular Culture Cr. 3
The course explores labor behind and in popular culture in the United States. We will use themes of race, gender, technology, and class to explore popular culture, cultural workers, and their relationship to labor organizations in the 20th and 21st centuries. Our topics include music, video games, television and films, animation, streaming and influencer culture, the fast food industry, fashion, sports, and more. Offered Yearly.
Equivalent: HIS 3220

ELR 3350 Black Women and Labor from the 'Nadir' to Black Power Cr. 3
This is an interdisciplinary course that examines Black women as a special class of workers between 1920-1970. It does so through theories of triple oppression, triple exploitation, and double/multiple jeopardy. Scholars argued that Black women were exploited as women, as workers, and as Black people. As such, they were situated in the bottom of the labor hierarchy, often being: wholly excluded from industries, included into industrial labor through the very worst jobs, excluded from or subordinated in labor unions; and the "last hired, first fired." Likewise, they often endured the worst labor conditions and job precarity. Given the character of their labor, they were assumed to be "unorganizable" and excluded from or marginalized in labor struggles. Yet, Black women challenged these material conditions to improve their economic and political realities and that of their families, communities, and comrades. Offered Every Other Fall.
Equivalent: AFS 3350, GSW 3350

ELR 3400 The Car in American Life and Labor Cr. 4
This course focuses on the history and current role of the automobile in the American economy and society. It teaches students to think about labor and workplace dynamics and develop a historical perspective on current labor questions. The course seeks to expand students' understanding of what work is, where it happens, and the spectrum of workplace issues by examining automotive manufacturing, advertising, sales, trucking and taxi driving, design, urban planning, and the gig economy. Finally, this course asks how labor issues intersect with other important dynamics of American life. By connecting life and work in a consumer capitalist economy with energy and environmental history, students will gain a fuller understanding of how consumption and climate change are labor issues, too. Offered Every Other Year.
Equivalent: HIS 3400

ELR 3434 Labor in Latin America Cr. 3
The aim of this course is to introduce students to the history of labor and the working-class throughout Latin America from pre-Hispanic times to the present. The class begins by looking at indigenous labor in the pre-Colombian context. This section will include readings on communal labor with emphasis on peasant classes. The second section moves to the Conquest of Latin America. Students will learn how colonialism influenced and drastically changed how people participated in the workforce. There will be readings on slave and indigenous labor. The third section deals with the independence and nation-building periods of the 19th and 20th centuries. Here students will examine how the working-class and peasants negotiated aspects of national identity in several case studies. This will involve exploring labor activism and other labor movements in Chile, Argentina, Peru, Brazil, and Mexico. Finally, the class will end with the neoliberal period and its impact on workers. Offered Every Other Year.
Equivalent: HIS 3434, LAS 3434

ELR 3650 The Philosophy of Work Cr. 3
This course examines philosophy of work and the relationship between political economy and the ethics of work. It explores the definition and meaning of work in different historical and cultural contexts and then focuses on practical philosophy and applied ethics with respect to work, occupational choice, and social responsibility. It also considers the tensions between work and individual rights and work and social justice. Offered Yearly.
Equivalent: PHI 3650

ELR 4100 Labor Through the Arts Cr. 3
This course is an analytical and critical exploration of Employment, Labor, and Working as they appear through the Arts in film, fiction, poems, theater, music, creative non-fiction, and more. This course will examine the diverse images of employer and employees' relationships and historical aspects of the labor movement and work in America as it appears in popular art. We will look to analyze and discuss openly by contrasting perspectives between workers, business owners and corporations which have shaped, and continue to shape, the workplace in our culture. Offered Yearly.

ELR 4150 From Proletariat to Precariat: Work and Workers in a Global Age Cr. 3
The working class is a central social actor tied to industrialization and the rise of capitalism. It has played a crucial role in challenging the power of capitalists and countering the tendencies of capitalism to intensify economic and social inequality. In this seminar, we will explore four crucial "turning points" in the formation of workers under capitalism: 1) the emergence of the working class under early capitalism, 2) the rise of Fordism and centering of the standard employment relationship, 3) neoliberalism and the unraveling of Fordism, fragmentation of work and the rise of the precariat, and finally, 4) the new technological revolution and its impact on workers today. During each period, we not only look at who was considered a worker, but also those who were outside of the system. Offered Every Other Year.

ELR 4200 All About Class Cr. 3
Social class fundamentally shapes our lives and American society, yet we don't talk about it (or rarely talk about it). This class gives us a chance to understand and explore what it is, how it operates, and why it maters so much. We will cover definitions, concepts, and statistics related to social class. Perhaps more importantly, we will learn about the narratives that weave these pieces into ideologies that can inspire protest and rebellion, give us ambition, or push us into apathy. Offered Every Other Winter.
Equivalent: SOC 4208

ELR 4250 "Workers of the World": Labor Protest and Capitalism in the 21st Century Cr. 3
"Workers of the world, unite!" But who are the workers of the world? When Karl Marx and Friedrich Engels inscribed this slogan into history in 1848, global capitalism was only beginning to expand beyond Europe. Consequently, their understanding of the "workers of the world" primarily referenced industrial laborers in Europe. Today, however, the working class spans nearly every corner of the globe and encompasses not only industrial workers but also service employees, gig laborers, and care workers. This course examines how these profound and ongoing shifts have shaped working conditions and the capacity of workers worldwide to unite in struggle. We begin with an exploration of theories of labor mobilization and a brief survey of global capitalism before turning to dynamics of contemporary labor protest in three world regions: the Middle East, Latin America, and East Asia. Offered Yearly.

ELR 4400 Labor and Health Cr. 3
This course provides students with an overview on the intersection of labor and public health, with a particular focus on how policy and collective bargaining agreements determine the health of workers. First, students will be taught an overview of study designs that will later allow them to assess how work impacts health. The class will then review examples of this for different labor sectors and then end the semester by analyzing how policies and contracts can be changed to improve worker health. Offered Every Other Fall.

ELR 4500 Applied Labor Studies Cr. 3
Practical training in various labor relations specialties, such as collective bargaining or labor law. Consult coordinator on specific topic. Offered Every Term.
Repeatable for 12 Credits

ELR 4600 Internship in Employment and Labor Relations Cr. 1-3
Employment and Labor Relations majors are encouraged to complete an internship at a local public agency, labor union, non-profit, business, or community organization. The internships are individually arranged, in consultation with the director/instructor, the academic advisor, and the organization or agency. Students should align their internship experience with their major focus and/or concentration in the program and their career objectives, including work in the areas of labor and health, culture, communications, non-profit sector, and/or human resources. Assignments include 100-120 internship hours during 14-week semester, keeping a journal, and writing a reflective essay. Offered Every Term.
Repeatable for 5 Credits

ELR 4700 Senior Seminar Cr. 3
Research, reflection, discussion and analysis of labor relations practice. Offered Yearly.
Prerequisites: ELR 2500
Repeatable for 6 Credits

ELR 4990 Directed Study Cr. 1-6
Supervised reading and research in labor studies. Offered Every Term.
Repeatable for 6 Credits

ELR 5100 Advocacy Journalism and Labor Cr. 3
This class will investigate labor journalism from its origins to its modern state, with a focus on how to write for the labor press. Offered Every Other Winter.

ELR 5200 Dispute Resolution in Labor and Employment Cr. 3
This course will provide an exploration of dispute resolution in labor and employment. We will include examining the causes of many disputes, the communication and negotiation skills necessary to resolve them, and the use of a third-party neutrals such as mediators and arbitrators. The use of the grievance procedure will be examined as the primary means of dispute resolution in organized work forces, and the skills necessary to successful resolve differences. The law of dispute resolution, from the NLRB's authority to resolve unfair labor practice charges, to the EEOC's charge process and the judicial enforcement of agreements to arbitrate and enforce awards will be covered. Offered Every Other Winter.

ELR 7000 Introduction to Labor and Employment Relations Cr. 3
Introduction to the broad and changing field of labor and employment relations. Topics from the nature of work and role of labor in society to current labor and employment laws. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ELR 7010 Health Care, Retirement, and Employee Benefit Plans Cr. 3
Comprehensive understanding of employee benefits issues and practices. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ELR 7400 Labor Relations Law in North America Cr. 3
Federal and provincial regulation of union organizing, collective bargaining and union contract administration in the private sector. Content, administration and judicial interpretation of labor relations legislation in the United States, Mexico, and the Canadian province of Ontario. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ELR 7420 Labor and American Politics Cr. 3
The role of organized labor in American politics. Historical background; race, gender, and immigration as they shape labor politics; current issues for the labor movement and labor's political agenda; organized labor's future as a force in politics and governance. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PS 6070

ELR 7430 Public Sector Labor Relations Cr. 3
History, present functions, problems and current controversies surrounding public sector unions. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PS 6340

ELR 7450 Employment Relations Law in North America Cr. 3
Federal and state legislation affecting employee-employer relations: discrimination, pension, occupational safety and health, fair labor standards. Implementation of these policies, effect on worker-manager relations: Canada, Mexico, United States. Required core course. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

ELR 7550 Selected Topics in Employment and Labor Relations Cr. 3
Various topics to be offered on a limited basis to meet needs of students with special interests not covered by regular course offerings. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ELR 7600 Internship in Employment and Labor Relations Cr. 1-3
Active involvement in employment and labor relations duties for an employer, union, government agency, or employment and labor relations professional; apprenticeship to a labor arbitrator; or other appropriate opportunity for industrial relations experience. At least eight hours per week; may be paid or unpaid. Offered Every Term.
Restriction(s): Enrollment limited to students in the MA in Employ & Labor Relations program; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

ELR 7670 Leadership Excellence Through Workplace Inclusion Cr. 3
This course equips students with the skills and knowledge to navigate today's diverse workplaces and employee relations. Integrating diversity, equity, and inclusion (DEI) principles with practical management strategies, students will develop the tools to excel as leaders in any organizational setting. By the end of the course, students will be prepared to foster inclusive workplaces where all employees can thrive. Offered Yearly.
Equivalent: MGT 7670

ELR 7990 Directed Study Cr. 1-4
Intensive study of significant industrial relations topic against background of more general course work. Preparation of term paper required. Offered Every Term.
Restriction(s): Enrollment limited to students in the MA in Employ & Labor Relations program; enrollment is limited to Graduate level students.
Repeatable for 4 Credits

ELR 7999 Master's Essay Direction Cr. 3
Plan B alternative to a three-credit elective course. Opportunity for intensive research and writing experience on relevant subject matter. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment limited to students in the MA in Employ & Labor Relations program; enrollment is limited to Graduate level students.

ELR 8000 International Employment Labor Relations and Human Resources Cr. 3
Provides an understanding of the role of international ELR and divided into three areas of study: the economic, political, and social contexts of international ELR; strategic and functional ELR policies and practices cross-nationally; and cross-national comparisons on dimensions of efficiency, equity, and voice. Covers issues related to host, home and third country nationals; recruitment, selection, training, development and compensation in international contexts, expatriation and repatriation, and employment and labor relations. Studies of the HR context of selected countries are also included. Offered Intermittently.
Prerequisite: ELR 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ELR 8500 Strategic Analysis of North American Labor and Human Resources Issues Cr. 3
Analysis on micro (game theory) and macro (planning) levels; integration of skills; student teams work as consultants for client organization on strategic labor or human resource problem. Offered Yearly.
Restriction(s): Enrollment limited to students in the MA in Employ & Labor Relations program; enrollment is limited to Graduate level students.

ENG - English

ENG 1010 Basic Writing Cr. 3
Extensive practice in fundamentals of college writing and reading in preparation for ENG 1020. Offered Every Term.

ENG 1020 Introductory College Writing Cr. 3
Satisfies General Education Requirement: Basic Composition Competency
A course in reading, research, and writing skills that prepares students to write successfully in college classes. Offered Every Term.

ENG 1350 Writing Detroit Cr. 2
This course uses public discussions and media accounts of select Detroit landmarks to engage students in identifying how debates about public spaces continue to shape our senses of community. Students will review the history of one Detroit landmark, evaluate the relationship of that landmark to social justice issues in Detroit, and then contribute to debate about that landmark by producing written presentations of their research. Offered Yearly.

ENG 2200 Shakespeare: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Emphasis on the dramatic and literary qualities of the plays: representative comedies, tragedies and histories. Offered Yearly.

ENG 2250 British Literature: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to major themes and some major writers of British literature from its beginnings to the present. Offered Yearly.

ENG 2350 American Literature: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to major themes and some major writers of American literature from its beginnings to the present. Offered Yearly.

ENG 2390 Introduction to African-American Literature: Writing about Texts Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Intermediate Comp Post-2018
Introduction to major themes and some major writers of African-American literature, emphasizing modern works. Reading and writing about representative poetry, fiction, essays, and plays. Offered Every Term.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100
Equivalent: AFS 2390

ENG 2395 Stories of Detroit: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to representative writings about Detroit from literary, rhetorical, or cultural studies perspectives. Readings might include creative non-fiction, historical texts, or literature. Offered Yearly.

ENG 2415 Geopolitics and Literature: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Introduction to the study of literature and geopolitics through the exploration of literary and cultural texts. Offered Yearly.

ENG 2420 Environmental Writing: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Studies of nature and environmental writing from a literary, rhetorical, or cultural studies perspective. Readings might include creative non-fiction; historical texts; personal essays; and science fiction. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 2425 Rhetoric and Social Change: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Studies of writing about social change from a rhetorical perspective. Readings might include argumentative essays, autobiography, and manifestos. Offered Intermittently.

ENG 2430 Digital Literacies: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to the study and composition of digital texts from a rhetorical perspective. Readings will include multimodal texts such as infographics, podcasts, and instructional videos. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 2435 Introduction to Digital Humanities Cr. 3
Digital humanities scholarship has exploded over the last ten years. Early DH scholarship represented a niche in humanities fields like English and History, dominated by unique individuals who had both technical programming skills and experience in humanities research. Since its early days, the field of digital humanities has expanded significantly. New tools and platforms make DH research more accessible. Today, DH scholars work in a highly collaborative, interdisciplinary environment that place programmers and developers, information science specialists, and humanities scholars in active conversation. In this course, students will be introduced to these different elements – tools, methods, theories, and critical analysis – of the digital humanities in order to learn new ways to interpret artistic or cultural objects or ideas, social relationships, and historical processes. Offered Yearly.
Equivalent: HIS 2435

ENG 2440 Introduction to Visual Culture: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introductory course in the reading of images from the perspective of literary and cultural studies. Attention to basic concepts, terms, and theories in the study of visual culture. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 2445 Comics and Graphic Novels: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to the history, forms, and reading practices of graphic storytelling through critical reading of, and writing about, comics and graphic novels. Offered Intermittently.

ENG 2450 Introduction to Film Cr. 4
Satisfies General Education Requirement: Cultural Inquiry
Examination of film techniques and basic methods of film analysis. Offered Every Term.
Fees: $15
Equivalent: COM 2010

ENG 2470 Television Culture: Writing about Texts Cr. 4
Satisfies General Education Requirement: Cultural Inquiry
A survey of American television history with an introduction to some of the aesthetic and theoretical concerns of television studies. Offered Intermittently.

ENG 2500 Literature and Religion: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to the study of literature and religion through the exploration of literary and cultural texts. Offered Intermittently.

ENG 2510 Popular Culture: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to the study of popular culture through the exploration of literary, cultural, and media texts. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 2530 Queer Literatures: Writing about Texts Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Introduction to the study of queer genders and sexualities through the exploration of literary and cultural texts. Offered Intermittently.
Equivalent: GSW 2530

ENG 2540 Global Literatures: Writing about Texts Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Introduction to the study of global writing through the exploration of literary and cultural texts beyond the US or British national traditions. Offered Intermittently.

ENG 2560 Children's and Young Adults' Literature: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to major themes and issues in children's and YA literature from a literary or cultural studies perspective. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 2570 Women Writers: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Introduction to the major themes and issues in writings by women. Reading and writing about representative fictional and non-fictional works. Offered Yearly.
Equivalent: GSW 2570

ENG 2670 Introduction to Canadian Studies Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Survey of Canada in its cultural, literary, historical, geographical and political aspects; key concepts and social patterns that define the Canadian experience. Offered Intermittently.
Equivalent: GPH 2700, HIS 2700, PS 2700

ENG 2720 Basic Concepts in Linguistics Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Analysis of the structure and use of language, focusing on English, from the standpoint of current linguistic practice. Topics include: phonetics and sound structure, word structure, syntax, semantics, language origin and history, dialects, language learning, animal communication, and language in social interaction. Offered Yearly.
Equivalent: LIN 2720

ENG 2730 Languages of the World Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Survey of structure of major language families of the world, western and non-western; interrelationships of language and culture; universals and variations of universals in language and culture. Offered Yearly.
Equivalent: LIN 2730

ENG 2800 Foundations of Creative Writing Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Writing in various creative forms. Frequent individual conferences and student readings for class criticism. Offered Fall, Winter.

ENG 3010 Intermediate Writing Cr. 3
Satisfies General Education Requirement: Intermediate Comp Post-2018
Course in reading, research and writing for upper-level students. Emphasis on conducting research by drawing from the sciences, social sciences, humanities, and professions in preparation for Writing Intensive courses in the majors. Offered Every Term.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3020 Writing and Community Cr. 3
Satisfies General Education Requirement: Intermediate Comp Post-2018
Students develop and write about community-based service-learning projects. Requires community-based work outside of normal class time across the semester. Satisfies the Honors College service-learning requirement. Offered Fall, Winter.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 3050 Technical Communication I: Reports Cr. 3
Satisfies General Education Requirement: Intermediate Comp Post-2018
Instruction in basic technical writing skills. Requirements include writing summaries, letters, memos, instructions, and technical reports. Topics include audience and purpose analysis, textual and visual aspects of document design, and formatting. Offered Every Term.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3060 Technical Communication II: Presentations Cr. 3
Satisfies General Education Requirement: Oral Communication Competency
Instruction in basic technical presentation skills. Requirements include informative presentations, oral briefings, needs assessments, progress reports, and formal proposals. Topics include collaborative teamwork, audience and purpose analysis, textual and visual aspects of presentation design, and formatting. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

ENG 3085 Introduction to Rhetorical Theory Cr. 3
Introduction to the theories of rhetoric and writing studies, with attention to their role in English studies. Offered Yearly.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 3090 Introduction to Cultural Studies Cr. 3
Introduction to the theories and practices of cultural studies. Examination of key theoretical terms and debates, to be put into critical practice through readings of various cultural forms. Offered Yearly.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 3095 Introduction to Race and Ethnic Studies Cr. 3
Introduction to the theories of race and ethnic studies, with attention to literary and cultural studies. Offered Intermittently.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3100 Introduction to Literary Studies Cr. 3
Introduction to the theories and practices of literary studies. Practice in responding to, analyzing, and writing about literary texts. Offered Yearly.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3105 Introduction to Film and Media Theory Cr. 3
Introduction to the theories of film and media studies, with attention to their role in English studies. Offered Intermittently.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3110 English Literature to 1700 Cr. 3
Satisfies General Education Requirement: Philosophy Letters
Historical survey of British literature from the medieval period to 1700. Offered Yearly.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3120 English Literature after 1700 Cr. 3
Satisfies General Education Requirement: Philosophy Letters
Historical survey of British literature from 1700 to the present. Offered Yearly.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3130 American Literature to 1865 Cr. 3
Satisfies General Education Requirement: Philosophy Letters
Historical survey of American literature from its beginnings to 1865. Offered Yearly.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 3140 American Literature after 1865 Cr. 3
Satisfies General Education Requirement: Philosophy Letters
Historical survey of American literature from the Civil War to the present. Offered Yearly.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3180 Rhetoric to 1800 Cr. 3
Historical survey of rhetoric from ancient cultures to 1800. Offered Yearly.
Prerequisite: ENG 1020 with a minimum grade of C

ENG 3190 Rhetoric after 1800 Cr. 3
Historical survey of rhetoric from 1800 to the present. Offered Yearly.
Prerequisite: ENG 1020 with a minimum grade of C

ENG 3200 Grant Writing Cr. 3
Prepares students to write successful grant applications in a range of professional situations. Offered Yearly.
Prerequisite: ENG 1020 with a minimum grade of C

ENG 3210 Public Humanities Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to the uses of civic discourse within one or more humanities disciplines. Offered Intermittently.

ENG 3250 Professional Editing Cr. 3
Introduction to professional editing methods and practices. Offered Yearly.
Prerequisite: ENG 1020 with a minimum grade of C

ENG 3470 Survey of African-American Literature Cr. 3
Satisfies General Education Requirement: Philosophy Letters
Historical survey of African-American literature from the early American period to the present. Offered Yearly.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100

ENG 3800 Living Writers Cr. 3
Introduction to contemporary fiction, poetry, and creative nonfiction by two living writers. Introduction to the practice of reading and analyzing creative literature as an important aspect of creating original writing. Offered Intermittently.
Prerequisites: ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 3810 The Craft of Poetry Cr. 3
Intermediate development of the essential techniques of poetry. Instruction and practice in the art of English and American poetic forms: patterns of sound, quantitative values, diction, metaphors and images. Offered Every Term.
Prerequisites: (ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100) and ENG 2800 with a minimum grade of D-

ENG 3820 The Craft of Prose Cr. 3
Intermediate development of the essential techniques of literary prose, both fiction and nonfiction. Offered Every Term.
Prerequisites: ENG 2800 and (ENG 1020 with a minimum grade of C, ENG 1020 with a minimum grade of P, ENG 1050 with a minimum grade of C, College Level Exam Program with a test score minimum of BC-BD, (AA) Exempt from Gen Ed MACRAO with a test score minimum of 100, Michigan Transfer Agreement with a test score minimum of 100, or (BA) Competencies Waiver with a test score minimum of 100)

ENG 4850 Research Methods Colloquium Cr. 3
Introduction to methodologies for locating and integrating primary and secondary sources into research-based writing within the discipline of English studies. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

ENG 4990 Directed Study: Honors Program Cr. 1-3
Offered Every Term.
Repeatable for 6 Credits

ENG 4991 Honors Seminar Cr. 3
Fulfills senior seminar requirement for English Honors students. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in English Honors; enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

ENG 4992 Honors Project Cr. 3
Substantial scholarly project in literature, rhetoric, film, or a body of creative writing accompanied by an essay. Offered Every Term.
Repeatable for 6 Credits

ENG 5005 Digital Storytelling Cr. 3
The goal of the class is to introduce storytelling to students of professional communication and to allow students to create narratives in genres of professional communication of interest to them. Offered Every Other Year.

ENG 5010 Topics in the Essay Cr. 3
Advanced study of the essay, through approaches such as creative writing, literary analysis, or rhetorical analysis. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5030 Topics in Women's Studies Cr. 3
Thematic, critical or generic study of women and literature. Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Equivalent: GSW 5030
Repeatable for 9 Credits

ENG 5035 Topics in Gender and Sexuality Studies Cr. 3
Advanced course on issues of sexuality and gender as mediated through literary and cultural study. Attention to critical theory as well as various literary and cultural forms. Topics to be announced in Schedule of Classes. Offered Yearly.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Equivalent: GSW 5035
Repeatable for 9 Credits

ENG 5070 Topics in Film and Media Cr. 4
Critical and theoretical topics including style and work of specific filmmakers and philosophical approaches to film and other media. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Fees: $20
Repeatable for 12 Credits

ENG 5080 Topics in Global and Transnational Studies Cr. 3
Study of literature and culture from a global and/or transnational perspective. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5090 Topics in Critical Theory Cr. 3
Advanced study of critical theory – such as cultural theory, film theory, or literary theory – with reference to primary texts. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5095 Topics in Visual Culture Cr. 3
Advanced course in visual culture and its theory, and in the practice of reading images in a variety of literary and visual forms. Topics to be announced in the schedule of classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5150 Shakespeare Cr. 3
For English majors and others interested in more intensive study. Some attention to Shakespearean scholarship. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

ENG 5340 Topics in British Literature Cr. 3
Thematic, generic or historical perspectives on British literature; may cover multiple periods. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5360 Child Language Acquisition Cr. 3
Despite its complexity and abstractness, young children acquire language without conscious effort or explicit instruction in a span of just a few years. This feat is unique to humans and is unmatched by any other species or even the most sophisticated computers. The course will present a comprehensive introduction to the study of child language acquisition. We will use a cross-linguistic approach to discuss some of the most important issues in language acquisition. We will not only talk about what children accomplish linguistically at various ages, but also discuss various theoretical approaches to explaining how children acquire linguistic knowledge in different domains, focusing on acquiring the sound inventory, words and sentence structure. We will look at some of the methods that have been employed to collect and analyze child language data. Offered Fall.
Equivalent: LIN 5360, PSY 5360

ENG 5420 American Literature: 1865-1914 Cr. 3
Survey of important literary texts that arose from cultural phenomena like post-reconstruction, urbanization, immigration, the suffrage movement, and native rights. Literary movements like Realism and Naturalism will be studied as well as influential writers such as Cahan, Chopin, Dreiser and Dunbar. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

ENG 5450 Modern American Literature Cr. 3
Survey of culturally-significant writers, themes and movements since 1914, such as: the Harlem Renaissance, Modernism, Postmodernism; authors like Ellison, Hemingway, Morrison, Stein. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

ENG 5480 Topics in African American Literature Cr. 3
Thematic, generic or historical perspectives: topics such as early black writers, Harlem Renaissance, African-American poetry, contemporary black writers. Topics to be announced in the Schedule of Classes. Offered Yearly.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5485 Topics in Race and Ethnic Studies Cr. 3
Thematic, generic or historical perspectives on race and ethnic studies; may cover multiple periods. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5490 Topics in American Literature Cr. 3
Thematic, generic, or historical perspectives on American literature; may cover writers of different periods. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5530 Topics in Poetry Cr. 3
Advanced study of poetry, through approaches such as creative writing or literary analysis. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5550 Topics in Fiction Cr. 3
Advanced study of fiction, through approaches such as creative writing or literary analysis. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5595 Topics in Global Literatures Cr. 3
Advanced study of global writing through the exploration of literary and cultural texts beyond the US or British national traditions. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5685 Topics in Editing Cr. 3
Thematic, generic or historical perspectives on editing; may cover multiple periods. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5690 Topics in Book History Cr. 3
Advanced study of the history of reading, writing, and the production and circulation of texts. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5695 Publishing Practicum Cr. 3
Students produce a creative or scholarly journal for undergraduates. Topics covered include editing, formatting, and publishing texts. Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5700 Introduction to Linguistic Theory Cr. 3
Introduction to the scientific study of language and methodologies of linguistic analysis: phonetics and phonology, morphology, syntax and semantics. Offered Yearly.
Equivalent: LIN 5700

ENG 5710 Phonology Cr. 3
The sound systems of a variety of human languages compared and contrasted in an introduction to the diversity and similarities in human sound systems. Theories of the nature of sound systems and methods of analysis in phonology and morphophonology will be presented. Offered Yearly.
Prerequisites: LIN 5700 with a minimum grade of D-, ENG 5700 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or ENG 2720 with a minimum grade of D-
Equivalent: LIN 5290

ENG 5715 Morphology Cr. 3
Morphology is a core area of Linguistics. The course will introduce the basic issues in the study of the internal structure of words, as well as the analytical techniques applied to morphological analysis. Students will learn how to analyze words of various (Indo-European and non-Indo-European) languages into morphemes, as well as to recognize morphological patterns and to utilize theoretical concepts in order to describe and analyze such patterns. In particular, the course will develop a theory of morphology in generative grammar, paying special attention to the question of whether particular morphological phenomena are primarily syntactic or primarily phonological in nature. Offered Fall.
Prerequisites: ENG 5700 with a minimum grade of D-, ENG 2720 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or LIN 5700 with a minimum grade of D-
Equivalent: LIN 5715

ENG 5720 Linguistics and Education Cr. 3
Introduction to linguistics with emphasis on applications to education. Offered Yearly.
Equivalent: LIN 5720

ENG 5730 English Grammar Cr. 3
Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. Offered Yearly.
Equivalent: LIN 5730

ENG 5740 Syntax Cr. 3
The theory of grammatical systems examined through analysis of sentence formation in a variety of human languages, diversity and universals in grammar, and theories of syntax. Offered Yearly.
Prerequisites: LIN 5700 with a minimum grade of D-, ENG 5700 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or ENG 2720 with a minimum grade of D-
Equivalent: LIN 5300

ENG 5745 Semantics Cr. 3
Semantics is a core area of Linguistics. This course investigates meaning in natural language. It examines two foundational assumptions of natural language semantics: (i) that the meaning of a declarative sentence is its truth conditions and (ii) that the truth conditions of an expression are determined compositionally (that is, they are determined as a function of its parts and how they are put together). Students will then learn to distinguish between the entailments, implicatures, and presuppositions of an expression, where only the first are part of the expression's truth conditions. Offered Winter.
Prerequisites: ENG 5700 with a minimum grade of D-, ENG 2720 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or LIN 5700 with a minimum grade of D-
Equivalent: LIN 5745

ENG 5770 Sociolinguistics Cr. 3
Identification of sociolinguistic principles used by English speakers and writers in choosing among the different English codes, styles, registers and social dialects in American and other communities. Offered Every Other Year.
Equivalent: LIN 5770

ENG 5785 Academic Writing for Graduate Students Cr. 2
Emphasis on learning and executing written genres common to research and presentation activities in graduate school. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: GS 5785
Repeatable for 6 Credits

ENG 5790 Writing Theory Cr. 3
Review of linguistic, rhetorical, and/or literary theories of written language. Analysis of the principles, purposes, types, and modes of written discourse. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

ENG 5795 Topics in Rhetoric and Writing Cr. 3
Advanced course in rhetoric and writing. Attention to recent work in composition studies, rhetorical theory, and writing. Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5820 Internship Practicum Cr. 3
Students work 8-20 hours per week as tutors, writers, editors or researchers in publishing firms, businesses, government, and community organizations. Classroom sessions focus on reading and writing analytical texts related to workplace experience, and creating a portfolio of works created from the internship. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 6 Credits

ENG 5825 Grant, Proposal, and Public Writing Cr. 3
This course guides students through the grant-writing process addressing the main components of a successful grant funding application. Students work in a collaborative environment to establish a relationship with an organization and to address a specific problem area that requires funding. Offered Every Other Year.
Repeatable for 9 Credits

ENG 5830 Writing in the Workplace Cr. 3
Intensive writing course that develops communication skills used in the workplace. Designed for students preparing to become technical writers/editors and students who will write as part of their professional work. Offered Every Other Year.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

ENG 5840 Topics in Professional Writing Cr. 3
Select topics in the theory and practice of professional communication. Topics include the rhetoric and teaching of technical communication, analysis of on-the-job writing and rhetorical situations, and use of new communications technology. Topics to be announced in the Schedule of Classes. Offered Every Other Year.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 9 Credits

ENG 5850 Introduction to Scholarly Writing for Non-native English Speakers Cr. 2
Intensive practice in writing at the graduate level for non-native speakers of English. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

ENG 5860 Topics in Creative Writing Cr. 3
Topics include new genres, new media, and writing for public audiences. Models drawn from works written in diverse communities and cultures. Frequent individual conferences. Offered Intermittently.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and (ENG 3810 with a minimum grade of B or ENG 3820 with a minimum grade of B)
Repeatable for 9 Credits

ENG 5870 Poetry Writing Workshop Cr. 3
The writing of poetry, conducted on a seminar basis; discussion and criticism of the work of students in the course. Frequent individual conferences. Offered Intermittently.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and ENG 3810 with a minimum grade of B
Repeatable for 6 Credits

ENG 5880 Fiction Writing Workshop Cr. 3
The writing of fiction, conducted on a seminar basis; discussion and criticism of the work of students in the course. Frequent individual conferences. Offered Intermittently.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and ENG 3820 with a minimum grade of B
Repeatable for 6 Credits

ENG 5885 Topics in Creative Non-Fiction Writing Cr. 3
Study and practice of hybrid forms that blend reportage and imaginative writing. Attention to essays, memoir, and personal writing. Frequent individual conferences. Offered Intermittently.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and ENG 3820 with a minimum grade of B
Repeatable for 9 Credits

ENG 5895 Topics in Environmental, Nature, and Science Writing Cr. 3
Advanced course in the study and practice of writing about the environment or the sciences. Specific topics to be announced in the Schedule of Classes. Offered Intermittently.
Repeatable for 9 Credits

ENG 5990 Directed Study in English Cr. 1-3
Advanced work for superior students whose program cannot be adequately met by scheduled classes. Course requires substantial written work. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Repeatable for 6 Credits

ENG 5992 Senior Seminar Cr. 3
In-depth study and discussion of topics to be announced in the Schedule of Classes. Attention to the use of primary and secondary sources in research and writing. Each student produces a substantial research project. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in 2nd English or English; enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

ENG 5993 Writing Intensive Course in English Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

ENG 6002 Teaching of Literary and Cultural Studies Cr. 2
Instruction in the teaching of literary and cultural studies through both individualized and group training. Offered for graduate credit only. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

ENG 6003 Teaching Film and Media Studies Cr. 2
Instruction and resources in the teaching of film and media studies through both individualized and group training. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

ENG 6005 Teaching Developmental Writing Cr. 2
Emphasis on researching pedagogical strategies to develop course materials for the teaching of a developmental writing class. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

ENG 6006 Teaching Creative Writing Cr. 2
As a discipline, creative writing straddles the Humanities and the Fine Arts, and so, of necessity, will this course. Although it complements the composition pedagogy curriculum, it will emphasize the practices particular to the creative writing classroom—practices that draw heavily from the studio art model. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

ENG 6010 Tutoring Practicum Cr. 3
Integration of theories of language, learning and composition into a teaching practicum for prospective teachers at the secondary level and beyond. Offered Yearly.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Junior, Senior or Post Bachelor.

ENG 6720 Topics in Language Cr. 3
Topics such as: pragmatics, historical linguistics, history of English, language and gender, language and variation, language and evolution. Topics to be announced in the Schedule of Classes. Offered Yearly.
Equivalent: LIN 6720
Repeatable for 12 Credits

ENG 6800 Advanced Creative Writing Cr. 3
Writing in any of the creative forms. Work by students presented in seminar meetings; frequent individual conferences. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ENG 7001 Introduction to Doctoral Studies in English Cr. 3
Training in fundamental critical and professional issues through reading and writing about problems, issues and texts central to English studies. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ENG 7003 Contemporary Literary Theory Cr. 3
In-depth reading of and education in contemporary literary works that are important to the discipline of English studies. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7004 Theoretical Issues in Cultural Studies Cr. 3
Intensive reading in and writing about central theoretical issues in cultural studies. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7007 Composition Theory Cr. 3
Seminar on such topics as: the writing process, computers in composition, theory of basic writing, theory of technical/professional writing. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7011 Studies in Medieval Literature Cr. 3
Selected topics such as: Arthurian legend, the alliterative revival, problems in Chaucer criticism. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7012 Studies in Early Modern Literature Cr. 3
Readings in representative works in literature in English of the early modern period. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7014 Studies in Early Modern Drama Cr. 3
Studies in representative English dramas from the early modern period. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7015 Studies in Shakespeare Cr. 3
Special problems in current scholarship and criticism. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7025 Studies in Contemporary British Literature Cr. 3
Studies in turn of the century literature and culture. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7032 Modernism and Modernity Cr. 3
Studies in modernism as a literary and cultural movement and/or in modernity as a social, economic and cultural formation. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7033 Postmodernism and Postmodernity Cr. 3
Studies in postmodernism as a literary and cultural movement and/or in postmodernity as a social, economic and cultural formation. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7042 Nineteenth-Century American Literature and Culture Cr. 3
Advanced study of texts from before and after the Civil War, covering such topics as Transcendentalism, Fugitive Slave Narratives, Native American Autobiographies and Histories, Literary Realism, and the Southern Gothic. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7043 Twentieth-Century American Literature and Culture Cr. 3
Advanced study of literary representations of crucial cultural issues as demonstrated among writers, movements, and selected texts. Possible writers include T.S. Eliot, Toni Morrison, Gertrude Stein; movements like Modernism and Postmodernism, and cultural phenomena like assimilation and reification may be treated. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7044 African-American Literature and Culture Cr. 3
Advanced study of topics in African-American literature. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7045 Transnational American Race and Ethnic Studies Cr. 3
This course provides an engagement with the critical scholarship in Transnational American Race and Ethnic Studies. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7053 Film and Media Genres Cr. 4
Survey of the genres of film and media studies. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ENG 7054 Topics in Film and Media Studies Cr. 4
Focus on selected topics in film and media. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ENG 7056 Comparative Media Cr. 4
Instruction in media from a comparative perspective, including but not limited to film, digital, visual, and auditory media. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ENG 7061 Rhetorical Theory Cr. 3
Survey of major rhetorical theories. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7062 Designing Research in Composition and Rhetoric Cr. 3
Survey of major research methodologies in rhetoric and composition. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7063 Historical Studies in Composition and Rhetoric Cr. 3
Survey of historical approaches to rhetoric and composition. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7064 The Teaching of Writing Cr. 3
Survey of major pedagogical theories in composition studies. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7065 Writing Technologies Cr. 3
Study of rhetorical and pedagogical issues related to writing and technology. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7066 Writing in Multiple Settings Cr. 3
Survey of research into writing in specific settings such as urban and/or rural sites, workplaces, communities and organizations, or classrooms. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7710 Advanced Studies in Linguistic Structure Cr. 3
Current issues in linguistic theory, including but not limited to topics in phonology, morphology, syntax, semantics. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: LIN 7710
Repeatable for 9 Credits

ENG 7720 Advanced Studies in Language Use Cr. 3
Current problems in language use, including issues in language variation, pidgins and creoles, first language acquisition, perception and production, and linguistic stylistics. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: LIN 7720
Repeatable for 9 Credits

ENG 7800 Seminar in Creative Writing Cr. 3
Intensive advanced study in creative writing and/or relevant critical theory. Topics such as: Writing the Novel, Narrative Perspective, Creative Text and Reader Response, to be announced in Schedule of Classes. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ENG 7820 Graduate Internship Practicum Cr. 2
Students work 6 hours per week gaining experience in alternatives to academic careers, typically as writers, editors or researchers in publishing firms, businesses, government, and community organizations. Students create a portfolio of works created from the internship. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ENG 7840 Technical and Professional Communication Cr. 3
Survey of contemporary research in technical and professional communication. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 7850 Pedagogical Practicum I Cr. 2
Instruction and resources to prepare newly-appointed graduate teaching assistants for teaching in the Wayne State composition program. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of English.

ENG 7860 Pedagogical Practicum II Cr. 2
Instruction and resources to support graduate teaching assistants during their first semester teaching in the Wayne State Composition Program. Offered for graduate credit only. Offered Winter.
Prerequisite: ENG 6001 with a minimum grade of B- or ENG 7850 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of English.
Repeatable for 4 Credits

ENG 7870 Teaching Practicum in Technical and Professional Writing Cr. 2
Instruction and resources in the teaching of technical and professional writing using both individualized and group training. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

ENG 7990 Directed Study in English Cr. 1-8
Advanced work for English majors whose program of study cannot be adequately met by scheduled classes. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ENG 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

ENG 8001 Seminar in Literary and Cultural Studies Cr. 3
Advanced special topics in literary and cultural studies. Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 8002 Seminar in Literary and Cultural Studies Before 1700 Cr. 3
Advanced special topics in literary and cultural studies before 1700. Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 8006 Seminar in Film and Media Studies Cr. 4
Advanced special topics in film and media studies. Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ENG 8007 Seminar in Rhetoric and Composition Studies Cr. 3
Advanced special topics in rhetoric and composition studies to be announced in Schedule of Classes. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 8008 Seminar in Theory Cr. 3
Advanced special topics in theory to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 8998 Prospectus and Dissertation Chapter Workshop Cr. 2
Intensive workshop in creating a dissertation prospectus and/or dissertation chapter. Attention to invention, development, peer support, and developing material for academic publishing audiences. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 8999 Master's Thesis Research and Direction Cr. 1-6
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ENG 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ENG 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ENG 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: ENG 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

ENG 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ENG 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ENG 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ENG 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ENG 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

EPS - Educational Leadership and Policy Studies

EPS 8180 Research Seminar Cr. 2-6
Students develop research proposals, evaluate each other's research designs, and conduct any necessary pilot studies. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

EPS 8530 Seminar in the History of Education Cr. 4
The growth and development of American education K-16, including events, circumstances, and influential ideas. Emphasis on the relationship between social, political, and economic change and the evolution of education. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

EPS 8560 Administration in Higher Education Cr. 4
Examination of alternative theories of organizational and administrative behavior as these relate to colleges and universities. Consideration of the issues of academic governance and college bargaining as they impact on the role of the administrator. Special projects according to positions held and particular interests of students. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

EPS 8570 Contemporary Issues in Higher Education Cr. 4
Intensive exploration of major issues and problems confronting higher education. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

EPS 8710 Readings in General Administration Cr. 4
Directed readings in the principles underlying administration in education, government, business and social agencies and other major areas. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EPS 8880 Workshop in Administrative and Organizational Studies Cr. 1-3
Practicum in the study of current problems affecting administrative and organizational studies. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Administration and Supervision, Administration and Supervision, Educational Leadership, Educational Leadership, Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

EPS 9600 Seminar in Research and Theory of Administration Cr. 3
Research and theory relating to administration. Examination of textbooks, journals, and associations which promote educational administration research; review of the focus of inquiry and methodology for research in educational administration. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EPS 9610 Seminar in Educational Policy Development Cr. 4
Role and nature of educational policies; observation, assessment, reporting, and discussion of policy-making bodies; review of policy research method; relationship of public values and public school policy. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EPS 9620 Seminar in Educational Policy Initiatives Cr. 4
Recent policy initiatives in elementary and secondary education, with some attention to higher education. Techniques of policy analysis are utilized. Offered Intermittently.
Prerequisite: EPS 9610 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

EPS 9630 Educational Policy Seminar Cr. 3
The course focuses on developing a deeper understanding of the nature of public education governance related to the policy making process, policy implementation, and emerging policy issues within P-20 education. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Educ Leadership&Policy Studies or Educ Leadership&Policy Studies; enrollment is limited to Graduate level students.

ESG - Environmental Science and Geology

ESG 1010 Geology: The Science of the Earth Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
Introduction to continental drift and plate tectonic theory, geophysics and structure of earth's crust and interior; rocks and minerals; igneous and volcanic geology; work of running water, glaciers and ground water; geologic time; oceanography. One day field trip. Offered Every Term.
Fees: $15

ESG 1011 Geology: The Science of the Earth Laboratory Cr. 1
Introduction to continental drift and plate tectonic theory, geophysics and structure of earth's crust and interior; rocks and minerals; igneous and volcanic geology; work of running water, glaciers and ground water; geologic time; oceanography. Satisfies General Education Laboratory requirement when taken concurrently with ESG 1010. Offered Every Term.
Corequisite: ESG 1010
Fees: $15

ESG 1020 Interpreting the Earth Cr. 4
Sedimentary rocks, sedimentary structures and fossils as tools for interpreting the history of the earth. Paleoecology of the geologic past and the structure of the earth are emphasized. Offered Fall, Winter.
Prerequisites: GEL 1010 with a minimum grade of C or ESG 1010 with a minimum grade of C

ESG 1050 Oceanography Cr. 4
Introductory course in oceanography; includes origin of the ocean basins; ocean currents, waves and tides; life in the oceans and marine ecology; food, mineral and energy resources of the sea. Offered Intermittently.
Fees: $15

ESG 1070 Our Furious Earth: Natural Hazards and Society Cr. 3
Our Furious Earth explores Earth's natural hazards and their role in society. From earthquakes and volcanoes to floods and fires, natural disasters have a profound effect on the human experience. This course delves into the basic science behind natural disasters, including physical causes, predictive relationships, and mitigation strategies. Offered Fall.

ESG 1370 Meteorology: The Study of Weather Cr. 3
This course covers the composition and structure of the atmosphere; the flows of energy to, from and through the atmosphere; and the resulting motions produced from small to planetary scales. The physical principles of atmospheric phenomena are stressed in the understanding of weather's impact on humans, particularly with severe weather. In summary, students are introduced to Earth's atmosphere and the dynamic world of weather. Offered Fall.
Fees: $15

ESG 1500 Introduction to Environmental Science Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
This introductory course is focused and organized around environmental problems and issues that we face in the world today using real stories. Students will be provided the scientific background to these issues, the tools for helping to build a sustainable future, and a strong foundation in environmental science education. Offered Fall.
Fees: $20

ESG 2130 Mineralogy Cr. 4
Mineral identification using physical and optical properties. Introduction to petrographic microscope and electron microscope/microprobe. Properties and occurrences of major mineral groups and their environmental significance. Check with instructor for field trip destination; field trip to Canada frequently part of course. Offered Fall.
Fees: $150

ESG 3000 Introduction to Environmental Analysis Using Geographic Information Systems (GIS) Cr. 3
Geographic Information Systems (GIS) is a powerful tool for environmental analysis. This course is designed to introduce students to the use of GIS to analyze, explore and visualize the spatial relationships and patterns of the biological, ecological, social and physical processes that can affect the environment and human health. Offered Fall.

ESG 3100 Air and Water in Environmental Systems Cr. 3
Development of quantitative skills related to applying an understanding of the basic properties of air and water,and the dynamics of these fluids at rest and in motion, critical to addressing almost any environmental issue. Applications will include the role of air and water in environmental problems at multiple scales (and in both urban and natural settings) and integrating a systems approach. Offered Fall.
Prerequisites: (GEL 1010 with a minimum grade of D- or ESG 1010 with a minimum grade of D-) and (MAT 1800 with a minimum grade of D- or MAT 2010-6999 with a minimum grade of D-)
Fees: $40

ESG 3160 Petrology Cr. 4
Classification of igneous and metamorphic rocks using macroscopic and microscopic material and textural characteristics. Occurrence and alteration of each major rock type related to tectonic settings. Offered Winter.
Prerequisites: (GEL 1020 with a minimum grade of D- or ESG 1020 with a minimum grade of D-) and (GEL 2130 with a minimum grade of D- or ESG 2130 with a minimum grade of D-)
Fees: $135

ESG 3250 Introduction to Remote Sensing Cr. 3
This course is an introduction to the theory and techniques of remote sensing tools with emphasis on the Geospatial Sciences. It also includes discussion on image processing and analysis. Homework focus will be on learning basics of remote sensing by processing and interpreting of digital images. Offered Winter.
Prerequisites: (GEL 1010 with a minimum grade of D- and GEL 1011 with a minimum grade of D-) or (ESG 1010 with a minimum grade of D- and ESG 1011 with a minimum grade of D-)

ESG 3300 Structural Geology Cr. 4
Description and interpretation of features which result from the origin or deformation of rock masses. Offered Winter.
Fees: $135

ESG 3400 Principles of Sedimentology and Stratigraphy Cr. 4
Processes which produce sediments, environments of deposition, changes after deposition; relationship between tectonics and sedimentation; origin of sedimentary strata; facies and correlations. Offered Fall.
Prerequisites: (GEL 1020 with a minimum grade of D- or ESG 1020 with a minimum grade of D-) and (GEL 2130 with a minimum grade of D- or ESG 2130 with a minimum grade of D-)
Fees: $20

ESG 3500 Ecology and the Environment Cr. 3
Introduction to key ecological concepts illustrated with contemporary environmental issues; basic population, community, ecosystem, landscape, and global ecology. Offered Fall.
Prerequisites: BIO 1500 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: BIO 3500

ESG 3600 Special Topics in Geology Cr. 2-3
Subjects of general interest to geology and environmental science majors. Topics may include: soil and groundwater pollution; petroleum geology; engineering geology; geochronology; isotope geochemistry; fate and transport of contaminants; applied geophysics; aquatic and terrestrial ecology. Offered Intermittently.
Prerequisites: GEL 1010 with a minimum grade of D- or ESG 1010 with a minimum grade of D-
Repeatable for 16 Credits

ESG 3650 Field Geology Cr. 1-6
Field studies involving problems in individual geologic mapping and related techniques. Offered Intermittently.
Repeatable for 6 Credits

ESG 3800 Team Research Cr. 2
Students work in teams to design and implement a fieldwork based geologic research project. Students develop hypotheses, tests, and fieldwork plans, and they make thin sections and collect data on the scanning electron microscope, finishing with poster presentations. Offered Fall.
Prerequisites: GEL 1010 with a minimum grade of D- or ESG 1010 with a minimum grade of D-

ESG 3990 Directed Study in Environmental Science and Geology Cr. 1-4
Facilitates the student's research experience to further develop their undergraduate training in concert with their studies in the environmental science program. Offered Every Term.
Repeatable for 4 Credits

ESG 4200 Geomorphology Cr. 4
Principles underlying development of landforms by geologic agents. Offered Every Other Year.
Prerequisites: GEL 1020 with a minimum grade of D- or ESG 1020 with a minimum grade of D-
Fees: $15

ESG 4860 Research Cr. 3-4
Primarily for honors students. Independent laboratory and field work. Offered Every Term.
Repeatable for 8 Credits

ESG 4900 Internship in Environmental Science Cr. 2
Approved work experience for students studying in environmental science that provides entry-level, career-related experience and workplace competencies. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Environmental Science Honors or Environmental Science.

ESG 4998 Honors Thesis Cr. 3
Preparation of an Honors thesis on a subject of general interest to environmental science and geology majors. Satisfactory completion assures Honors graduation, providing performance in preceding Honors courses at Honors level; to be taken under direction of Environmental Science and Geology faculty. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Senior.

ESG 5000 Geological Site Assessment Cr. 4
Geologic methods for Phase I Environmental Site Assessments. Application of geostatistics to site characterization. Offered Every Other Year.
Prerequisites: GEL 1010 with a minimum grade of D- or ESG 1010 with a minimum grade of D-

ESG 5120 Environmental Geochemistry Cr. 4
Survey of some of the geochemical interactions which take place in Earth environments (water, soils, atmosphere, etc.) brought about by natural and human-induced chemical processes. Offered Every Other Year.
Prerequisites: CHM 1000-6XXX with a minimum grade of C- and (GEL 1010 with a minimum grade of C- or ESG 1010 with a minimum grade of C-)
Fees: $20

ESG 5150 Soils and Soil Pollution Cr. 4
Physical, chemical and mineralogical properties and classification of soils. Behavior of pollutants in soils and methods for reclamation. Offered Winter.
Prerequisites: CHM 1100 with a minimum grade of D- and CHM 1130 with a minimum grade of D-
Fees: $40

ESG 5210 Environmental and Applied Geophysics Cr. 4
Introduction to geophysical methods used in characterizing the Earth's subsurface for environmental, engineering, and exploration applications. Students will learn the basics of near-surface seismic, gravity, magnetic, electrical resistivity, and electromagnetic methods and data analysis. Offered Every Other Year.
Prerequisites: (4 of (GEL 1010 with a minimum grade of D- or ESG 1010 with a minimum grade of D-), PHY 1230 with a minimum grade of D-, and PHY 1240 with a minimum grade of D- or 2 of PHY 2170 with a minimum grade of D- and PHY 2180 with a minimum grade of D-) and MAT 2010 with a minimum grade of D-
Fees: $40

ESG 5360 Hydrology and Water Resources Cr. 4
A lecture-laboratory combination, with field trips, emphasizing the practical and applied aspects of hydrology and water resources management. This course looks at how water movement, storage and transformation on the Earth's surface is influenced by landscape characteristics, including human modifications of those characteristics, and weather. This course also explores those processes and modifications in a real-world context. While we introduce belowground aspects of the water cycle, this course focuses on surface water. Offered Every Other Year.
Prerequisites: MAT 1800 with a minimum grade of D-
Fees: $55

ESG 5420 Mathematical Methods in Earth Science Cr. 4
An introduction to mathematical methods in Earth Science focusing on an introduction to programming in Matlab, using statistical methods, Monte Carlo, and building towards finite difference numerical methods. Offered Every Other Year.

ESG 5450 Hydrogeology Cr. 4
Characteristics and behavior of groundwater in earth materials. Principles of groundwater flow and solute transport. Introduction to numerical models and methods. Offered Every Other Year.
Prerequisites: GEL 1010 with a minimum grade of D- and MAT 2010-6XXX with a minimum grade of D-

ESG 5510 Environmental Fate and Transport of Pollutants Cr. 4
Basic principles of chemical behavior in the environment; sources, fate, and transport of contaminants. Offered Winter.
Prerequisites: (CHM 1220 with a minimum grade of D-, CHM 1240 with a minimum grade of D-, CHM 1230 with a minimum grade of D-, or CHM 1250 with a minimum grade of D-) and MAT 2010-6XXX with a minimum grade of D-

ESG 5600 Special Topics in Environmental Science and Geology Cr. 4
Subjects of general interest to Environmental Science and Geology majors. Topics may include: mapping, soil and groundwater pollution; petroleum geology; engineering geology; mathematical methods in Earth Science; Biogeochemical cycling in aquatic system; or others. Offered Intermittently.

ESG 5610 Special Topics in Environmental Science and Geology Cr. 1
Topics may be related themes such as current events, a specific area of geology or the Earth or Environmental Sciences, or the development of professional skills relevant to careers in the Earth and Environmental Sciences. Offered Every Other Year.
Repeatable for 3 Credits

ESG 5620 Special Topics in Environmental Science and Geology Cr. 2
Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies (EPA). The City of Detroit has faced many environmental issues, where several decades of industrialization resulted in a vast impairment of natural resources in urban ecosystems. Moreover, these environmental issues are more likely to occur in low-income and communities of color in the city. Offered Intermittently.
Repeatable for 6 Credits

ESG 5650 Applied Geologic Mapping Cr. 4
Geographic Information Systems (GIS) is a powerful tool for analyzing spatial datasets, and for this reason it can be applied to many geological problems. This course will provide students the necessary skills to use GIS with an emphasis on geological applications. It will focus on geologic aspects of GIS analysis such as spatial analysis, geologic mapping, topographic analysis, and the importation and interpolation of aerial photos/satellite images and field data. Offered Winter.
Prerequisites: GEL 1010 with a minimum grade of C or ESG 1010 with a minimum grade of C

ESG 5700 Environmental Law and Policy Cr. 3
This course provides an overview of the protection of environmental interests and needs in the American legal system, from a stable climate to safe drinking water. It begins by introducing students to the American legal system with foundational subjects of property law, tort law, constitutional law, and administrative law. It then surveys the major federal environmental statutes, including the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, the Endangered Species Act, and laws regarding waste and remediation. Finally, the course explores environmental rights, including the public trust doctrine, state and federal constitutional rights, and the human right to a healthy environment. Offered Winter.
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.

ESG 6100 Seminar: Environmental Science and Geology Cr. 1
This course will expose students to current research topics as they listen to scientists giving seminars on their current research. This can help students in many ways including helping them to: i) refine their research interests; ii) network with the speakers to refine potential areas of Ph.D. study; iii) identify supplemental research areas outside their own subfields, possibly leading to cross-fertilization of research ideas; and iv) broaden their knowledge base in Geology and Environmental Science. Offered Fall, Winter.

ESG 6150 River Assessment and Restoration I Cr. 3
Students will learn field methods to assess stability, condition of rivers and contributing watersheds. Students will learn basic surveying techniques, apply these to the collection, analysis of cross-sectional data and longitudinal profiles. Other field methods include: Wolman pebble count, measurement of plan-form geometry, identification of key geomorphic features (e.g., bankful elevation, abandoned floodplains, mid-channel and transverse features). Field measurements will be made to calculate Bank Erosion Hazard Index (BEHI), Near-Bank Stress Index. Students will learn how to monitor a river for bank erosion (e.g., bank pins), riverbed aggradation/degradation (e.g., scour chains). Students will learn stream classification, sediment budgeting, methods to quantify sediment yield and transport, and how to analyze data, and identify trends in river hyrdology and sediment supply. Offered Every Other Spr/Sum.
Equivalent: CE 6170

ESG 6160 Applied Remote Sensing Cr. 3
This course focuses on remotely sensed data for geospatial applications. It is desirable for students to have prior knowledge in the basics of remote sensing, mapping, and GIS, and have experience with geospatial software, particularly ArcGIS, but it is not necessary. Students will develop a strong understanding of the tools and techniques used to display, process, and analyze remotely sensed data. Upon completion of this course, students will be able to develop analytical workflows to derive products and extract information from remotely sensed data for a broad range of applications. To assess the course learning, an independent final project for each student will be assigned in which students will demonstrate their ability to apply new skills to a real-world situation of personal or professional interest. Offered Yearly.

ESG 6165 Biodiversity Changes in the Anthropocene Cr. 4
This course is a study of the Anthropocene—what scientists argue is our current epoch in geologic time—emphasizing changes in Earth's biodiversity as a result of human activities. Following an introduction to the Anthropocene, how it can be defined, and key ecological principles of biodiversity, we will explore the history and context for various types of human-influenced change. We will then survey seven human drivers of biodiversity change—from climate and chemical changes to habitat alteration and resource use and finally species transport (including modern pandemics) and invasion. We will wrap up the course examining past, present, and future tipping points, shifting baselines, goals and targets for management, and attitudes. Through this course, you will be challenged to consider both domestic and global (indigenous and western) perspectives of biodiversity change and issues concerning environmental justice. Emphasis will be placed on biodiversity shifts as influenced by humans. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 6165

ESG 6170 Spatial Statistics and Analyses for Environmental Applications Cr. 3
Students will gain an understanding of spatial analysis methods and learning practical skills in using GIS and spatial analysis to discover features of spatial distribution. The class covers the methods of spatial analysis including measuring aspects of geometric features and identifying spatial patterns of geospatial objects that are represented as points, lines, networks, areal data, and 3-D surfaces. The material will be presented in readings, lectures, lab assignments, and a final project. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

ESG 6180 Environmental DNA for Ecosystem Monitoring and Conservation Cr. 4
This course is a study of environmental DNA principles, approaches, and applications to study anthropogenic change in the environment. Following an introduction to the field of eDNA, challenges and limitations, early landmark studies, and applications in a variety of ecosystems and types of research questions, we will shift our focus to the technical background for designing an eDNA study—including how eDNA samples are collected, processed, and analyzed— and wrap up with considerations of the future of DNA metabarcoding. Emphasis will be placed on eDNA as a tool for studying environmental changes caused by humans. Offered Yearly.
Prerequisites: BIO 3070 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 6185

ESG 6190 Environmental Microbiology Cr. 4
This course is a study of microbial diversity, approaches, and anthropogenic change in the environment. Following an introduction to the field of environmental microbiology, emerging global issues, and exploration of microorganisms in various habitats, we will focus on recent advances in characterization of microorganisms, pathogen transmission (including modern day pandemics), indicators of ecosystem health, and risk assessment. Through this course, you will also develop an understanding of how environmental microbiological samples are collected and processed, analyze how to track microbial sources and transport, and evaluate how microbiota interact with pollutants and ecosystems. Emphasis will be placed on microbiotic changes in the environment as influenced by humans. Offered Yearly.
Equivalent: BIO 6195

ESG 6250 Fluvial Geomorphology Cr. 3
This course is an introduction to the physical processes that shape rivers. The focus will be on wadable streams; however, many of the concepts will be applicable to larger rivers, such as the Missouri, Mississippi, Detroit and St. Clair Rivers. River restoration is a thriving industry, and professionals who understand the mechanics of rivers and sediment transport will be in great demand. Students will learn how the dimension, pattern and profile of a river will adjust to changes in hydrology and sediment supply. Students will apply equations to predict flow, velocity and sediment yield and transport, in addition to calculating stable channel dimensions and the extent of departure from stability. Students will learn the value of field measurements and how such observations can help reconstruct the historic disturbances to the fluvial system. Lastly, the role that humans and climate change play in river adjustment will be discussed. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

ESG 6300 Emerging Organic Contaminants in Global Environment Cr. 4
Contaminants of emerging concern (CECs), also known as emerging contaminants, involve major scientific and political issues. Contaminants of emerging concern can refer to a variety of different compounds, including but not limited to pharmaceuticals, personal care products, disinfection by-products, and some pesticides. Many of these chemicals have been detected in global air, water, sediment, soil, and biota. In this hybrid class, students will be in an active learning community and be exposed to real-world examples. Through this course, students will become familiar with common CECs, analytical methods, their source/occurrence, environmental behaviors, and potential treatment methods. Using the knowledge you have learned in this course, you will be asked to develop a research proposal for one class of CECs that is important in your field or of your interest. This course will prepare graduate students for professional work in environmental sciences, consulting, and management. Offered Fall.

ESG 6320 Coastal Geology and Processes in the Great Lakes Cr. 3
Waves and currents are the dominant forces shaping the shoreline. Students will learn how waves form and undergo transformation from deep water to the shoreline. Emphasis will be placed on a general understanding of these processes and their quantification with equations and numerical models. The geology and morphology of the shoreline will dictate its response, and student will spend a significant amount of time learning about the varying types of shorelines (till, dunes, bedrock, gravel/cobble, etc.), how they formed and their response to wave attack. Students will also learn how anthropogenic encroachment and climate change affect the coastal response, in addition to an introduction to coastal field methods. The material in this course will benefit students seeking employment as a coastal geologist, environmental engineer or environmental scientist. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

ESG 6400 Isotopes: Applications in Geological and Environmental Sciences Cr. 4
Our current understanding of our Earth and its environment are revolutionized by the applications of radioactive and stable isotopes of a large number of the first 95 elements in the Periodic Table. These isotopes, because of their suitable geochemical and nuclear properties, serve as tracer and chronometers to investigate a variety of topics that include chronology of rocks and minerals, paleoclimate, and paleo-environment, erosion and weathering of rocks and minerals, material transport within and between various reservoirs of earth processes. The major objective of this course is to introduce fundamental principles behind dating of Earth material that includes sediment, carbonate, aerosols, glaciers, groundwater/water masses, etc. Further, the foundations of fractionation of stable isotopes in the environment will be laid. Using isotopes as a powerful tool, a large number of applications in solving environmental problems (during Anthropocene) will be presented. Offered Yearly.
Prerequisites: ((PHY 2130 with a minimum grade of D- and PHY 2140 with a minimum grade of D-) or (PHY 2170 with a minimum grade of D- and PHY 2180 with a minimum grade of D-)), (CHM 1220 with a minimum grade of D- and CHM 1230 with a minimum grade of D-), and (GEL 1010 with a minimum grade of D- or ESG 1010 with a minimum grade of D-)

ESG 7210 Environmental and Applied Geophysics Cr. 4
Introduction to geophysical methods used in characterizing the Earth's subsurface for environmental, engineering, and exploration applications. Students will learn the basics of near-surface seismic, gravity, magnetic, electrical resistivity, and electromagnetic methods and data analysis. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ESG 7620 Seminar in Environmental Science and Geology Cr. 1-4
This seminar seeks to explore topics relating to water, its infrastructure, availability, and human impacts to aquatic systems. Students will be introduced to drinking water management, and its availability in metropolitan areas from a multitude of experts ranging from academics (biology, anthropology, urban planning, engineering, pharmacology, and more) to community leaders. Potential solutions for issues relating to water equity, sustainable infrastructure and best management practices will be introduced and evaluated. This knowledge will allow students to engage in informed critical analysis of water issues from the perspective of availability, equity and evaluate the efficacy of sustainable infrastructure. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

ESG 7650 Applied Geologic Mapping Cr. 4
Geographic Information Systems (GIS) is a powerful tool for analyzing spatial datasets, and for this reason it can be applied to many geological problems. This course will provide students the necessary skills to use GIS with an emphasis on geological applications. The course will focus on geologic aspects of GIS analysis such as spatial analysis, geologic mapping, topographic analysis, and the importation and interpolation of aerial photos/satellite images and field data. Offered Winter.
Prerequisites: GEL 1010 with a minimum grade of C or ESG 1010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ESG 7990 Directed Study in Environmental Science and Geology Cr. 2-8
Subjects of general interest to Environmental Science and Geology majors at the graduate level. Topics may include in any area where the department of Environmental Science and Geology faculty are interested. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ESG 7997 Research in Environmental Science and Geology Cr. 3-4
In-depth research on a particular topic producing an essay. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ESG 7999 Master's Essay Direction Cr. 3-5
In-depth research on a particular topic producing an essay which will be comparable to a research publication. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Geology; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree.
Repeatable for 5 Credits

ESG 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ET - Engineering Technology

ET 1500 Engineering Technology Trades Internship Cr. 1-6
Industrial practice dealing with specific skill trades in engineering technology, under supervision in cooperative internship program. Offered Intermittently.

ET 2140 Computer Graphics Cr. 3
Solution of drafting problems and development of graphic presentations using computer-assisted drafting techniques. Use of programming techniques for direct solution of drafting/graphic problems and available software routines. Introduction to the use of computer plotters, CRTs, digitizers. Offered Fall.
Fees: $15

ET 2160 Computer Applications for Engineering Technology Cr. 2
Various software programming environments and programming skills for engineering technology applications, including programming logic, file IO, data acquisition and processing, computer simulation, and communication protocols. Offered Fall.
Prerequisites: EET 2000 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

ET 2200 Engineering Materials Cr. 3
Application and characteristics, both physical and chemical, of metallic and nonmetallic materials, polymers, and composites used in industry. The primary process involved in producing these materials. Offered Yearly.
Prerequisites: CHM 1020 with a minimum grade of C-

ET 2500 Co-op Experience Cr. 1-4
Industrial practice under supervision in cooperative education. Work-study program. Report required. Offered Every Term.
Repeatable for 4 Credits

ET 3030 Statics Cr. 3
The objective of this course is to provide the student with a basic understanding of the analytical and graphical techniques that are used to determine the forces acting upon and within a body or structural component under static load. This course provides the necessary foundation for later studies in the analysis and design of structures as well as mechanical and electrical equipment. Offered Fall, Winter.
Prerequisites: ET 2140 with a minimum grade of C-, PHY 2130 with a minimum grade of C-, and (ET 3430 with a minimum grade of C- (may be taken concurrently) or MAT 2010 with a minimum grade of C- (may be taken concurrently))

ET 3050 Dynamics Cr. 3
Kinematics; kinetics of particles; kinetics of translation and rotation of a rigid body; relative motion; use of equations of plane motion. Application of impulse and momentum principles; work and efficiency. Offered Yearly.
Prerequisites: ET 3030 with a minimum grade of C- and (ET 3430 with a minimum grade of C- or MAT 2010 with a minimum grade of C-)

ET 3430 Applied Differential and Integral Calculus Cr. 4
Limits, derivatives, applications of derivatives, definite integrals and their applications, and trigonometric functions. No degree credit in College of Liberal Arts and Sciences. Offered Every Term.
Prerequisites: MAT 1800 with a minimum grade of C-
Equivalent: MAT 3430

ET 3450 Applied Calculus and Differential Equations Cr. 4
Continuation of MAT/ET 3430, including logarithmic and exponential functions, first and second order ordinary differential equations, vectors, polar coordinates, Laplace transforms, Taylor series, and Fourier series. No degree credit in College of Liberal Arts and Sciences. Offered Every Term.
Prerequisites: ET 3430 with a minimum grade of C- or MAT 2010 with a minimum grade of C-
Equivalent: MAT 3450

ET 3850 Reliability and Engineering Statistics Cr. 3
Probability, hypergeometric, binomial, Poisson, and normal probability distribution; confidence intervals; inferences concerning means; linear regression; introduction to statistical quality control and reliability; use of computers. Offered Fall, Winter.
Prerequisites: MAT 1800 with a minimum grade of C-, MAT 2010 with a minimum grade of C-, or ET 3430 with a minimum grade of C-

ET 3870 Engineering Economic Analysis Cr. 3
Techniques to economically evaluate major technical projects, rate of return and present worth, interest formulae, federal taxes, risk, inflation, and non-economic constraints. Offered Every Term.
Prerequisites: MAT 1800 with a minimum grade of C-, MAT 2010 with a minimum grade of C-, or ET 3430 with a minimum grade of C-

ET 4990 Guided Study Cr. 1-6
Supervised study and instruction in field selected by student. Offered Intermittently.
Repeatable for 6 Credits

ET 4999 Senior Design Project Cr. 3
Student designs, builds, and tests product; philosophy of design. Project proposal to be submitted by second week, final outcome to be completed by thirteenth week; progress reports, and oral presentation required. Students must be in one of their last two semesters before graduation in order to enroll in this course. Offered Fall, Winter.
Prerequisites: ENG 3050 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Senior.

ET 5100 Fundamentals of Mechatronics and Industrial Applications Cr. 3
Fundamentals of mechatronics and their applications in industry; building blocks of mechatronic products including sensors, proximity, displacement and rotational measurement sensors, force and torque measurement sensors, pressure sensors, accelerometers, and actuators; introduction of closed-loop control, electrohydraulic motion control, PLC mechatronics design by embedding sensors, actuators and controllers into mechanical components. Offered Fall.
Prerequisites: EET 3180 with a minimum grade of C- or MCT 3010 with a minimum grade of C-

ET 5110 Advanced Programmable Controllers and Industrial Applications Cr. 3
Introduces basic concepts and architecture of industrial control systems, sensors, measurement devices, PID controllers, and operating principles of PLCs. Students will learn how to operate the PLC programming software. Ladder logic programs are the main language, and functions and function blocks will also be taught for students to grasp high-level PLC-programming skills. Offered Winter.
Prerequisites: EET 3720 with a minimum grade of C- or MCT 3010 with a minimum grade of C-

ET 5200 Charging Infrastructures for Electric Vehicles Cr. 3
This course provides the student with technical knowledge into concept development, product design, and manufacturing of Charging Infrastructures for Electric Vehicles. Explore concept development, design, etc. to manage Michigan, USA, and global increased sales volumes. Student will research and document evolving battery technology which includes battery chemistry, precious materials, mineral mining, and supply chain technical challenges. Offered Spring/Summer.

ET 5300 Machine Vision - Industrial Applications Cr. 3
To build a basic understanding of fundamental vision and imaging concepts through both lecture and hands-on projects. In this course, students will understand basic optic and lighting strategies as well as understanding the fundamentals of image sensor technology, basic processing tools and software. The goal of this course is to provide students and engineers the basic tools and knowledge required to implement an engineered vision solution for robotics, automation and other industries. Offered Spring/Summer.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Doctorate, Senior or Post Bachelor; enrollment limited to students in the College of Engineering.

ET 5400 Micro-Nanomanufacturing Cr. 3
Introduce micro-nanomanufacturing, classification of micromanufacturing and nanomanufacturing, modern fabrication techniques, micro-nanomanufacturing applications in energy storage, solar, robotics, biomedical and industrial engineering, various types of nanostructured materials - nanofibers, nanorods, nanoparticles. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Doctorate, Senior or Post Bachelor; enrollment limited to students in the College of Engineering.

ET 5500 Graduate Industrial Internship Cr. 1-4
Industrial practice under supervision in cooperative education. Oral presentation and written report describing professional experience required. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

ET 5600 Python: Industrial Applications Cr. 3
Provides a combination of lectures and hands-on projects on how computer programming is applied in various industrial applications including robotics, automation and visualization applications. After an introduction to the basics of Python programming, students will then be provided with the opportunity to perform industrial projects using Python. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Doctorate, Senior or Post Bachelor; enrollment is limited to Graduate or Undergraduate level students.

ET 5800 Industrial Robots Programming Cr. 3
Provides an understanding of basic robotic theory (direct kinematics, inverse kinematics, links, joints, coordinates systems, and robotic vision theory) and applications. Students will program and maintain an R-J or higher robot controller with a standard application software package; identify the components of a vision system; install vision hardware; develop an application; perform error recovery procedures; and follow recommended safety practices. Labs, assignments and projects will be done using industrial robots: FANUC S 430 iw, FANUC LR Mate 200 iC, FANUC LR Mate 200 iD, and FANUC CR 4iA collaborative robot. Simulation and off-line programming will be done using Visual Components and ROBOGUIDE simulation software packages. Offered Fall.

ET 5870 Engineering Project Management Cr. 3
Provides the student with insights into human and organizational behavior affecting projects, in addition to the quantitative tools for the successful management of engineering projects. The course addresses a variety of project types and deals with how to select, initiate, operate and control as well as terminate a project. The role of project managers and their interaction with the rest of the organization is highlighted. Offered Fall, Winter.
Prerequisites: MAT 1800 with a minimum grade of C-, MAT 2010 with a minimum grade of C-, or ET 3430 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Doctorate, Senior or Post Bachelor.

ET 5900 Multi-Robot Systems for Smart Manufacturing Cr. 3
Design and deploy coordinated multi-robot systems for modern smart factories and industrial automation. Students learn navigation, area mapping, localization, motion planning, and multi-robot coordination using ROS2. Through hands-on hardware setup and digital twin models, students build, simulate, and test an integrated smart factory pipeline facilitated by robots focused on real-world industrial automation. Offered Fall.
Prerequisite: ET 5600 with a minimum grade of B

ET 5995 Special Topics in Engineering Technology I Cr. 1-4
Topics to be announced in Schedule of Classes. Offered Intermittently.
Repeatable for 8 Credits

ET 7300 Advanced Battery Systems for Electric-drive Vehicles Cr. 3
Aims to familiarize students with advanced battery technologies and their applications in hybrid and electric vehicles. Contents include: a descriptive overview of energy sources and conversions, HEV/PHEV/EV technology, hybrid powertrain configuration and components, in-vehicle energy storage systems, electrochemistry fundamentals, battery power and capacity/energy, battery system design (cell, module and pack), Battery Management System (BMS), cell monitoring and balancing, thermal management, on-board diagnostics, battery charging schemes and systems. Offered Fall.
Prerequisite: MCT 5150 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: EVE 7300

ET 7430 Methods of Engineering Analysis Cr. 4
This course aims to provide the theory and computer applications of differential equations, partial derivatives, Laplace transforms, Fourier series, matrices, and vectors. It also encourages students to use software programming environments to solve numerical problems. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

ET 7800 Industrial Robots Dynamics and Control Cr. 3
Covers the direct and inverse dynamic problem for industrial robots; Newton-Euler and Lagrange-Euler equations of robot arm motion; a new automatic separation method (ASM) for automatic generation of dynamic equations; robot trajectory generation; control of Robot Manipulators (PID control, design of control systems in State-Space and computed torque technique); sensing (range sensing, proximity sensing, touch sensing, force and torque sensing) using available Robots and Collaborative robots; current trends and research in Industrial Robotics and Cobotics. Offered Winter.
Prerequisite: MIT 5700 with a minimum grade of C or ET 5800 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ET 7990 Directed Study Cr. 1-8
Supervised study and instruction in an advanced topic. Outline of proposed study and petition must be submitted to graduate committee in advance of registration for approval. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ET 7999 Master's Project Cr. 1-6
Design, fabrication, system optimization, and applications of graduate level material. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

EVE - Electric-drive Vehicle Engineering

EVE 5110 Fundamentals of Electric-drive Vehicle Engineering Cr. 3
Cover engineering fundamentals and basic design of electric-drive vehicle powertrains by understanding and analyzing the relevant multi-physics and applying the associated equations and simple models. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: ME 5115

EVE 5115 Fundamentals of Electric-drive Vehicle Modeling Cr. 4
Covers engineering and modeling fundamentals and basic design of electric-drive vehicle powertrains by understanding and analyzing the relevant multi-physics and applying the associated equations and simple models. MATLAB script m-file is required for all assignments. Offered Fall.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to Graduate or Undergraduate level students; enrollment limited to students in the College of Engineering.
Equivalent: ME 5115

EVE 5120 Fundamentals of Battery Systems for Electric and Hybrid Vehicles Cr. 4
Fundamental electrochemistry and engineering aspects for electric propulsion batteries, including lead acid, nickel metal hydride, and lithium ion technologies. Offered Intermittently.
Equivalent: AET 5310, CHE 5120, ME 5215

EVE 5130 Fundamental Fuel Cell Systems Cr. 4
Introduce various types of fuel cells, materials properties of electrodes and polymeric membranes, and electrochemical mechanisms. Reforming of various types of hydrocarbon fuel to hydrogen, and reforming technology. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: AET 5110, CHE 5110, ME 5110

EVE 5410 Power Electronics and Control Cr. 3
Control of electrical energy using solid state devices, diodes, thyristors, IGBTs, and new WBG devices; mathematical analysis of circuits containing these devices; power converters and control; applications of power converters in alternative energy systems and electric vehicles. Offered Winter.
Prerequisites: ECE 4330 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: ECE 5410

EVE 5450 Control and Optimization for Integrated Electric-drive Vehicle Systems Cr. 4
Understanding of how to control a system using modern control theory, how to optimize the performance of a system using various optimization technologies, and how to apply the control and optimization technologies to EDV systems. Offered Winter.
Prerequisite: EVE 5430
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate or Senior; enrollment limited to students in the College of Engineering.

EVE 5600 Integrated Product Development Cr. 3
Product development process: product architectures, concurrent engineering. Integration of marketing, design, and manufacturing functions for product development. How such processes are designed to account for various manufacturing and other business constraints to ensure that customer needs are met. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: AET 5600, IE 6405

EVE 5700 Electric-drive Vehicle Capstone Design Cr. 4
The class is divided into teams competing on same or similar Electric-Drive Vehicle (EDV) system design project on contemporary EDV issues with relevant vehicle powertrain and energy system contents, involving energy, environmental, safety and economic analyses. Offered Winter.
Prerequisites: EVE 5110 and (EVE 5310 or EVE 5430)
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate or Senior; enrollment limited to students in the College of Engineering.

EVE 5810 Power Management for Advanced Energy Storage Systems and its Applications Cr. 4
Operating principles and modeling of energy storage techniques; control and power management, power electronic converters, electric machines, and power systems; power management strategies of hybrid energy systems including HEV and alternative energy systems. Offered Fall, Winter.
Prerequisites: ECE 4470
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: AET 5810

EVE 7300 Advanced Battery Systems for Electric-drive Vehicles Cr. 3
Aims to familiarize students with advanced battery technologies and their applications in hybrid and electric vehicles. Contents include: a descriptive overview of energy sources and conversions, HEV/PHEV/EV technology, hybrid powertrain configuration and components, in-vehicle energy storage systems, electrochemistry fundamentals, battery power and capacity/energy, battery system design (cell, module and pack), Battery Management System (BMS), cell monitoring and balancing, thermal management, on-board diagnostics, battery charging schemes and systems. Offered Fall.
Prerequisite: EVE 5120 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ET 7300

EVE 7310 Electric-drive Vehicle Simulation and Control Cr. 4
Cover modeling, simulation and control of electric-drive vehicle powertrain including plant modeling, controls model development, and in-the-loop controls testing. Proficiency in MATLAB/Simulink is required. Offered Winter.
Prerequisites: EVE 5115 with a minimum grade of B- or ME 5115 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: ME 7315

EVE 7990 Directed Study Cr. 1-4
Independent projects on subjects of interest in electric-drive vehicle engineering. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad or Graduate Certificate; enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Repeatable for 4 Credits

EVE 7991 Internship in Industry Cr. 1
Industrial internship in automotive vehicle-related technologies, particularly in vehicle electrification, and related components and/or systems. Internships are off-campus experiential learning activities designed to provide students with opportunities to make connections between the theory and practice of academic study and the practical application of that study in a professional work environment. Internships are completed under the guidance of an on-site supervisor and a faculty sponsor, who in combination with the student will create a framework for learning and reflection. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 3 Credits

EVE 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad or Graduate Certificate; enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Repeatable for 8 Credits

FIN - Finance

FIN 1200 Personal Finance Planning Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
Introductory course designed to help students become financially literate and make proper financial decisions encountered in everyday life. Topics covered will include income, money management, spending and credit, as well as saving and investing. No credit after former FIN 3050. No credit after former BA 1200. Offered Fall, Winter.

FIN 3290 Business Finance Cr. 3
Principles of financial administration, with applications to problems of financial analysis, control, and planning by firms under changing economic conditions. This course satisfies Society of Actuaries Validation by Educational Experience (VEE) in Accounting and Finance when taken with ACC 3010 with a B- or better in each course. Offered Every Term.
Prerequisites: TIS 2300 with a minimum grade of C (may be taken concurrently)

FIN 4500 Business Co-op Assignment Cr. 0
Must be elected by Professional Development Co-operative Program students during work semester. Offered for S and U grades only. No credit toward degree. Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. Offered Every Term.
Restriction(s): Enrollment limited to students in the School of Business.
Equivalent: ACC 4500, MGT 4500, MKT 4500

FIN 4990 Directed Study in Finance Cr. 1-3
Advanced readings and research or tutorial under the supervision of a faculty member in areas of special interest to student and faculty member. Offered Every Term.
Prerequisites: ACC 5100 with a minimum grade of D- and FIN 5210 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

FIN 5000 Financial Statement - Analysis & Modeling Cr. 3
Introduction to foundational concepts used in corporate financial statement analysis, including application of specific financial modeling tools, and an overview and practical application of techniques necessary to build dynamic cash flow models. The course includes advanced discussions on the relationship between the financial statements, and using Excel, students will learn how to build analytical and proforma models themselves to understand the decision-making inputs used by corporate finance professionals. The course concludes with a discussion on professionally presenting model outputs, forecasts, valuations, and transactional analyses for management review. Successful completion of introductory courses in accounting and finance is required for this class. It is highly recommended that students have a basic working knowledge of Microsoft Excel prior to enrollment in the course. Replaces ACC 5000 for finance majors. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: ACC 3010 with a minimum grade of C and FIN 3290 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 5090 Capital Markets Cr. 3
Detailed discussion of financial intermediaries; the capital markets; money markets, macroeconomics policies and interest rates. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: FIN 3290 with a minimum grade of B (may be taken concurrently)
Restriction(s): Enrollment is limited to Undergraduate level students.

FIN 5200 Startup Funding and Profitability Cr. 3
Introductory course that will expose students to accounting and financial information. This foundational knowledge will be used to give students the financial language and understanding of the development and operations of new ventures. The ideal audience for this course is undergraduate students. Additionally, others who are interested in starting their own firm or working at a startup, or who are interested in careers in venture capital or private equity could benefit. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

FIN 5215 Investment Fundamentals Cr. 3
Focus on modern investment analysis; fundamentals of asset classes including stocks, bond, derivatives, as well as index and mutual funds; risk and return analysis and how characteristics of a portfolio differ significantly from those of the securities from which they are formed; investigation of the Capital Asset Pricing Model (CAPM) and other risk-return models, including Arbitrage Pricing Theory (APT). Tools to manage investment risk and detect mispriced securities. Offered Fall, Winter.
Prerequisites: FIN 5000 with a minimum grade of C (may be taken concurrently), TIS 3400 with a minimum grade of C, and FIN 3290 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 5220 Portfolio Management Cr. 3
The student managed investment fund course gives students real world experience investing and managing a long only, $2 million equity portfolio. Students apply concepts related to equity asset valuation, equity research, and portfolio management to monitor and evaluate current holdings, and recommend new investments for the fund. Offered Fall, Winter.
Prerequisites: FIN 5000 with a minimum grade of C and FIN 5215 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 5270 Advanced Business Finance Cr. 3
Risk analysis, working capital management, capital budgeting and valuation theories. Role of financial management in maximizing value of the firm. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: FIN 3290 with a minimum grade of C, TIS 2300 with a minimum grade of D-, and FIN 5000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 5280 Entrepreneurs' Ecosystem Cr. 3
Focuses on resources available to the entrepreneur. Exposes the students to angel and superangel funding, microloans, crowdfunding, and various types of the venture capital funding avenues. Examines the challenges of financing and structuring a deal with financiers. Provides experience in pitching a business idea and understanding the anatomy of a successful business plan. Offered Winter.
Prerequisite: FIN 3290 with a minimum grade of C and FIN 5270 with a minimum grade of C

FIN 5290 Topics in Finance Cr. 3
Current developments in such areas as: working capital management, mergers and acquisitions, pension fund management, use of options and futures, high-risk debt management, hybrid securities, management of financial institutions, international financial issues, or market microstructure. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

FIN 5320 Principles of International Finance Cr. 3
Financial management in an international context. Determination of exchange rates; their effect on the economy and financial securities; operation of multinational firms (MNCs) in this environment. Measurement and management of MNC exchange-rate exposures; tax regulatory arbitrage; international portfolio investment; determination of cost of capital for a foreign direct investment project and construction of its capital budget. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: FIN 3290 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 5330 Bank Management Cr. 3
Analysis of the functional areas of management of banks and related financial institutions, including deposits, cash, loans and asset accounts. Discussion of current topics including liquidity, capital adequacy, electronic fund transfers and mortgages. Offered for undergraduate credit only. Offered Intermittently.
Prerequisites: FIN 3290 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 5340 Valuation Cr. 3
Asset valuation is at the heart of intelligent financial decision-making, whether that takes the form of portfolio allocation, in deciding the appropriate price to pay or receive in a corporate merger or acquisition, investing in publicly traded securities or private firms, valuation of real estate, even valuing intangible assets such as brands. This course will provide you with the necessary tools, techniques, and models to address almost any valuation problem in finance. Offered Yearly.
Prerequisites: FIN 5270 with a minimum grade of C-

FIN 5380 Introduction to Fintech Cr. 3
This course is for students interested in exploring emerging topics in financial technology (i.e., Fintech). Students will develop a broad but solid understanding of the recent innovations in Fintech such as blockchain, cryptocurrencies, peer-to-peer lending, crowdfunding, and initial coin offerings. Basic concepts in artificial intelligence (AI) and machine learning techniques will be discussed. In groups, students will develop a fintech startup business model and give a presentation as a final project. Offered Intermittently.
Prerequisites: FIN 3290 with a minimum grade of C-

FIN 5400 Real Estate Investment Cr. 3
Introduces students to real estate – residential and commercial (office, retail, industrial, multi-family) – the largest asset class in the US economy. The sequential units of learning will be 1) description, 2) analysis, 3) valuation. In whatever business a graduate will work, the successful student will know enough to contribute to real estate decisions. Offered Intermittently.

FIN 5500 Intro to Financial Data Analysis with Python Cr. 3
This course introduces students to the fundamentals of Python programming specifically tailored for financial data analysis. Students will learn to clean and manipulate datasets, retrieve data via financial APIs, perform elementary statistical analysis, and generate professional-grade visual charts. Offered Fall.
Prerequisite: TIS 3400 with a minimum grade of B and FIN 3290 with a minimum grade of B
Restriction(s): Enrollment is limited to Undergraduate level students.

FIN 5890 Internship in Finance Cr. 3
Minimum ten-page paper (excluding exhibits) discussing a problem or opportunity facing the sponsor organization, application of financial concepts, and outcomes relative to the problem or opportunity; summary presentation to department chairperson. Offered for undergraduate credit only. Offered Intermittently.
Prerequisite: (TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 6000 Advanced Financial Analysis and Modeling Cr. 3
This intensive finance modeling course goes beyond basics to build intermediate and advanced Excel skills for business analysis and decisions. Students will master analytical capital budgeting techniques to evaluate investments; perform detailed valuation analysis with discounted cash flows, precedents, comparables, and scenarios; build a leveraged buyout model to calculate potential equity returns under various debt financing assumptions; and utilize statistical models for correlation and regression modeling. Offered Intermittently.
Prerequisites: FIN 5000 with a minimum grade of C

FIN 6005 Basics of Financial Management Cr. 3
Basic aspects of finance: time value of money, financial markets, risk and return, valuation and basic capital budgeting. Required of all graduate students; may be waived only through waiver exam. Offered for graduate credit only. No credit after former BA 6005. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

FIN 6996 Corporate Financial Strategies Cr. 3
Advanced financial strategies dealing with cost of capital, mergers and other corporate reorganizations, investment banking and capital acquisition, dividend policy, lease financing, pension funds, convertible securities, international perspectives. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: FIN 5000 with a minimum grade of C, FIN 5215 with a minimum grade of C, and FIN 5270 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 6997 Derivative Securities Cr. 3
Valuation of options, futures and swaps contracts on equities, fixed instrument securities and foreign exchange; use of these derivatives for risk management; brief review of empirical evidence. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: FIN 5215 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

FIN 7000 Applied Financial Analysis Cr. 3
This course will bridge the gap between the study of financial theory and analysis, and its practical application. The course provides foundational concepts for corporate financial statement analysis, including an overview of specific financial modeling tools, and techniques necessary to build ratio sets and dynamic cash flow models. The course includes advanced discussions on the relationship between the financial statements and tools used for decision-making by professionals.
The course concludes with a discussion on professionally presenting model outputs, forecasts, valuations, and transactional analyses for management review. It is highly recommended that students have a basic working knowledge of Microsoft Excel prior to enrollment in the course as a computer with the most recent version of Excel will be required in every class session. Offered Intermittently.
Prerequisite: FIN 7020
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7020 Corporate Financial Management Cr. 3
Development of tools to evaluate investment and financial decisions in modern global organizations. No credit after former BA 7020. Offered Every Term.
Prerequisites: FIN 6005 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

FIN 7025 Quantitative Methods in Finance Cr. 3
Provides students with the fundamental tools to conduct empirical analyses in the area of corporate finance. Topics include data analysis and manipulation, regression analysis, hypothesis testing, linear regression analysis, and interpretation of results. Computer lab sessions that will help students to get the necessary hands-on experience on using financial data. When appropriate, the class will refer to how these techniques are used in research papers and in finance-related industry contexts. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7030 Fixed Income Securities Cr. 3
The course prepares students for successful careers as fixed-income portfolio managers or fixed income risk managers. Fixed-income securities are debt instruments issued by governments, corporations, or other entities to finance and expand their operations. These securities provide investors with a return in the form of fixed periodic payments and the eventual return of principal at maturity. Examples of fixed-income securities include government bonds, treasury bills, corporate bonds, municipal bonds, step-up bonds, Guaranteed Investment Certificates (GICs), mortgages, and preferred shares. These securities essentially represent a loan from the investor to the issuer. The course aims to introduce students to analytical tools used in interest rate modeling and risk management within the fixed-income market. Additionally, it covers various risks that can be inherent in fixed-income securities, such as credit risk, illiquidity risk, and risks associated with securitization. Offered Intermittently.
Prerequisite: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7035 Data Analytics in Finance Cr. 3
The primary objective of this course is to provide the student with the ability to process and analyze financial data using Python. The course material will involve hands on use of real data and focus on data visualization, time series analysis, and statistical applications. The course will cover basic Python syntax, data manipulation with NumPy and Pandas, and IO operations. Python will be the primary computing language used in this course. However, students will be permitted to use R for course projects. Offered Yearly.
Prerequisite: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7040 Artificial Intelligence and Machine Learning for Finance Cr. 3
The primary objective of this course is to provide the first or second semester financial engineering or business analytics student with applied quantitative skills in the areas of artificial intelligence and machine learning for finance applications. The course material will involve hands on use of real data and focus on various AI/ML algorithms common in the finance industry. The course will cover supervised learning and unsupervised algorithms and applications including natural language processing. R will be the primary computing language used in this course. However, students will be permitted to use Python for course projects. Offered Yearly.
Prerequisite: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7090 Money and Capital Markets Cr. 3
An in depth look into the operations, mechanics, and structure of the financial system. We will discuss topics including: financial institutions, markets, instruments, regulations and monetary policy. As well as developing an understanding of how current monetary policy by the Federal Reserve impacts financial markets. Offered Fall.
Prerequisites: FIN 6005 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7200 Startup Financing and Profitability Cr. 3
Students are introduced to basic accounting and financial information that provides the tools necessary to understand the workings and prospects a new venture. The skills learned in this course will provide the student with a basic understanding of the financial language of any business. This course will benefit students who are interested in starting their own firm or working at a startup, or who are interested in careers in venture capital or private equity. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

FIN 7220 Advanced Managerial Finance Cr. 3
Advanced topics in managerial finance, including leasing, merger valuation, reorganization, interactions of investment and financing decisions, and critical evaluation of alternative firm valuation theories. Offered Fall, Winter.
Prerequisites: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7229 Corporate Valuation: Techniques, Models and Strategic Applications Cr. 3
Tools, techniques and models used to address valuation problems in finance; emphasis on corporate strategic valuation. Offered Yearly.
Prerequisites: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7230 Investment Policies Cr. 3
The key determinants of security prices under changing economic conditions. Theories, strategies and techniques for selection, timing, and diversification; methods of portfolio construction and administration. Offered Fall, Winter.
Prerequisites: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7250 Financial Technology Cr. 3
Financial Technology (Fintech) refers to a financial industry that applies technology to improve financial activities and/or aims to compete with traditional financial methods in the delivery of financial services. This course provides an introduction to the major topics of Fintech, including blockchain, cryptocurrencies, artificial intelligence (AI) and machine learning, peer-to-peer lending, crowdfunding, and initial coin offerings. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7270 Entrepreneurs' Ecosystem Cr. 3
The course focuses on resources available to the entrepreneur, such as incubators and accelerators as well as on the various forms of financing the entrepreneur can access at different stages of growth. While examining the unique financial issues start-ups face, students are exposed to angel and superangel funding, microloans, crowdfunding, and various types of the venture capital funding avenues. From the entrepreneur's point of view, students gain experience in pitching a business idea and learn the anatomy of a successful business plan. Offered Spring/Summer.
Prerequisite: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7280 Entrepreneurial Finance and Venture Capital Cr. 3
Focuses on the venture capital (VC) cycle and understanding and analyzing the unique financial issues which entrepreneurial start-up firms face. Two distinct perspectives are provided: (a) issues that relate to the venture capitalist and (b) issues that relate to the entrepreneur. As a result, the course should be of interest to those pursuing careers in an entrepreneurial setting as well as those who are interested in a career in venture capital firm, management buyouts or private equity firm. Offered Fall, Winter.
Prerequisites: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7290 Topics in Finance Cr. 3
Current developments in such areas as: working capital management, mergers and acquisitions, pension fund management, use of options and futures, high-risk debt management, hybrid securities, management of financial institutions, international financial issues, or market microstructure. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

FIN 7340 Futures and Options Cr. 3
Valuation of options, futures and swaps contracts on equities, fixed instrument securities and foreign exchange; use of these derivatives for risk management. Offered Yearly.
Prerequisites: FIN 7230 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7870 International Finance Cr. 3
Identification of basic factors affecting exchange rates; roles of central banks and international monetary system. Exchange-rate forecasting, balance of payments, international economic linkages. Management of foreign exchange risk (translation, transaction, and economic exposure) by hedging with financial derivative securities and using operational hedges that deal with marketing and production strategies. In-depth analysis of multinational companies' investment in foreign countries; cost-of-capital and capital-budgeting issues. Offered Yearly.
Prerequisites: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7890 Internship in Finance Cr. 3
Students work a minimum of 160 hours for fifteen weeks in an entry-level management position in finance. Offered Intermittently.
Prerequisites: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7900 Mergers and Acquisitions Cr. 3
An in depth examination of the valuation complexities encountered in corporate restructuring and corporate change of control. The primary topics covered include the Mergers and Acquisitions (M&A) process, valuation using methods of comparables, precedent transactions, and Discounted Cash Flow (DCF) analysis. Financing M&A transactions, particularly using different kinds of debt used in leveraged buyouts will be discussed. Offered Intermittently.
Prerequisites: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7990 Portfolio Management/Student Managed Investment Fund (SMIF) Cr. 3
This course provides students with practical experience in portfolio management. Students are responsible for detailed monitoring and recommendations related to the stocks in the Student Managed Investment Fund, a $2 million long only equity portfolio. Each student is assigned to a market sector and acts as a security analyst, applying appropriate fundamental and valuation analyses, preparing written reports, and making oral presentations to the class and the Fund's advisory board. Offered Fall, Winter.
Prerequisites: FIN 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

FIN 7995 Directed Study Cr. 1-3
Advanced independent readings and research under the supervision of a graduate faculty member in areas of special interest to student and faculty member. Offered Every Term.
Prerequisites: ACC 7000 with a minimum grade of C, FIN 7020 with a minimum grade of C, MGT 7040 with a minimum grade of C, MKT 7050 with a minimum grade of C, and MGT 7070 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 5 Credits

FPC - Fine Arts: Interdisciplinary

FPC 1010 Math for the Arts Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
An introduction to quantitative reasoning, with the aim of developing the capacity to comprehend and analyze the quantitative information that is prevalent in daily life, with a particular focus on the arts. Topics include problem solving with shape and form and mathematical modeling of consumer finance. Offered Every Term.

FPC 1020 Building a Foundation for College Success Cr. 1
Satisfies General Education Requirement: Wayne Experience
This course is designed to expose students to the Wayne State University undergraduate experience. Students will gain an understanding of campus resources, institutional values, and the merits of a liberal arts education from an urban research one university. This course will aid in the development of critical and analytical thinking skills necessary for college success while determining one's academic and professional goals. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Freshman.
Equivalent: BE 1060, RSE 1010

FPC 5025 Entrepreneurship in the Arts Cr. 3
Explores the possibilities of entrepreneurship as a career/life option. Students will identify the intersection of the arts, arts culture, entrepreneurship and the individual to provide a practical and meaningful guide to creating a professional career in the arts. Offered Winter.

FPC 5660 Creativity Cr. 3
Theoretical and experiential exploration in creativity and its relation to individuals, organizations, and the entrepreneurial process. Offered Fall.

FPC 5990 CFPCA Service-Learning Cr. 0
Corequisite course used to designate the service-learning component of specified CFPCA courses. Maximum of three registrations allowed. Offered Intermittently.

FPH - Family Public Health

FPH 7010 Urban Community Assessment and Planning Cr. 1
Designed to provide students an introduction to the public health landscape of an urban community. Students will be traveling around an assigned community in which they will observe, assess, analyze and prioritize needs and goals, which promote public health. A group community assessment along with a presentation will include data collection, an analysis of data and prioritization of health objectives. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7011 Foundations of Public Health Cr. 3
Foundations of Public Health is a required course in the MPH program, covering the history, philosophy and values of the public health profession. With a focus on the core functions of public health, the course provides an overview of the science of health promotion and disease prevention, and it will introduce students to the multiple factors associated with population health and explore communication strategies to disseminate public health content to intended populations. Topics include: core functions of public health, 10 essential services of public health, morbidity, mortality, evidence-based practice, social determinants of health, health promotion, disease prevention, communication in public health practice. Offered Fall, Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in MSW/MPH, Public Health, Public Health Practice or Public Health Honors; enrollment is limited to Graduate level students.

FPH 7012 Social Justice in Public Health Cr. 3
This course provides an introduction to the topic of public health and social justice. Students will explore social constructions of health, and examine the complex interplay of community, cultural, ethical, social, economic, environmental, political and social justice forces that shape human health globally and locally. Students will gain an understanding of how social determinants of health impact health and contribute to health disparities and health inequities. Core public health concepts of community, culture, and social justice will be explored through a critical lens, and students will examine the various ways in which these concepts can be applied to public health interventions. The course is designed to provide students with theoretical principles, methods, and skills essential to plan, implement, and evaluate community development activities. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in MSW/MPH, Public Health, Public Health Practice or Public Health Honors; enrollment is limited to Graduate level students.

FPH 7015 Biostatistics I Cr. 3
Descriptive statistics; elementary probability; measures of central tendency and of dispersion; random samples; probability distributions including the binomial, the Poisson, the normal, the t, the chi-square, and the F; introduction to estimation and hypothesis testing; rates and vital statistics. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in MSW/MPH, Public Health or Public Health Honors; enrollment is limited to Graduate level students.

FPH 7020 Biostatistics II Cr. 3
The primary biostatistical tools in public health research are single-outcome, multiple-predictor methods, such as multiple linear regression for continuous outcomes and logistic regression for binary outcomes. This course is to provide introduction to multi-predictor methods, emphasizing their proper use and interpretation. The course incorporates as little theory as feasible, but illustrates the techniques using a variety of examples in the public health field. There are a number of software that can perform these analyses, such as R, SAS, STATA, and SPSS. The R is a flexible environment for data analysis and data visualization. It is open-source and has been compiled for common operating systems such as Windows, Mac (OS X), and Linux. Upon completion of this course, students will be able to perform and interpret regression modeling in epidemiological research. Offered Fall.
Prerequisites: FPH 7250 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7100 Health Care Organization and Administration Cr. 3
General overview of the U.S. health care system; social and organizational aspects of the delivery, financing, utilization, planning, and development of health care systems. Offered Winter, Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in MSW/MPH, Public Health or Public Health Honors; enrollment is limited to Graduate level students.

FPH 7120 Global Public Health Cr. 3
Addresses global public health issues that impact populations, with the major objective of health equity. Public health principles and techniques are applied using a multidisciplinary approach to prevention and risk reduction strategies. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7210 Research Methods for Public Health Professionals Cr. 3
Logic of research design, formulation of public health research problems and objectives; development of hypotheses or research questions, specification of variables; sampling; issues in measurement, data collection and analyses. Emphasis will be on qualitative methods in use by public health agencies and non-profit organizations. The focus will be on data collection and analytic skills commonly used in a variety of public health settings including, health care, non-profit organizations, community groups and public health departments. Offered Fall, Spring/Summer.
Prerequisites: FPH 7015 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7230 Health Program Evaluation Cr. 3
Principles and application of program evaluation in health care fields. Design, implementation, and management of evaluations in health environments. Offered Fall.
Prerequisites: FPH 7011 with a minimum grade of B, FPH 7012 with a minimum grade of B, and FPH 7210 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7240 Epidemiology Cr. 3
Epidemiologist's task list; research of problems without known etiology; infectious and non-infectious models; examination of current problems. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in MSW/MPH, Public Health, Public Health Practice or Public Health Honors; enrollment is limited to Graduate level students.

FPH 7241 Epidemiology of Aging Cr. 3
This discussion-based graduate seminar is focused on the epidemiology of aging from a public health perspective. The objective is to introduce students to theoretical and empirical population health and aging research with an emphasis given to research utilizing epidemiologic methods and findings. Topics covered include epidemiologic studies of disease, cognition, and functional status in late-life. Attention will also be given to possible mechanisms and disparities underlying these population patterns of health and aging. By exposing students to key trends in aging, students will also become familiar with the major medical and public health challenges associated with the aging of the population. Readings for this course are primarily drawn from U.S. epidemiologic research, but also include readings from other fields and countries examining population health and aging. Offered Winter.
Prerequisite: FPH 7240 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7250 Health Data Analytics Cr. 3
This course introduces students to descriptive and analytic strategies that are used to study the distribution, determinants and control of health-related states and events in populations. First, the historical evolution of key concepts is overviewed. Second, critical reading guidelines are discussed. Third, students are introduced to different applications (i.e., surveillance, program evaluation, clinical, social, environmental and economic) and emerging strategies (e.g., precision public health). Throughout the course, examples relative to social determinants of urban health are emphasized. Offered Spring/Summer.
Prerequisites: FPH 7350 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7260 Epidemiologic Methods Cr. 2
Methodologic concepts underlying the science of epidemiology; conduct and interpretation of epidemiologic studies. Emphasis on elements of observational study design, data analysis, and inference, including issues related to causation, bias, and confounding. Offered Intermittently.
Prerequisites: FPH 7015 with a minimum grade of B and FPH 7240 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7270 Applied Research Methods in Urban Public Health Cr. 3
Focuses on applying quantitative methods to multiple data sets to answer analytic questions, completion of an individualized small project from hypothesis to methods to analysis and discussion that utilizes urban health focused data provided to students. Qualitative methods will be included. Offered Intermittently.
Prerequisites: FPH 7015 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7280 Public Health Community Level Intervention Science Cr. 3
Focuses on intervention science as it pertains to improving public health, with an emphasis on intervening at the community and institutional rather than individual level. The course focuses on systematic, theoretical, and model-driven approaches for developing, implementing, and evaluating evidence-based public health interventions in community settings. Offered Fall.
Prerequisites: FPH 7011 with a minimum grade of B, FPH 7012 with a minimum grade of B, and FPH 7210 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7300 Public Health Policy Cr. 3
Concepts, issues, and problems in population health policy; substantive information regarding policy formulation and content. Offered Fall, Winter.
Prerequisites: FPH 7011 with a minimum grade of B and FPH 7012 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7320 The Social Basis of Health Cr. 3
Social, cultural, and psychological aspects of health and health-related behavior. Topics include: health prevention and promotion, relationship between stress and illness, health services utilization, patient-practitioner interactions, and coping with chronic illness. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7340 Generalized Linear Models and Categorical Data Cr. 4
Statistical analysis of categorical and non-normal data, with an emphasis on the cohesive approach of generalized linear models. Specific types of models to be examined include logistic regression, probit regression, and log-linear models. Offered Intermittently.
Prerequisites: FPH 7150 with a minimum grade of B and FPH 7160 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7350 Advanced Statistical Programming Cr. 2
Statistical programming using R and SAS in public health. SAS topics include error checking, reading datasets, coding and formatting variables, writing reports, tables, and graphs. R topics include data visualization and analysis, numeric optimization and bootstrapping. Offered Winter.
Prerequisites: FPH 7015 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7420 Principles of Environmental Health Cr. 3
Current environmental health issues that affect individuals at work and in their communities. Sources of chemical, physical, and biological agents; their associated health effects. Air pollution, exposure prevention, water and solid waste management, and occupational health and safety. Impact of environmental exposures on human health; case studies. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7430 Application of Public Health Principles Cr. 3
Provides exposure and skill development in a broad and diverse range of public health projects and associated methods while working to develop an applied learning project proposal including grant development and budgeting. Offered Winter.
Prerequisites: FPH 7011 with a minimum grade of B, FPH 7012 with a minimum grade of B, and FPH 7210 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7440 Applied Practice Experience Cr. 3
Individual field experience in public health setting. Integration and synthesis of content and experiences of the public health courses; direct hands-on experience, with appropriate reporting mechanism. Offered Every Term.
Prerequisites: FPH 7210 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7460 Linear Mixed Models Cr. 3
Statistical modeling to incorporate random effects. Topics will include clustered-data analysis, longitudinal data analysis, hierarchical linear models, correlated data, and covariance structure. Offered Intermittently.
Prerequisites: FPH 7150 with a minimum grade of B or FPH 7160 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7480 Design of Experiments and Clinical Trials Cr. 3
Introduction to five different types of experimental designs and design and analytic issues that arise in each of the study designs. Extension of the designs to clinical trials and microarray experiments are discussed. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7500 Survival Analysis Cr. 3
Statistical methods for analyzing survival data, including parametric and nonparametric approaches. Topics include Kaplan-Meier estimation, log rank test, and proportional hazards regression analysis. Offered Intermittently.
Prerequisites: FPH 7150 with a minimum grade of B or FPH 7160 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7510 Leadership and Population Health Cr. 2
An overview of the critical principles of public health leadership. The course will emphasize management and leadership skills applied to teams, public health projects and programs. Organizational and leadership principles which are applied to health care settings will also be reviewed. The focus will be on the theoretical and practical application of leading process and performance improvement in a variety of health and public health organizations in the Metropolitan Detroit area. Offered Spring/Summer.
Prerequisites: FPH 7011 with a minimum grade of B and FPH 7012 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7511 Health Promotion Messaging and Advocacy Cr. 3
Health Promotion Messaging and Advocacy is a required course in the Master of Public Health Program's Community Based Public Health Practice (CBPHP) concentration. This course covers the principles and practices of health promotion messaging and the role of health advocacy in tackling health inequalities. Through the lens of the social determinants of health, students will design a community focused health promotion messaging intervention to enhance awareness for community-health outcome improvements. Topics include: behavior change theories for health messaging, message framing, health literacy, health promotion campaigns, crisis and outbreak messaging, technology-based messaging, clinical-patient messaging, and health advocacy. Offered Spring/Summer.
Prerequisites: FPH 7011 with a minimum grade of B and FPH 7012 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7520 Public Health Preparedness Cr. 2
The course provides an introduction and overview of the discipline of public health emergency preparedness, response, and recovery. It aims to provide a wide-ranging introduction to the field's core competencies. Public health preparedness examines the role and function of public health professionals in emergencies. The course will employ an all-hazards, domestic perspective, and explore different types of natural, biological, chemical, radiological, nuclear, and other human-caused disasters and a whole community approach. Students will learn to apply these concepts to real-world disasters, and identify, evaluate, and apply information related to public health disaster response. The course is designed to a capacity for public health to be active participants in responses to emergencies. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

FPH 7760 Community Health Education Cr. 3
Analysis of community health problems and change strategies for health promotion; application of principles and techniques of community health education to multiple ethnic groups and diverse health problems. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7780 Emergent Topics in Public Health Cr. 3
Selected public health topics or emerging fields in public health practice, including environmental health, social behavioral health, epidemiology, biostatistics, and healthcare leadership and management. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

FPH 7990 Directed Studies in Community Health Services Cr. 1-6
Studies dealing with the public health practice and research to supplement regular course offerings. An approved directed study proposal is required prior to registration. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

FPH 8991 Integrated Learning Experience Cr. 3
This is a seminar in which faculty and students interact in a variety of in-class writing activities to support development of individually prepared scholarly products. This course fulfills the Master's Project requirements for completion of the MPH degree. Offered Every Term.
Prerequisites: FPH 7440 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

FRE - French

FRE 1010 Beginning French I Cr. 4
Introduction to the French language and Francophone cultures through interactive and communicative reading, writing, listening, and speaking activities to develop language and cultural proficiency. No experience with French is needed. Offered Every Term.
Fees: $5

FRE 1020 Beginning French II Cr. 4
Continuing development of French language and Francophone cultural proficiency through interactive and communicative reading, writing, listening and speaking activities. Offered Every Term.
Prerequisites: FRE 1010 with a minimum grade of D-
Fees: $5

FRE 2010 Intermediate French Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Continuing development of French language and Francophone cultural proficiency through interactive and communicative reading, writing, listening and speaking activities. Completion of this course fulfills the General education requirement for foreign language and culture. Offered Every Term.
Prerequisites: FRE 1020 with a minimum grade of D-
Fees: $5

FRE 2100 French through Film I Cr. 4
Increased mastery in French and Francophone linguistic and cultural proficiency through film and interactive and communicative reading, writing, listening and speaking activities. Offered Fall.
Prerequisites: FRE 2010 with a minimum grade of D-
Fees: $30

FRE 2110 French through Film II Cr. 4
Increased mastery in French and Francophone linguistic and cultural proficiency through film and interactive and communicative reading, writing, listening and speaking activities. Offered Winter.
Prerequisites: FRE 2010 with a minimum grade of D-
Fees: $30

FRE 2700 Anguish and Commitment: European Existentialist Literature Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Pirandello, Sartre, Camus and Unamuno. Offered Every Other Year.
Equivalent: GER 2700, ITA 2700, SPA 2700

FRE 2710 Introduction to French Civilization I Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
An overview of France's great contributions to world culture, from the time of the Gauls to the French Revolution. French history, thought, art, architecture, society, geography, and institutions; illustrated with slides and films; includes visits to Detroit Institute of Arts. Offered Every Term.

FRE 2720 Introduction to French Civilization II Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
From the French Revolution to contemporary times. French way of life, its moral and intellectual foundations, its culture and institutions; their transformation under the stress of the twentieth century. Offered Every Other Year.

FRE 2991 Understanding the Fairy Tale Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Follows the development of classical fairy tales with a focus on France and Germany, moving from important writers like Marie-Catherine d'Aulnoy and Charles Perrault in France to the Brothers Grimm and Caroline Stahl in Germany, to Walt Disney films and contemporary fairy-tale retellings on YouTube and other media. Approaches introduced in the course include feminist, gender, queer, race, and sociohistorical. Taught in English. Offered Yearly.
Equivalent: GER 2991

FRE 3200 French Cafe Cr. 3
Students hone their speaking skills through discussions and debates about French and Francophone culture (film, television, graphic novels, podcasts) and current events. Offered Winter.
Prerequisites: FRE 2100 with a minimum grade of D- or FRE 2110 with a minimum grade of D-
Fees: $30

FRE 3300 Professional French through Literary and Filmic Texts Cr. 3
An initiation into the reading of various genres from the perspective of business and other professional contexts. Study of methods and vocabulary to enable students to discuss and analyze essays, poems, short novels, films and television series, and plays set in and dealing with questions relevant to professional language contexts. Offered Winter.
Prerequisites: FRE 2100 with a minimum grade of D- or FRE 2110 with a minimum grade of D-

FRE 4620 Topics in Sociocultural Analysis Cr. 3
Initiation into reading a range of different media, verbal and visual, in French and francophone cultural texts, from poetry to prose (fictional and non-fictional), to painting, photography, architecture, and other media. Offered Winter.
Repeatable for 6 Credits

FRE 5000 Minor Language Practicum Cr. 3
Controlled application of active language skills for students electing a Ph.D. minor in French. No degree credit toward Ph.D. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

FRE 5100 Advanced French Composition and Conversation through Cultural Analysis Cr. 4
Focus on advanced writing and speaking skills through the analysis of different types of contemporary French and Francophone cultural texts, including literature, film and television, newspaper articles, social media, etc. Students will enhance their written and oral competency in French and develop cross-cultural skills to better appreciate the Francophone world. Offered Winter.

FRE 5410 Topics in French and Francophone Culture Cr. 3
Students will explore French and Francophone culture from the perspective of political, cultural, and/or social history. Topics could include war, women, popular culture, childhood, colonialism and postcolonialism; the course may focus on a single period or provide a diachronic overview. Topics to be announced in the Schedule of Classes. Offered Every Other Fall.
Prerequisites: 2 of (FRE 3300, FRE 4620, FRE 5100, or FRE 5600)
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

FRE 5415 Topics in French and Francophone Literature Cr. 3
Students will explore French and Francophone literature from the perspective of political history, aesthetic history, cultural history, and/or social history. Topics might include: the diachronic study of a genre like theater or the fairy tale; themes such as gender, travel, the Other; a geographical focus such as North African or Quebecois and Franco-Canadian literature. Topics to be announced in the Schedule of Classes. Offered Every Other Fall.
Prerequisites: 2 of (FRE 3300, FRE 4620, FRE 5100, or FRE 5600)
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

FRE 5600 Translation Studies Cr. 3
Introduces students to the study of translation, both as theory and practice, through the discussion of key texts in translation theory, and weekly practice focused on the acquisition of different translation techniques and improving students' idiomatic French. Students will polish their language skills while exercising their creative faculties through translations of various texts from different genres: newspaper articles, graphic novels, poems, diaries, song lyrics, print ads, etc. Offered Fall.
Prerequisites: 2 of (FRE 3300, FRE 4620, or FRE 5100)

FRE 5990 Directed Study Cr. 1-4
Offered Every Term.
Repeatable for 8 Credits

FRE 5999 Internship in French Studies Cr. 3
Internship in a public or private organization related to French Studies. Offered for undergraduate credit only. Offered Every Term.
Prerequisite: FRE 3200 with a minimum grade of C- or FRE 3300 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in French or French Honors.

FRE 6200 Renaissance to Revolution Cr. 3
Offers a panoramic view of the literary and cultural landscape from the French Renaissance to the Revolution through the study of influential texts of prose, poetry, and theater. The texts studied will range from the early sixteenth century and the period of the Sun King to the philosophes. Offered Every Other Fall.
Prerequisites: 2 of (FRE 3300, FRE 4620, FRE 5100, or FRE 5600)

FRE 6300 Modernity, Postmodernity, and Extreme Contemporain Cr. 3
Offers a panoramic view of the modern, postmodern, and contemporary periods through the study of influential texts of prose, poetry, and theater. The texts studied will range from the early nineteenth century and la Belle Epoque to the two World Wars and the contemporary period. Offered Every Other Fall.
Prerequisites: 2 of (FRE 3300, FRE 4620, FRE 5100, or FRE 5600)

FRE 6620 Topics in Sociocultural Analysis Cr. 3
Initiation into reading a range of different media, verbal and visual, in French and francophone cultural texts, from poetry to prose (fictional and non-fictional), to painting, photography, architecture, and other media. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

FRE 7010 Introduction to Literary Theory Cr. 3
Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: GER 7010, ITA 7010, SPA 7010

FRE 7100 Introduction to Translation Studies Cr. 3
Introduction to Translation Studies presents the essential theories as tools to deal with the significant practical problems and issues that may confront the practitioner in specialized translation. The class will focus on the following points: 1) acquisition of the basics of translation theory in order to facilitate the comprehension of translation's multidisciplinary processes and be aware of the variety of theoretical approaches, 2) the study and evaluation of primary methods of research to enhance future research and practices, 3) the acquisition of necessary metalanguage, which allows the textual analysis of the translation process, the solution driven mind of a translator, the approach to tackle recurring translation problems, and the evaluation of translated texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ARB 7100, CLA 7100, GER 7110, ITA 7100

FRE 7996 Research Project Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

FRE 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

FRE 8410 Topics in French and Francophone Culture Cr. 3
In this course, students will explore French and Francophone culture from the perspective of political, cultural, and/or social history. Topics could include war, women, popular culture, childhood, colonialism and postcolonialism; the course may focus on a single period or provide a diachronic overview. Topics to be announced in the Schedule of Classes. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

FRE 8415 Topics in French and Francophone Literature Cr. 3
In this course students will explore French and Francophone literature from the perspective of political history, aesthetic history, cultural history, and/or social history. Topics might include: the diachronic study of a genre like theater or the fairy tale; themes such as gender, travel, the Other; a geographical focus such as North African or Quebecois and Franco-Canadian literature. Topics to be announced in the Schedule of Classes. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

FRE 8600 Seminar in Early Modern Studies Cr. 3
Advanced special topics on early modern literature and culture. Topics to be announced in the Schedule of Classes. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

FRE 8610 Seminar in Modernity, Postmodernity, and Extreme Contemporain Cr. 3
Advanced special topics on modern, postmodern, and contemporary French and Francophone literatures and cultures. Topics to be announced in the Schedule of Classes. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

FRE 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

FRE 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

FRE 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

FRE 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: FRE 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

FRE 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: FRE 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

FRE 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: FRE 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

FRE 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

FYS - First Year Seminar

FYS 1010 Introduction to University Life and College Success Cr. 1
FYS 1010 is a foundational course that supports new Wayne State University students in making a successful transition to college. Through interactive lessons, activities, and discussions, students build the skills and confidence needed to excel both academically and personally. The course focuses on four key areas: academic skill development, personal and professional growth, navigating the academic environment, and fostering community and engagement. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Freshman.

GER - German

GER 1010 Elementary German I Cr. 4
Development of ability to speak and read German. Offered Every Term.
Fees: $5

GER 1020 Elementary German II Cr. 4
Continuation of GER 1010. Offered Every Term.
Prerequisites: GER 1010 with a minimum grade of C
Fees: $5

GER 2010 Intermediate German Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Continuation of GER 1020. Reading of graded German literature and grammar review. Offered Every Term.
Prerequisites: GER 1020 with a minimum grade of C
Fees: $5

GER 2020 Everyday Encounters in Language and Culture Cr. 4
Solidifies students' ability to express themselves in German with increased clarity and grammatical accuracy when writing and speaking about topics of personal experience (studies, work, family, daily life, leisure time), current events, and issues of general interest. Offered Every Term.
Prerequisites: GER 2010 with a minimum grade of C (may be taken concurrently)
Fees: $5

GER 2310 Short Fiction from Central Europe and Russia Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Explores how writers use short fictional forms, such as parable, short story, fairy tale, and satire, to express important themes in the Central European experience, including violence and cruelty, freedom and imprisonment, utopian visions, and urban life. Offered Fall.
Equivalent: SLA 2310

GER 2700 Anguish and Commitment: European Existentialist Literature Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Pirandello, Sartre, Camus and Unamuno. Offered Every Other Year.
Equivalent: FRE 2700, ITA 2700, SPA 2700

GER 2710 Resistance, Rebellion, Revolution: Transitional Moments in German Culture and History Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Transitional moments in German culture and history from the Middle Ages to the present are examined through literary and non-literary texts and cultural artifacts. Taught in English. Offered Every Term.

GER 2991 Understanding the Fairy Tale Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Follows the development of classical fairy tales with a focus on France and Germany, moving from important writers like Marie-Catherine d'Aulnoy and Charles Perrault in France to the Brothers Grimm and Caroline Stahl in Germany, to Walt Disney films and contemporary fairy-tale retellings on YouTube and other media. Approaches introduced in the course include feminist, gender, queer, race, and sociohistorical. Taught in English. Offered Yearly.
Equivalent: FRE 2991

GER 3100 Engaging Historical Moments Cr. 3
Further developing intermediate skills in language and cultural competency, the course explores core moments in German history through a wide range of primary sources, such as print and online journalism, new media, television, as well as popular and canonical literature and film. It may explore a particular moment in detail or examine several core moments in thematic units. Offered Yearly.
Prerequisites: GER 2020 with a minimum grade of C

GER 3200 Exploring Modern Identities Cr. 3
Focuses on contemporary texts from various German language media that reflect the diversity of perspectives and identities in Germany-speaking countries. Consolidates intermediate proficiency skills, particularly in writing and speaking, by exploring language as it is embedded in German culture. Offered Yearly.
Prerequisites: GER 2020 with a minimum grade of C

GER 3410 New Soil, Old Roots: The Immigrant Experience Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American life. Offered Fall.
Equivalent: ARM 3410, POL 3410, RUS 3410, SLA 3410

GER 4600 Products, Perspectives, and Practices of Culture Cr. 3
Introductory seminar in German Studies, designed to build skills in critical reading, research and writing. Focus is on a selected literary or cultural topic. Offered Intermittently.
Prerequisites: GER 3100 with a minimum grade of C and GER 3200 with a minimum grade of C

GER 5000 German Practicum Cr. 3
Controlled application of active language skills for students electing a Ph.D. minor in German, or German as a graduate reading language. No Ph.D. degree credit. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

GER 5100 Advanced Communication in Oral and Written Discourse Cr. 3
This course expands and refines students' interpersonal, interpretive, and presentational communication skills in both oral and written German discourse in academic and professional contexts. Offered Every Other Year.
Prerequisites: GER 3100 with a minimum grade of C and GER 3200 with a minimum grade of C

GER 5210 German Translation Studies Cr. 3
Introduces students to the study of translation, both as theory and practice, through the discussion of key texts in translation theory, and weekly practice focused on the acquisition of different translation techniques and improving students' understanding of the subtleties of the German language. Students will polish their language skills while exercising their creative faculties through translations of various texts from different genres and media. Offered Every Other Year.
Prerequisites: GER 3100 with a minimum grade of C and GER 3200 with a minimum grade of C

GER 5390 Holocaust Studies Cr. 3
Interdisciplinary approach to studying the Holocaust that includes history, literature, film, aesthetics, presentation and reception, and other areas that encourage a broad and deep understanding of Holocaust Studies. Offered Intermittently.

GER 5400 Cultural Studies and Criticism Cr. 3
Exploration of key concepts and major figures for scholarship in literary and cultural studies. Readings and class in English. Open to students from diverse disciplines. Offered for undergraduate credit only. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

GER 5600 Research in German Studies Cr. 3
Introductory seminar for graduate students in German studies that will prepare them to write graduate research papers. Focus on a particular topic of current relevance in German studies to help participants develop skills as critical readers, researchers, and writers of scholarship-based textual analysis. Offered Fall.
Prerequisites: GER 4600 with a minimum grade of D-
Restriction(s): Enrollment is limited to Graduate level students.

GER 5770 Modernism Cr. 3
Fin-de-siecle Germany and Austria, modernism and the metropolis, modernism and the new media (film, radio), art and politics of the Weimar Republic. Offered Intermittently.
Repeatable for 6 Credits

GER 5780 Texts and Contexts Since 1945 Cr. 3
Recent and contemporary literary and cultural works in context of the political, social and intellectual developments since 1945. Offered Intermittently.
Repeatable for 6 Credits

GER 5790 Topics in German Studies Cr. 3
Special topics in German studies, focusing on culture, literature, language, or area studies. Topics to be announced in Schedule of classes. Offered Intermittently.
Repeatable for 9 Credits

GER 5800 Literature and Cultures of Minorities Cr. 3
Focuses on literature by and about marginalized groups and on their cultures in postwar Germany. Offered Intermittently.

GER 5990 Directed Study Cr. 1-3
Offered Every Term.
Repeatable for 6 Credits

GER 5993 Writing Intensive Course in German Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a course designated as a corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Fall, Winter.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and (GER 4600 (may be taken concurrently) or GER 5000-5999 (may be taken concurrently))
Restriction(s): Enrollment is limited to Undergraduate level students.

GER 5999 Internship in German Studies Cr. 3
Internship in a public or private organization related to German studies. Offered for undergraduate credit only. Offered Every Term.
Prerequisite: GER 3100 with a minimum grade of C- or GER 3200 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in German or German Honors.

GER 7010 Introduction to Literary Theory Cr. 3
Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: FRE 7010, ITA 7010, SPA 7010

GER 7110 Introduction to Translation Studies Cr. 3
Introduction to Translation Studies presents the essential theories as tools to deal with the significant practical problems and issues that may confront the practitioner in specialized translation. The class will focus on the following points: 1) acquisition of the basics of translation theory in order to facilitate the comprehension of translation's multidisciplinary processes and be aware of the variety of theoretical approaches, 2) the study and evaluation of primary methods of research to enhance future research and practices, 3) the acquisition of necessary metalanguage, which allows the textual analysis of the translation process, the solution driven mind of a translator, the approach to tackle recurring translation problems, and the evaluation of translated texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ARB 7100, CLA 7100, FRE 7100, ITA 7100

GER 7390 Holocaust Studies Cr. 3
Interdisciplinary approach to studying the Holocaust that includes history, literature, film, aesthetics, presentation and reception, and other areas that encourage a broad and deep understanding of Holocaust Studies. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

GER 7400 Cultural Studies and Criticism Cr. 3
Exploration of key concepts and major figures for scholarship in literary and cultural studies. Readings and class in English. Open to students from diverse disciplines. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

GER 7770 Modernism Cr. 3
Fin-de-siecle Germany and Austria, modernism and the metropolis, modernism and new media (film, radio), art and politics of the Weimar Republic. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

GER 7780 Texts and Contexts Since 1945 Cr. 3
Recent and contemporary literary and cultural works in context of the political, social and intellectual developments since 1945. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

GER 7790 Topics in German Studies Cr. 3
Special topics in German studies, focusing on culture, literature, language, or area studies. Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

GER 7800 Literatures and Cultures of Minorities Cr. 3
Focuses on literature by and about marginalized groups and on their cultures in postwar Germany. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

GER 7996 Research Project Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

GER 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

GER 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

GER 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

GER 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

GER 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: GER 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

GER 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: GER 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

GER 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: GER 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

GER 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

GKA - Greek: Ancient

GKA 1010 Elementary Ancient Greek I Cr. 4
Basic vocabulary, forms, grammar, and introduction to ancient Greek culture. Offered Intermittently.
Fees: $5

GKA 1020 Elementary Ancient Greek II Cr. 4
Continuation of GRK 1010 with increasing emphasis on reading ability. Offered Intermittently.
Prerequisites: GKA 1010 with a minimum grade of D-
Fees: $5

GKA 2010 Intermediate Ancient Greek I Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Review of Greek grammar, and readings from selected Greek prose authors such as Plato and Lysias. Offered Intermittently.
Prerequisites: GKA 1020 with a minimum grade of D-
Fees: $5

GKA 2020 Intermediate Ancient Greek II Cr. 4
Introduction to genre; poetic language, meters, sociological and historical context; reading of selected passages from the Iliad or the Odyssey; study of the fundamentals of Homeric Greek. Offered Intermittently.
Prerequisites: GKA 2010 with a minimum grade of D-

GKA 3300 Greek Tragedy Cr. 4
One tragedy of Euripides, Sophocles, or Aeschylus, supplemented by selections from the dramas of the other two playwrights. Offered Intermittently.
Prerequisites: GKA 2020 with a minimum grade of D-

GKA 5000 Ancient Greek for Graduate Students Cr. 1-4
Basic grammar and vocabulary of Greek; leads to reading of continuous passages of poetry and prose in Greek. No credit applicable to M.A. in classics degree. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

GKA 5200 Ancient Greek Lyric Poetry Cr. 4
Personal lyric poetry as a reflection of individual and society in the culture of the post-Homeric Greek world. Offered Intermittently.
Prerequisites: GKA 2020 with a minimum grade of D-

GKA 5350 Readings in Ancient Greek History and Culture Cr. 1-3
Readings in Greek primary sources relevant to the associated CLA course (which is taught in English). Offered Every Term.
Prerequisites: (GKA 3000-3999 with a minimum grade of D- or GKM 3000-3999 with a minimum grade of D-) and CLA 5000-5999 with a minimum grade of D- (may be taken concurrently)
Repeatable for 6 Credits

GKA 5400 Ancient Greek Philosophy Cr. 4
The origin and development of Greek philosophy as seen through representative selections from prominent philosophers such as the Presocratics, Plato, Aristotle, Epicurus, and the Stoics. Offered Intermittently.
Prerequisites: GKA 2020 with a minimum grade of D-

GKA 5500 Ancient Greek Historians Cr. 4
Prose style and historiographic techniques of ancient historians; selections from Herodotus, Thucydides, Xenophon, and Polybius. Offered Intermittently.
Prerequisites: GKA 2020 with a minimum grade of D-

GKA 5600 Ancient Greek Epic Poetry Cr. 4
Study in ancient Greek of Homer, Hesiod, Apollonius Rhodius and others. Theory of oral vs. literary composition, the Homeric question, metrics. Offered Intermittently.
Prerequisites: GKA 2020 with a minimum grade of D-

GKA 5840 Ancient Greek: Attic Orators Cr. 4
Evolution of Greek prose style and historical context of the development of rhetoric in selected works of Attic orators. Offered Intermittently.
Prerequisites: GKA 2020 with a minimum grade of D-

GKA 5990 Directed Study Cr. 1-4
Offered Every Term.
Repeatable for 8 Credits

GKA 6250 Ancient Greek Drama Cr. 4-8
Selected readings from the plays of Aeschylus, Sophocles, or Euripides or from the plays of Aristophanes or Menander. History and theory of the development of Greek drama and its subsequent influence on world literature. Offered Intermittently.
Prerequisites: GKA 2020 with a minimum grade of D-
Repeatable for 8 Credits

GKA 7820 Studies in Ancient Greek Prose Cr. 4
Study of a major prose author or genre. Topics to be announced in Schedule of Classes . Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

GKA 7999 Ancient Greek: Master's Essay Direction Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

GKA 8999 Ancient Greek: Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

GKM - Greek: Modern

GKM 1010 Elementary Modern Greek I Cr. 4
Training in pronunciation, conversation and reading; introduction to the culture of Greece today. Offered Every Other Fall.
Fees: $5

GKM 1020 Elementary Modern Greek II Cr. 4
Continuation of GKM 1010. Offered Every Other Winter.
Prerequisites: GKM 1010 with a minimum grade of D-
Fees: $5

GKM 2010 Intermediate Modern Greek I Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Review of grammar, practice in oral and written modern Greek, based on readings in modern Greek literature. Offered Every Other Fall.
Prerequisites: GKM 1020 with a minimum grade of D-
Fees: $5

GKM 2020 Intermediate Modern Greek II Cr. 4
Special attention to vocabulary enrichment and writing compositions. Class conversation based on reading of cultural materials and short stories. Translation exercises from English to Greek; study of appropriate grammar rules. Offered Every Other Winter.
Prerequisites: GKM 2010 with a minimum grade of D-
Fees: $5

GKM 3530 The World of Early Christianity Cr. 3
A historical survey of the cultural, social, and literary world of early Christianity. Offered Every Other Year.
Equivalent: CLA 3530

GKM 3590 Byzantine Civilization Cr. 3
Satisfies General Education Requirement: Social Inquiry
Survey of Byzantine culture, religion, society, and literature from late Antiquity to 1453, through secondary and primary sources in translation. Offered Yearly.
Equivalent: CLA 3590

GKM 3710 Modern Greek Literature and Culture in English Cr. 3-4
Satisfies General Education Requirement: Global Learning Inquiry
Survey of the culture and civilization of modern Greece through a study of modern Greek history, religion, and literary traditions. Offered Every Term.

GKM 3720 Greek Identity from Antiquity to Modernity Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Explores what it meant to be Greek from Archaic Greece to the modern era. Offered Yearly.
Equivalent: CLA 3720

GKM 3930 Topics in Byzantine and Modern Greek Studies Cr. 3
In-depth study of aspects of Byzantine and Modern Greek history, society, literature, and culture. Topics to be announced in Schedule of Classes. All readings in English. Offered Intermittently.
Repeatable for 9 Credits

GKM 3990 Directed Study Cr. 1-4
For students desiring additional work in the language at the intermediate level; for programs of work not included in scheduled courses, either in language or literature. Offered Every Term.
Prerequisites: GKM 2020 with a minimum grade of D-
Repeatable for 8 Credits

GKM 5000 Modern Greek for Graduate Students Cr. 1-4
Basic grammar and vocabulary of modern Greek. Emphasis on conversation, reading and writing. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

GKM 5530 The World of Early Christianity Cr. 3
A historical survey of the cultural, social, and literary world of early Christianity. Offered Every Other Year.
Equivalent: CLA 5530

GKM 5590 Byzantine Civilization Cr. 3
Survey of Byzantine culture, religion, society, and literature from late Antiquity to 1453, through secondary and primary sources in translation. Offered Yearly.
Equivalent: CLA 5590

GKM 5720 Greek Identity from Antiquity to Modernity Cr. 3
Satisfies General Education Requirement: Historical Studies
Explores what it meant to be Greek from Archaic Greece to the modern era. Offered Yearly.
Equivalent: CLA 5720

GKM 5990 Directed Study Cr. 1-4
Offered Every Term.
Repeatable for 8 Credits

GLS - Global Studies

GLS 2000 Around the World in Seven Weeks: Introduction to Global Languages and Cultures Cr. 2
Get to know multiple linguistic areas of the world, learn basic phrases in five different languages, explore different ways to write (e.g. with Chinese or Japanese signs, Arabic writing, the Cyrillic or Greek alphabet), and discuss current events from the perspective of various cultures (such as social justice, sustainability, minorities, art and media, conflict, human rights). Sessions will be led by different instructors who teach an area of their research. Offered Intermittently.

GLS 2700 Introduction to Global Stories Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Provides students with an introductory understanding of constructions and representations of global issues and globalization in literature, film, media and the visual arts and of the ways in which human stories contribute to complex matrices of representation. Offered Fall, Winter.

GLS 2800 Introduction to Global Issues and Institutions Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Provides a broad overview of some of the big and controversial questions facing our increasingly globalized world today and introduces some of the tools we have to confront these issues. Topics include the conflict and security threats, protection of human rights, global warming, and resource management. Offered Fall, Winter.
Equivalent: HIS 2800

GLS 2820 Topics in Emerging Global Issues Cr. 2-3
Special topics in emerging global issues related to international relations, global governance institutions, international law, human rights, global environment, global resource management, and other fields. Topics to be announced in the class schedule. Offered Every Term.
Repeatable for 6 Credits

GLS 2900 Intercultural Competence for a Global World Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
The objectives of this course are to explore cultures via characteristics of intra-cultural communication (varieties of language marked by history and region, gender, and migration); to acknowledge regional and ethnic variations of cultural value systems as expressed in everyday interactions as well as cultural products; to learn to reflect on one's own cultural "branding" or vantage point as determined by ethnicity, region, and language(s) as well as within the context of lifelong learning at home and abroad. Offered Fall.

GLS 3030 Made In Italy: Language, Culture, and Business Around the World Cr. 3
This interdisciplinary, student-centered course explores the global power and cultural meaning of different global brands. We will examine key sectors of a specific country's business culture or compare products from different countries, including fashion, food and wine, design, artisanal craftsmanship, automotive innovation, information technology, environmental engineering, etc. Through cultural analysis, site-based research, and experiential learning we will tie theoretical learning to our place in Metro Detroit where we can visit multinational and foreign companies. The class is either a comparative class taught in English (focusing on, e.g. French, Italian, German, and Japanese industries) or a country-specific class. Offered Yearly.

GLS 3111 Digital Storytelling and Ethnic Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Students will learn about the ethnic, racial, and cultural history of Detroit and how to document elements of that history. This course introduces students to both theoretical and practical concepts around digital storytelling, drawing on extensive theoretical scholarship about placemaking, experiencing place, and the social production of heritage that spans the disciplines of anthropology, historical archaeology, heritage studies, historic preservation, media studies, and mobilities. Students will learn the practical steps involved in creating digital stories and will be introduced to best practices in multimedia development as discussed in the literature in the field of instructional technology. They will also explore the cultural, ethical and technological considerations involved in creating and disseminating digital stories. They will then create their own short digital story, which they will be able to share with the website Ethnic Layers of Detroit. Offered Yearly.
Equivalent: ANT 3111, POL 3111, RUS 3111

GLS 3300 Streaming Across Borders Cr. 3
In this course, we will explore the global phenomenon of streaming platforms and their impact on culture, media, and globalization. Through a critical analysis of the platforms' global expansion, content, and reception, we will examine the complex relationships between media, culture, and power in the 21st century. We will draw on theories and concepts from cultural studies, media studies, communication, and globalization theory to understand how streaming is shaping and is being shaped by global cultural flows. Students will engage with a diverse range of shows from around the world, analyzing their cultural representations, narratives, and themes. We will explore how global content reflects and challenges dominant cultural discourses, and how it is being used to promote cultural diversity and understanding. Through a combination of lectures, discussions, and multimedia assignments, students will develop their critical thinking, writing, communication, and media analysis skills. Offered Yearly.

GLS 3410 Global Health Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Introduces students to problems of disease and disorder worldwide and looks at various efforts to define and address these problems through a social science perspective. Offered Every Term.
Equivalent: ANT 3410, PH 3410

GLS 3700 Globalization: Theories, Practices, Implications Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Students develop analytical tools for appraising processes of globalization; acquire a familiarity with the current topical concerns of global studies; and examine economic, political, and cultural approaches to globalization. Offered Winter.
Equivalent: ANT 3700

GLS 3810 Topics in Global Studies Cr. 1
Special topics in global history, politics, culture, science, health, law, philosophy, language, and other fields and issues. Topics to be announced in the class schedule. Offered Every Term.
Repeatable for 6 Credits

GLS 3830 Topics in Global Studies Cr. 3
Special topics in global history, politics, culture, science, health, law, philosophy, language, and other fields and issues. Topics to be announced in the class schedule. Offered Every Term.
Repeatable for 6 Credits

GLS 4200 Orientalism and Occidentalism, Past and Present Cr. 3
This course, team-taught by one scholar of the contemporary (traditionally defined) East and one scholar of the (traditionally defined) ancient West, will explore many facets of the west's creation of the eastern other, beginning in the time of the ancient Greeks through the current age in Detroit. Students will read primary sources, theoretical treatises, novels, and poems; they will watch films and view paintings. During spring break, the group will travel to Turkey and visit Ephesus and Istanbul, two places that defy definition as either East or West. Departmental permission is required. Offered Every Other Winter.

GLS 4600 Topics in Global Film Cr. 3
This class is a special topics class in global film. Topics will be announced in the class schedule. Topics can be comparative and focused on a specific topic, e.g. human rights in film, or emphasize a specific regional, national, or local tradition of film-making outside of the English speaking world, e.g. the GDR in film (see attached sample syllabus). Offered Every Other Year.
Repeatable for 6 Credits

GLS 4700 Topics in Global Literature, Art, and Culture Cr. 3
This class is a special topics class focusing on literature, the arts, and cultural production from a specific region or with a comparative focus. Topics will be announced in the class schedule. Offered Every Other Year.
Repeatable for 6 Credits

GLS 4800 Topics in Global History and Culture Cr. 3
This class is a special topics class focusing on Global History and Culture in comparative manner or with a regional focus. Topics will be announced in the class schedule. Offered Every Other Year.
Repeatable for 6 Credits

GLS 5500 Internship in Global Studies Cr. 3,6
Offered for undergraduate credit only. Internship in a public or private organization related to global studies. Offered Every Term.
Prerequisite: GLS 3700 with a minimum grade of C-

GLS 5540 World Environmental History since 1900 Cr. 4
This course examines the transformation of the relationship between human society and the natural environment in global context since 1900. Available for undergraduate credit only. Offered Fall.
Equivalent: HIS 5540

GLS 5700 Climate, Environment, and Media Cr. 3
This course considers major environmental challenges, foremost among these climate change, through the interdisciplinary lenses of Environmental Media Studies and the Environmental Humanities. How do different media seek to tell the story of climate change, a massive problem that can be hard to visualize? How do the media tackle problems of disaster fatigue, environmental grief, and distraction, in order to continue to focus attention on one of the most significant challenges of the twenty-first century? How do they navigate the global scale of the problem while being mindful of local realities? What environmental impact do media themselves have? We will study an array of climate media from around the world, including feature films, documentary series, podcasts, and digital humanities projects, to analyze and critique genres and mediatic forms of climate protest, resistance, and activism. Offered Every Other Fall.
Prerequisites: GLS 2700 with a minimum grade of C-, GLS 2800 with a minimum grade of C-, GLS 2900 with a minimum grade of C-, ENG 2450 with a minimum grade of C-, ENG 3010 with a minimum grade of C-, COM 1700 with a minimum grade of C-, or COM 2010 with a minimum grade of C-

GLS 5993 Writing Intensive Course in Global Studies Cr. 0
Offered for S and U grades only. No degree credit. Required for all majors. Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a course designated as a corequisite. Satisfies the University General Education Writing Intensive Course in the Major requirement. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

GLS 5996 Junior or Senior Research Seminar Cr. 3
This junior or senior research seminar is the culminating class of the Global Studies program. It is tailored to majors and gives students the opportunity to combine all the skills they have developed, including research, writing, and analysis. Students engage with the discipline, ask fundamental questions, and synthesize information and skills acquired in Global Studies core classes. Topics will be announced in the course schedule. Offered Every Term.
Prerequisites: (GLS 2800 with a minimum grade of D- and GLS 2700 with a minimum grade of D-), (GLS 2700 with a minimum grade of D- and GLS 2900 with a minimum grade of D-), (GLS 2700 with a minimum grade of D- and GLS 3900 with a minimum grade of D-), (GLS 2800 with a minimum grade of D- and GLS 2900 with a minimum grade of D-), (GLS 2800 with a minimum grade of D- and GLS 3700 with a minimum grade of D-), or (GLS 2900 with a minimum grade of D- and GLS 3700 with a minimum grade of D-)
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to Undergraduate level students.

GPH - Geography

GPH 1100 World Regional Patterns Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Concepts and theory in analyzing areal relationships and distinguishing regional patterns of human activity; cultural factors and physical conditions (climate, landforms) as factors in regional delineations; comparisons and contrasts in regional economic development; analysis of concentrations/dispersals of human activity; local, national and regional phenomena in the interpretation of global patterns. Offered Every Term.

GPH 2000 Introduction to Urban Studies Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
In this introductory urban studies course, students learn about the historic and contemporary forces driving urbanization with an emphasis on US cities and urban areas; the effects of these forces on diverse population groups; and challenges facing cities and strategies to resolve them. Although the course will draw from international contexts, wherever possible, experiences of and from the Detroit metro—city and suburbs—will be used to illustrate particular themes. Student learning centers on an examination of issues related to diversity, equity, and inclusion, and broader social phenomena. Offered Every Term.
Equivalent: HIS 2000, PS 2000, SOC 2500, US 2000

GPH 2200 Geography of Michigan Cr. 3
The spatial physical, social, environmental, settlement and developmental patterns and problems of the State of Michigan. Offered Intermittently.

GPH 2700 Introduction to Canadian Studies Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Survey of Canada in its cultural, literary, historical, geographical and political aspects; key concepts and social patterns that define the Canadian experience. Offered Intermittently.
Equivalent: ENG 2670, HIS 2700, PS 2700

GPH 3130 Introductory Urban Geography Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Have you ever wondered why cities are the way they are? Why did humans start to live in cities in the first place? Why did they grow in the ways they did, and how do they function differently in different parts of the world? We explore the social, economic, and physical organization and functioning of cities in the US and all over the globe, aided by guest speakers who are experts on cities in Africa, Asia, and South America. We look at the ways space and place interact with money, power, and human nature to produce the built environment around us. And we explore the experience of living in a city through the lenses of culture, race, class, gender, and sexuality. Offered Fall, Winter.

GPH 3200 Europe Cr. 3
Satisfies General Education Requirement: Social Inquiry
Analysis of European countries. Emphasis on population changes resource problems, industrial location, urbanization, regional development, and emerging economic and political unities. Offered Intermittently.

GPH 3600 Introduction to Geographic Information Systems Cr. 4
Theory and application of computer-based systems for the analysis and representation of spatial data. Offered Every Term.

GPH 3900 Topics in Urban Studies and Geography Cr. 1-4
Special topics focused on Urban Studies and Geography. Offered Every Term.
Equivalent: US 3900
Repeatable for 8 Credits

GPH 3990 Directed Study Cr. 1-3
Readings and research. Offered Every Term.
Repeatable for 9 Credits

GPH 4600 Advanced Geographic Information Systems Cr. 4
Application of GIS to analyses of spatially-referenced data. Offered Yearly.
Prerequisites: GPH 3600 with a minimum grade of D-
Repeatable for 998.99 Credits

GPH 6420 Quantitative Techniques I Cr. 4
Statistical inference with emphasis on applications including central tendency, dispersion, hypothesis testing, correlation and regression. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: UP 6320

GS - Graduate School

GS 0900 Essential Research Practices: Responsible Conduct of Research Cr. 0
This course presents both general and directed instruction/discussion in topics related to Responsible Conduct of Research (RCR). Available for S/U grading only. Offered Fall, Winter.

GS 5785 Academic Writing for Graduate Students Cr. 2
Emphasis on learning and executing written genres common to research and presentation activities in graduate school. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ENG 5785
Repeatable for 6 Credits

GS 7890 Preparing Doctoral Trainees for Multiple Careers Cr. 1
Offered by the Graduate School for doctoral students who wish to better prepare for various professional careers. Focuses on enhancing students' skill sets for navigating the job market. This course is open to doctoral students who have completed at least one year of coursework and who have not yet entered maintenance status. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 2 Credits

GS 7900 Introduction to College Teaching and Learning Cr. 1
Provides an introduction to the principles and performance of college teaching through an examination of current research and best practices related to teaching and learning in a range of higher education settings and contexts (i.e., traditional, hybrid and online). It offers opportunities for the development and improvement of participants' instructional skills from both a theoretical and a practice-based understanding of excellence in teaching. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 2 Credits

GS 7991 Doctoral Program Internship Course Cr. 1-2
Practical training experience in industry, government offices/labs or other professional settings. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 2 Credits

GSC - Global Supply Chain Management

GSC 3600 Operations and Supply Chain Management Cr. 3
The concepts, issues, techniques and analysis of supply chain and production systems. Topics include supply chain strategy, analytics, technology, and information flows. More specifically the course addresses production planning and scheduling, forecasting, sales & operations planning, quality control, inventory control, capacity planning, purchasing, logistics, risk management, project management and other related subjects. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Sophomore, Junior or Senior; enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 4500 Business Co-op Assignment Cr. 0
Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. No credit toward degree. Offered Every Term.
Restriction(s): Enrollment limited to students in the BA in Business Administration or BS in Business Administration programs; enrollment is limited to Undergraduate level students.
Equivalent: ACC 4500, FIN 4500, MGT 4500, MKT 4500

GSC 4990 Directed Study in Global Supply Chain Management Cr. 1-3
Advanced readings and research or tutorial under supervision of faculty member. Offered Every Term.
Prerequisites: GSC 5620 with a minimum grade of C or BLG 5620 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BA in Business Administration or BS in Business Administration programs; enrollment is limited to Undergraduate level students.
Repeatable for 3 Credits

GSC 4991 Study Abroad Cr. 3
Study abroad programs in various countries. Programs run 10-15 days in length. Recent country programs have been in China; Netherlands, Germany, Poland; Italy and Canada. Travel within a given country with visits to various companies and cultural attractions. Traveling costs are over and above tuition and vary by country. Various reading and assignments required. Offered Winter, Spring/Summer.
Equivalent: MGT 4991, MKT 4991
Repeatable for 6 Credits

GSC 5200 ERP Systems and Business Integration Cr. 3
Enterprise Planning (ERP) systems comprise the primary software packages for the operational, managerial, and accounting activities of an organization. Role and function of ERP systems within organizations; analysis of major business processes and their implementation in ERP software; hands-on use of an ERP package for transaction processing and decision support; understand the use of ERP for customer relationship management, supply chain management, and electronic commerce. Offered Winter.
Prerequisites: GSC 3600 with a minimum grade of C and TIS 3630 with a minimum grade of C

GSC 5300 Manufacturing and Supply Chain Analytics Cr. 3
Discussion of the strategic and tactical issues surrounding the design and operation of supply chains through effective information collection, sharing, and collaboration, an understanding of applied analytical tools and methods that can be used to make better supply chain decisions and practical application of supply chain advanced planning and optimization solutions. Offered Fall, Winter.
Prerequisite: GSC 3600 with a minimum grade of C-

GSC 5600 Logistics and Transportation Strategy Cr. 3
An overview of logistics strategy with an emphasis on transportation. Study of the management of the movement of raw materials and finished products including the development of transportation strategies and objectives, and the selection of modes and carriers. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: GSC 3600 with a minimum grade of D-
Restriction(s): Enrollment limited to students in the BA in Business Administration or BS in Business Administration programs; enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 5620 Global Supply Chain Management Cr. 3
Concepts of managing operations and supply chains that span multiple countries. Topics covered include, Sourcing in International Settings, Global Logistics and Trade Management, Global Plant Location and Manufacturing Network Design, and Managing International Production Operations. Emerging concepts in the discipline will also be discussed. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students in the BA in Business Administration or BS in Business Administration programs; enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 5650 Strategic Procurement Cr. 3
Principles of the purchasing function with topics including sourcing decisions, negotiations, buyer/seller relationships in the supply chain, supplier quality issues, supplier selection, price determination, ethical issues, legal issues, and international issues. Extensive coverage of automotive industry topics and perspectives. Offered for undergraduate credit only. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the BA in Business Administration or BS in Business Administration programs; enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 5670 Special Topics in Supply Chain Management Cr. 3
Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

GSC 5680 Production Planning and Control Cr. 3
Concepts for planning and management of production resources in manufacturing organizations. Topics covered include: Demand Management, Sales and Operations Planning, Master Production Scheduling, Materials Requirement Planning, and Capacity Planning in a manufacturing environment. Emerging concepts in the discipline will also be covered. Offered for undergraduate credit only. Offered Fall.
Prerequisites: GSC 3600 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 5690 Principles of Quality Management Cr. 3
Quality control overview with a focus on complex manufacturing industry processes for new product development and supplier quality in the auto industry. Topics include lean concepts, six sigma processes, FEMA, IATF16949 standards, APQP, PPAP, statistical quality control, control charts, and acceptance sampling procedures. Class will help prepare students for the Six Sigma Yellow Belt Certification. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: GSC 3600 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 5890 Internship in Global Supply Chain Management Cr. 3
Student works a minimum of 160 hours. Offered for undergraduate credit only. Offered Every Term.
Prerequisite: (TIS 3630 with a minimum grade of D-
Restriction(s): Enrollment limited to students in the BA in Business Administration or BS in Business Administration programs; enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 5930 Customs Administration and High Tech Purchasing Cr. 3
The course covers two important topics: Customs Administration and High Tech Purchasing. In Customs Administration, the following are covered: historic and current issues related to international trade, trade policy, customs programs, import and export similarities and differences, and how organizations can leverage customs programs to improve financial results while mitigating risks and creating more efficient supply chains. In High Tech Purchasing, issues related to high tech purchasing of hardware and software will be covered. Specific topics will include negotiations, segmentation of relationships from market-based to strategic partnerships, sourcing strategies for autonomous vehicles, connectivity, and artificial intelligence; "Should Cost" analysis for highly complex components, the global semiconductor crisis - what happened and how it can be prevented in the future; and negotiation strategies in an ultra-rapid changing tech market. Offered Winter.

GSC 5980 Healthcare Supply Chain Management Cr. 3
Introduction to industries and disciplines within healthcare supply chain management. Topics include medical device manufacturing, pharmaceuticals, lean principles in healthcare, quality management, logistics, hospital materials management, purchasing and disaster preparedness. Offered Fall.

GSC 5996 Process Analysis and Cost Estimating for Buyers Cr. 3
Focused on providing future buyers and SCM professionals an understanding of basic production processes and the cost and quality drivers that impact supplier performance. Helps buyers learn what to look for when visiting suppliers. Teaches students how to identify and evaluate supplier cost and quality drivers. There will be multiple supplier visits during class hours. Offered for undergraduate credit only. Offered Winter.
Prerequisites: GSC 3600 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 6000 Consultative Analysis and Executive Presentation Cr. 3
Students will gain consulting skills for supply chain issues including situational and data analysis, strategy, communicating insights, persuasion and executive presentation skills. Students will conduct in-depth case study analysis, and present results with live peer feedback with special focus on research, approach, analytical tools and professional delivery. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 6997 Global Supply Chain Analysis and Planning Cr. 3
Capstone course in the Global Supply Chain Management Major. An emphasis on analysis, planning and strategy. Use of supply chain simulation games and/or cases to provide students with a comprehensive view of supply chain issues and management. Provides students with an experience of running a supply chain using a simulation. Topics include: forecasting, purchasing, logistics, inventory management, production planning, project management, utilization of decision making tools, executive communication skills, and teambuilding. Offered Every Term.
Prerequisites: GSC 3600 with a minimum grade of D-, GSC 5600 with a minimum grade of D-, and GSC 5650 with a minimum grade of D-
Restriction(s): Enrollment limited to students in the BA in Business Administration or BS in Business Administration programs; enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

GSC 7090 Global Operations and Supply Chain Management Cr. 3
Effective management of supply chains is critical to overall firm performance. Supply chain management encompasses the management of financial, material, informational and human resource flow. Globalization has increased the strategic importance of effective supply chain management, making global supply chain and operations management decisions directly correlated to customer service and firm success. This course introduces students to the concepts and techniques of modern Global Supply Chain and Operations management. Students will gain fundamental knowledge of Supply Chain strategy formulation, Capacity Management, Business process mapping, Quality management, Theory of Constraints, Logistic Management, Location Analysis, Forecasting, Demand Planning and inventory management and Project Management. No credit after former BA 7010. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

GSC 7100 Study Abroad Cr. 3
Study abroad programs in various countries. Travel within a given country with visits to various companies and cultural attractions. Traveling costs are over and above tuition and vary by country. Various reading and assignments required. Offered Winter, Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

GSC 7200 ERP Systems and Business Integration Cr. 3
Enterprise Planning (ERP) systems comprise the primary software packages for the operational, managerial, and accounting activities of an organization. Role and function of ERP systems within organizations; analysis of major business processes and their implementation in ERP software; hands-on use of an ERP package for transaction processing and decision support; understand the use of ERP for customer relationship management, supply chain management, and electronic commerce. Offered Winter.
Prerequisites: GSC 7090 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7260 Theory of Constraints: Breakthrough Solutions Cr. 3
Problem solving based on Theory of Constraints logic process. Use of cause-effect logic diagrams to identify root cause of problems, discover breakthrough solutions, specify expected results of these solutions (including negative side effects which can thus be avoided), overcome obstacles to implementation, and construct a detailed plan for implementation of solutions. Applications to management of business and other operations. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7300 Manufacturing and Supply Chain Analytics Cr. 3
Discussion of the strategic and tactical issues surrounding the design and operation of supply chains through effective information collection, sharing, and collaboration, an understanding of applied analytical tools and methods that can be used to make better supply chain decisions and practical application of supply chain advanced planning and optimization solutions. Offered Winter.
Prerequisites: GSC 7090 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7620 Global Logistics Management Cr. 3
Introduction to global logistics management, integrating materials management and physical distribution through the investigation of transportation, inventory, handling and storage, acquisition, order processing and facility location subsystems. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7650 Strategic Procurement Cr. 3
Creation of competitive advantage with superior procurement management. Topics include: negotiating, relationship to the supply chain, quality issues, supplier selection and management, quantity and delivery, and price determination. Strategic, ethical, legal and international issues. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7670 Special Topics in Supply Chain Management Cr. 3
Topics range from automotive supply chain management to international supply chain management fields and countries. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

GSC 7680 Manufacturing Planning and Control Cr. 3
Covers concepts for management of production resources in manufacturing organizations. Topics covered include demand management, sales & operations planning, master production scheduling, material requirement planning, capacity planning & management and production activity control. Emerging concepts in the discipline will also be discussed. Offered Fall.
Prerequisites: GSC 7090 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7890 Internship in Global Supply Chain Cr. 1-3
Student works in an entry-level management position in global supply chain. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

GSC 7920 Supply Chain Process Analysis and Costing Cr. 3
Develops understanding about manufacturing processes in a wide range of products. The class will also help develop skills for cost estimating and managing sourcing in manufacturing environments. Topic covered include, how to conduct supplier site visits, viewing sales pitches, learn different types of manufacturing processes for metals, plastic and electronics and how to estimate their costs. Travel in the Detroit area will be required for the class. Offered Winter.
Prerequisites: GSC 7090 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7930 Customs Administration and High Tech Purchasing Cr. 3
The course covers two important topics: Customs Administration and High Tech Purchasing. In Customs Administration, the following are covered: Historic and current issues related to International Trade, Trade Policy, Customs programs, Import and Export similarities and differences, and how organizations can leverage Customs programs to improve financial results while mitigating risks and creating more efficient supply chains. In High Tech Purchasing, issues related to high tech purchasing of hardware and software will be covered. Specific topics will include negotiations, segmentation of relationships from market-based to strategic partnerships, sourcing strategies for autonomous vehicles, connectivity, and artificial intelligence; "Should Cost" analysis for highly complex components, the global semiconductor crisis - what happened and how it can be prevented in the future; and negotiation strategies in an ultra-rapid changing tech market. Offered Winter.
Prerequisites: GSC 7090 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7950 Auto Industry Supply Chain Management Cr. 3
Provides a study of issues in managing automotive supply chains such as: supply chain strategy, managing global manufacturing networks, logistics and trade management in auto networks, make-buy decisions, total cost of ownership, global automotive component sourcing and logistics, managing quality and risk, etc. Case situations of real companies facing these issues will be analyzed. Offered Spring/Summer.
Prerequisites: GSC 7090 with a minimum grade of C, GSC 7620 with a minimum grade of C, and GSC 7650 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7960 Lean Six Sigma Cr. 3
All organizations strive to improve efficiency and reduce waste, i.e. become lean enterprises. This course provides students with the core concepts related to managing lean organizations and implementing six sigma. Topics covered include, lean principles, process capability, value stream mapping, process improvement, and six sigma implementation. Offered Spring/Summer.
Prerequisites: GSC 7090 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7980 Healthcare Supply Chain Management Cr. 3
Introduction to industries and disciplines within healthcare supply chain management. Topics include medical device manufacturing, pharmaceuticals, lean principles in healthcare, quality management, logistics, hospital materials management, purchasing and disaster preparedness. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

GSC 7995 Directed Study in Global Supply Chain Cr. 1-3
Advanced independent readings and research under supervision of a graduate faculty member, in areas of special interest to student and faculty member. Offered Every Term.
Prerequisites: GSC 7620 with a minimum grade of C or GSC 7650 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.
Repeatable for 3 Credits

GSW - Gender, Sexuality and Women's Studies

GSW 2100 Introduction to Queer Studies Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
This course is an introduction to the interdisciplinary academic field of Queer Studies. The course begins with an overview of queer terminology and identities, and includes units on Queer History, Queer Theory, Contemporary Queer Issues, and Queer Art. Offered Fall, Winter.

GSW 2360 Feminist Philosophy Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
An examination of work by feminist philosophers. Offered Winter.
Equivalent: PHI 2360

GSW 2500 Humanities Perspectives on Gender, Sexuality, and Women Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Focusing on literature, art, and other media from different historical periods and geographical locations, students will engage with humanities methods for the study of gender and sexuality. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.

GSW 2530 Queer Literatures: Writing about Texts Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Introduction to the study of queer genders and sexualities through the exploration of literary and cultural texts. Offered Intermittently.
Equivalent: ENG 2530

GSW 2570 Women Writers: Writing about Texts Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Introduction to the major themes and issues in writings by women. Reading and writing about representative fictional and non-fictional works. Offered Yearly.
Equivalent: ENG 2570

GSW 2600 History of Women, Gender and Sexuality in the Modern World Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Examination of change over time, using different historical approaches to try to account for change as specifically applicable from a comparative perspective to the experiences of women and constructions of gender and sexual identity. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: HIS 2605

GSW 2650 Gender and Crime Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Critical examination of gender-related issues in criminal justice; impact on defendants, inmates, victims, and criminal justice personnel; relation to policy issues. Offered Yearly.
Equivalent: CRJ 2650

GSW 2700 Social Science Perspectives on Gender, Sexuality, and Women Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
Explore the ways that political, social and cultural institutions shape gender, sexuality, and women's experiences within a local and global context. Offered Every Term.

GSW 2750 Diversity Issues in Criminal Justice Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Critical examination of gender, race, class, and ethnicity issues in criminal justice; impact on defendants, inmates, victims, and criminal justice personnel; relation to policy issues. No credit after CRJ/GSW 3750. Offered Yearly.
Equivalent: CRJ 2750

GSW 3000 Themes in Gender and Sexuality Cr. 3
Themed course on various topics related to gender and sexuality studies, with course theme announced each time the course is offered. Special attention will be paid to research skills and academic writing. Offered Yearly.
Repeatable for 6 Credits

GSW 3100 Women of Color: Social Activism and Power Cr. 3
This course will explore the ways in which Women of Color have impacted the trajectory of the social justice movement in the US through scholarship and sisterhood, despite racism, sexism, and classism. During this interdisciplinary study, learners will look at the history of Women of Color in the feminist movement and how it parallels the current movement. This course will answer the questions, “what has been done?” and “where do we go from here?” Offered Intermittently.

GSW 3200 Introduction to Gender, Sexuality, and Women’s Studies Cr. 3
This course is an introduction to key themes and methodologies within the interdisciplinary and overlapping fields of feminism, gender studies, and queer theory, with a focus on both foundational readings and contemporary experiences. In addition to exploring and evaluating diverse methods of inquiry into the intersectional experiences of gender and sexuality the course will help develop critical reading and writing strategies in Gender, Sexuality, and Women's Studies. Offered Yearly.

GSW 3240 Queer Film and Media Cr. 3
Queer voices have been an integral part of cinema since its inception in the late nineteenth century. Students in this course will study the intersections of queer lives with the industry and artistry of film and media. To do this, we will revisit film history with an eye for the queer experience, identify landmark works and key pioneers of queer cinema, consider how queer representations have shifted across decades, and analyze the integral themes and styles of queer media. Offered Yearly.
Equivalent: COM 3240

GSW 3300 Black Women Writers Cr. 3
Students will explore the writings of Black women across a broad range of genres, which may include poetry, short stories, drama, essays, and novels. Offered Intermittently.
Equivalent: AFS 3300

GSW 3350 Black Women and Labor from the 'Nadir' to Black Power Cr. 3
This is an interdisciplinary course that examines Black women as a special class of workers between 1920-1970. It does so through theories of triple oppression, triple exploitation, and double/multiple jeopardy. Scholars argued that Black women were exploited as women, as workers, and as Black people. As such, they were situated in the bottom of the labor hierarchy, often being: wholly excluded from industries, included into industrial labor through the very worst jobs, excluded from or subordinated in labor unions; and the “last hired, first fired.” Likewise, they often endured the worst labor conditions and job precarity. Given the character of their labor, they were assumed to be “unorganizable” and excluded from or marginalized in labor struggles. Yet, Black women challenged these material conditions to improve their economic and political realities and that of their families, communities, and comrades. Offered Every Other Fall.
Equivalent: AFS 3350, ELR 3350

GSW 3433 Gender and Sexuality in Latin American History Cr. 3
This course covers the Conquest/Encounter through the late 20th century and will explore Caribbean and Latin American history through the lenses of gender and sexuality. This course focuses on women and explores homosexuality and transgenderism in the Latin American and Caribbean context. Readings, lectures, and film discussions will focus on the intersectional experiences of people of different ethnicities and socioeconomic backgrounds. Offered Winter.
Equivalent: HIS 3433, LAS 3433

GSW 3990 Directed Studies Cr. 1-3
Individually-designed research projects, developed with a supervising professor and approved by program director. Offered Every Term.

GSW 5030 Topics in Women's Studies Cr. 3
Thematic, critical or generic study of women and literature. Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Equivalent: ENG 5030
Repeatable for 9 Credits

GSW 5035 Topics in Gender and Sexuality Studies Cr. 3
Advanced course on issues of sexuality and gender as mediated through literary and cultural study. Attention to critical theory as well as various literary and cultural forms. Topics to be announced in Schedule of Classes. Offered Yearly.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Equivalent: ENG 5035
Repeatable for 9 Credits

GSW 5110 Black Women in America Cr. 3
Social, cultural, artistic and economic development of Black women in America; topics include: racism, sexism, marriage, motherhood, feminism, and the welfare system. Offered Yearly.
Equivalent: AFS 5110

GSW 5200 Feminist, Gender, and Queer Theory Cr. 3
Overview of feminist, gender and queer theory, focusing on the three "waves" and the social, political, and cultural construction of femininities, masculinities, and sexualities. Offered Yearly.
Prerequisites: GSW 2500 with a minimum grade of D-, GSW 2600 with a minimum grade of D-, or GSW 2700 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

GSW 5300 Topics in LGBTQ Studies Cr. 3
Focused examinations of LGBTQ studies from different disciplinary perspectives, including but not limited to literary, historical, and media studies; social sciences; and philosophy. Topics to be announced in Schedule of Classes. Offered for undergraduate credit only. Offered Intermittently.
Prerequisites: GSW 2100 with a minimum grade of C, GSW 2500 with a minimum grade of C, GSW 2600 with a minimum grade of C, or GSW 2700 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

GSW 5310 Law, Justice, and Intersectionality Cr. 4
An examination of social, political, and legal constructions of race, gender, sexuality, and ableism from intersectional perspectives, with a focus on how these institutions attempt to define who counts as human and whose lives, knowledge, and experiences have value. Offered Fall.
Equivalent: PHI 5310

GSW 5400 Topics in Gender and Women's Studies Cr. 3
Focused examination of gender and women from different disciplinary perspectives, including but not limited to literary, historical, and media studies; social sciences; and philosophy. Topics to be announced in schedule of classes. Offered for undergraduate credit only. Offered Intermittently.
Prerequisites: GSW 2100 with a minimum grade of C, GSW 2500 with a minimum grade of C, GSW 2600 with a minimum grade of C, or GSW 2700 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

GSW 5500 Internship in Gender, Sexuality, and Women's Studies Cr. 3
Internship in a public or private organization related to gender, sexuality, or women's studies. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.

GSW 5875 Gender in Modern East Asia Cr. 4
History of gender in China, Japan, and Korea, with topics to include Confucianism, the state's role in gender construction, nationalism, imperialism, marriage, family, labor, sexuality, and feminism. Offered Every Other Year.
Equivalent: ASN 5875, HIS 5875

GSW 5990 Senior Project Seminar Cr. 4
In collaboration with a faculty mentor, students propose, design, and conduct independent scholarly research, resulting in a substantial project. Offered Every Term.
Prerequisite: GSW 5200

GSW 7200 Feminist, Gender, and Queer Theory Cr. 3
Overview of feminist, gender and queer theory, focusing on the three ""waves"" and the social, political, and cultural construction of femininities, masculinities, and sexualities. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

GSW 8150 Seminar in the History of Gender, Women and Sexuality Cr. 3
Research seminar in the History of Gender, Women, and Sexuality. Topics vary by Term. Offered Yearly.
Prerequisites: HIS 7830 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 8150
Repeatable for 6 Credits

HA - Health Administration

HA 7000 Health Administration Organizations Cr. 3
This course provides a holistic overview of the healthcare organizations within the United States and globally. Students will examine the key components of each key functional area including marketing, communications, human resources, customer relations, operations and financial management. Students will also review organizational behavior strategies and the goal setting process. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

HA 7010 Health Administration Finance & Budgeting Cr. 3
This course provides an in-depth exploration of the financial principles and practices essential to the management of healthcare organizations. Students will gain a solid understanding of the financial operations within healthcare settings, including budgeting, financial reporting, cost control, and resource allocation. Key topics include the analysis of financial statements, the development of operating and capital budgets, revenue cycle management, healthcare reimbursement models, and financial decision-making in the context of healthcare policy and regulation. Offered Fall.
Prerequisite: HA 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7020 Health Administration Quality & Safety Improvement Cr. 3
This graduate-level course provides an in-depth exploration of the principles and practices of quality improvement (QI) and patient safety in healthcare administration. Students will learn the methodologies and tools used to assess healthcare systems, identify areas for improvement, and implement changes that enhance patient care outcomes and safety. Topics include the use of data for quality measurement, the implementation of evidence-based practices, risk management, patient safety culture, and the role of leadership in fostering continuous improvement. Offered Winter.
Prerequisite: HA 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7030 Health Administration Operational Management Cr. 3
This course is designed to provide students with an in-depth understanding of the principles and practices involved in the operational management of healthcare organizations. The course emphasizes the integration of operational strategies within healthcare settings, focusing on improving efficiency, patient satisfaction, and cost-effectiveness. Topics include healthcare systems and processes, workflow optimization, resource management, risk management, patient safety, and compliance with healthcare regulations. The course also covers leadership in healthcare operations, strategic planning, and the role of healthcare administrators in driving continuous improvement and organizational change. Offered Winter.
Prerequisite: HA 7000 with a minimum grade of C and HA 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7100 Health Administration Data Analytics Cr. 3
This course introduces graduate students to the principles and applications of data analytics in healthcare administration. Students will learn to collect, analyze, interpret, and present healthcare data to support evidence-based decision-making and strategic planning. Emphasis is placed on using data to improve healthcare quality, reduce costs, and enhance organizational performance. Topics include data governance, health information systems, data visualization, predictive modeling, population health analytics, and the ethical use of data in health care. Students will gain experience with industry-standard tools such as SQL, Excel, Tableau, and basic programming in R or Python. Offered Yearly.
Prerequisite: HA 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7110 Health Administration Change Management Cr. 3
This course provides an in-depth exploration of change management principles and practices within the context of healthcare organizations. Designed for healthcare administrators and leaders, the course focuses on the strategic, operational, ethical and human aspects of developing and managing organizational change in the healthcare sector. Students will examine various change management models, theories, and frameworks, with an emphasis on their application to healthcare settings. The course will cover key topics such as leadership strategies for driving change, assessing organizational readiness, addressing resistance, and designing effective change management plans. Offered Spring/Summer.
Prerequisite: HA 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7115 Exploring Leadership, Entrepreneurship, and Innovation Cr. 3
Examines how leadership, collaborative teamwork, and entrepreneurial thinking drive innovation across healthcare systems. Students engage in design thinking, systems-based approaches, and strategic problem-solving to develop sustainable solutions for real-world healthcare challenges. Expert-led sessions bridge theory and practice, equipping students to lead change, cultivate high-performing teams, and transform innovative ideas into actionable outcomes. Offered Yearly.
Prerequisite: HA 7000 with a minimum grade of C and HA 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7120 Health Administration Research Cr. 3
This course provides a comprehensive overview of the principles and practices of health care research. It emphasizes the importance of research in improving patient outcomes, guiding health care policies, and supporting evidence-based decision-making in clinical settings. Students will learn how to design and conduct research, analyze data, and interpret findings to advance knowledge in health care. Offered Spring/Summer.
Prerequisite: HA 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7130 Health Administration Information Management Cr. 3
This course provides advanced knowledge and skills in the management of health information systems in healthcare organizations. Students will explore topics such as managing health data governance, electronic health records (EHRs), clinical classification and coding systems, regulatory compliance (e.g., HIPAA, HITECH), data analytics, and quality improvement. Students will explore how health data is collected, secured, analyzed, and applied to improve clinical and administrative outcomes. Emphasis is placed on developing leadership and decision-making skills necessary to manage people, processes, and technologies in complex healthcare environments. Offered Yearly.
Prerequisite: HA 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7140 Health Administration Informatics Cr. 3
This course offers a comprehensive exploration of health informatics with a focus on the strategic application of data science and information systems in complex healthcare environments. Students will engage in critical analysis of methodologies for interpreting diverse health data sources and designing advanced electronic health record (EHR) systems and clinical decision support tools that align with regulatory, ethical, and operational standards. Emphasis is placed on leveraging predictive analytics, machine learning, and artificial intelligence to address challenges in population health management. The course also examines the technical and policy dimensions of achieving interoperability across heterogeneous health information systems. Offered Yearly.
Prerequisite: HA 7000 with a minimum grade of C and HA 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7150 Health Administration Business Planning Cr. 3
This course provides students with the knowledge and skills to develop comprehensive business plans for entrepreneurial ventures in the health care industry. The course blends theory with practical application, guiding students through the process of identifying unmet needs in health care, designing innovative solutions, and creating viable business models that align with industry regulations and ethical standards. Students will explore key components of entrepreneurial success, including opportunity recognition, competitive analysis, marketing strategy, operations planning, and financial forecasting. Offered Spring/Summer.
Prerequisite: HA 7000 with a minimum grade of C and HA 7010 with a minimum grade of C and HA 7020 with a minimum grade of C and HA 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7160 Health Administration Contracts and Negotiations Cr. 3
This course provides students in health administration with a comprehensive understanding of contract development, negotiation strategies, and legal principles relevant to healthcare organizations. Students will explore the structure and content of various types of healthcare contracts, including provider agreements, managed care contracts, vendor agreements, employment contracts, and partnership arrangements. Emphasis will be placed on the negotiation process, ethical considerations, risk management, and the alignment of contractual terms with organizational strategy and compliance standards. Offered Yearly.
Prerequisite: HA 7000 with a minimum grade of C and HA 7010 with a minimum grade of C and HA 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7170 Health Administration Strategic Planning Cr. 3
This graduate-level course focuses on the development and implementation of strategic planning within healthcare organizations. Students will explore advanced concepts and tools necessary for making informed, strategic decisions in a dynamic, highly regulated healthcare environment. Emphasizing a systems-thinking approach, the course elevates key areas such as organizational assessment, competitive analysis, market research, policy considerations, sustainability, change management and resource allocation, all tailored to healthcare settings. Building organizational capacity, driving improvements in patient outcomes, operational efficiency, and stakeholder satisfaction will also be addressed. Offered Spring/Summer.
Prerequisite: HA 7000 with a minimum grade of C and HA 7010 with a minimum grade of C and HA 7020 with a minimum grade of C and HA 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7180 Health Administration Global Immersion Cr. 3
This course provides students with a deep, experiential understanding of global healthcare systems through immersive global studies. Students will examine healthcare delivery, financing, policy, operations and innovation across diverse cultural and economic contexts. The course combines asynchronous coursework combined with synchronous engagements with one or more international locations, where students will engage directly with healthcare leaders, practitioners, policy makers, and entrepreneurs. Key themes include comparative health system analysis, global health operations, technology and innovation in healthcare, public-private partnerships, and the role of culture and governance in shaping health outcomes. Students will also explore the challenges and opportunities of delivering high-quality, cost-effective care in varying environments. Offered Yearly.
Prerequisite: HA 7000 with a minimum grade of C and HA 7010 with a minimum grade of C and HA 7020 with a minimum grade of C and HA 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HA 7200 Health Administration Capstone Cr. 4
The Health Administration Capstone course provides students with the opportunity to synthesize and apply the principles, theories, and practices of health administration through an individual a case analysis, verbal defense and in a comprehensive group project. Each capstone project includes a thorough review of industry and competitive conditions and situational analysis of the company, including financial trends and concluding with defendable recommendations for specific strategies that improve organizational performance and sustainability. This course serves as the culminating experience for students pursuing a Master of Health Administration degree. Offered Every Term.
Prerequisite: HA 7000 with a minimum grade of C and HA 7010 with a minimum grade of C and HA 7020 with a minimum grade of C and HA 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HE- Health Education

HE 1010 Foundations of Health and Health Promotion Cr. 3
Foundations of the community health education profession and practice, including history, settings, organizations, ethics and employment. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

HE 2310 Dynamics of Personal Health Cr. 3
Critical health issues relevant to both traditional and non-traditional college students today. In-depth study of varied health issues and applications to personal, family and community needs. Offered Every Term.

HE 2320 Advancing Policy in Community Health Education Cr. 3
Provides an overview of the community health policy process, advocacy and social, political and environmental issues affecting urban populations. Offered Winter.

HE 3300 Health of the School Child Cr. 3
Health status and problems of school-age children. Role of teacher and schools in promoting healthy behavior. Emphasis on impact of institutional forces (e.g., family, media) on development of children's health beliefs and behavior. Offered Every Term.

HE 3344 Methods and Materials in Community Health Education Cr. 3
Frameworks, practical applications and mechanics of conducting health interventions in community settings. Offered Fall.
Prerequisites: HE 1010 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

HE 3440 Nutrition and Health Education Cr. 3
Relationships between dietary intake and health status in various populations. Role and responsibilities of health educators in nutrition programs. Concepts from health psychology applied to school and community approaches. Offered Fall, Winter.

HE 3500 Human Disease Cr. 3
Body system impairments from disease, injury or congenital abnormalities that relate to morbidity and mortality in the U.S. Signs, symptoms, causes, prevention, and treatment. Offered Fall, Winter.
Prerequisite: HE 3440 with a minimum grade of C or NFS 2030 with a minimum grade of C

HE 3990 Individual Problems in Health Cr. 1-3
Solving a specific personal health problem or studying a specific community health problem under the guidance of divisional staff. Offered Every Term.
Prerequisite: HE 2310 with a minimum grade of C or HE 2320 with a minimum grade of C
Repeatable for 3 Credits

HE 4010 Foundations of Community Health Program Planning Cr. 3
Introduction and practical application of health promotion program planning, including: developing a need assessment, recruiting community support, writing program goals and objectives, developing a program plan, identifying existing interventions and/or designing new intervention activities to address program objectives, using theory to enhance effective programming, program implementation, budgeting and measurement. Offered Winter.
Prerequisites: HE 1010 with a minimum grade of C

HE 4902 Health Education Internship Cr. 5-6
Students contribute expertise and enthusiasm to their host agency and demonstrate their ability to perform the duties of a community health professional. Offered Every Term.
Prerequisites: HE 4010 with a minimum grade of D- (may be taken concurrently), HE 5522 with a minimum grade of D-, and HE 6330 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $16
Repeatable for 6 Credits

HE 5522 Health Psychology Cr. 3
Foundations of health, research methods, biological foundations of health/illness, stress, nutrition, obesity, eating disorders, substance abuse and health, cardiovascular disease, diabetes and health, exercise and cancer; HIV, AIDS, and health; pain management and patient behavior, complementary and alternative medicine, health psychology across the life span. Offered Fall.
Prerequisites: PSY 1010-6999

HE 6000 Yoga: History, Philosophy, and Practice Cr. 3
The in-depth study of yoga history, philosophy, research, and ethics, as well as the physical and mental practice, used for self-care as well as introducing professional training. Offered Fall.

HE 6050 Mindfulness: Philosophy, Theory, Practice, and Research Cr. 3
The in-depth study of mindfulness history, theory, research, and practice used for self-development and self-care. The course prepares students to successfully complete an optional Mindfulness-Based Stress Reduction (MBSR) training and receive a MBSR certificate of completion. Offered Fall, Winter.

HE 6100 Health Communication Methods and Techniques Cr. 3
Provides students with a framework for identifying, understanding, creating and evaluating health communication efforts. Focus will be on multilevel health communication and behavior change, factors affecting communication and the development of effective materials. Offered Intermittently.

HE 6200 Yoga and Mindfulness in Professional Practice Cr. 3
Introduction to yoga and mindfulness as applied to professional settings. Topics will include the research on and availability of yoga & mindfulness programs in a variety of professions, how to design a yoga and/or mindfulness program in varied settings, and also a discussion of concerns, ethics, self-care, and scope of practice. Offered Winter.
Prerequisite: HE 6000 with a minimum grade of C and HE 6050 with a minimum grade of C

HE 6310 Reproductive Health Education Cr. 3
Program planning, curriculum development and classroom teaching strategies in the areas of human sexuality, reproductive health and venereal disease, family planning and family health. Course will satisfy Michigan Department of Education requirements for teaching in these areas. Offered Fall.

HE 6320 Mental Health and Substance Abuse Cr. 3
Identification, treatment, and prevention of mental health/substance abuse problems. How school-age children and their families are affected by these problems; role of the teacher. Offered Fall, Winter.

HE 6330 Health Behavior Change Cr. 3
Principles of behavior modification; theories of health behavior and program planning as they relate to health promotion and wellness. Offered Fall, Winter.
Prerequisites: PSY 1010-6999 and (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C)

HE 6340 Advanced Concepts in Health Cr. 3
An in-depth study of health content areas taught in the K-12 school system. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Health & Phys Ed Teaching.

HE 6360 Performance Based Assessment Cr. 3
Assessment and evaluative techniques applied to health education, including test construction and performance-based assessment. Designed to meet assessment and evaluative competencies required for entry-level health teachers in Michigan. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Education.

HE 6420 Introduction to Health Education Program Design Cr. 3
Overview of health education program process in all practice settings. Introduction to needs assessment, objective writing, staff training, and evaluation in health education. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HE 6500 Secondary Health Methods Cr. 3
Principles, curriculum development and techniques in teaching health grades 6-12. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.

HE 6501 Measurement and Evaluation in Community Health Education Cr. 3
Frameworks, principles, models and strategies for evaluating health education programs. Offered Fall.
Prerequisites: HE 4010 with a minimum grade of C or HE 6420 with a minimum grade of C

HE 6530 Principles and Practice of Health Education and Health Promotion Cr. 3
Principles, resources and practical application of community health education in various settings, with emphasis on the role of the community health education specialist. Offered Every Other Year.

HE 6560 Integrating Evidence-Based Practices in Community Health: Translating Research-To-Practice Cr. 3
Integrating evidence-based practices into community health settings is recognized as the foundational gold standard for improving population health and is a key skill required of community health specialists. This course will examine approaches, including theories and frameworks, which can be utilized to guide the effective translation of evidence-based community health interventions into practice. It will also help prepare students to identify and implement best practices that are theory-based, evidence-based, community-based, and reality-based. Offered Intermittently.

HE 6570 Advancing Community Health and Health Equity Cr. 3
Examines approaches in policy and advocacy to advance health equity and community health. Social and public health injustices among key populations will be reviewed and the saliency of policy and advocacy advancement strategies to improve health of disenfranchised populations will be discussed and assessed. Offered Intermittently.

HE 7051 Measurement and Evaluation in Community Health Education Cr. 3
Frameworks, principles, models and strategies for evaluating health education programs. Offered Every Other Year.
Prerequisite: HE 6420 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

HE 7200 Grant Writing and Management in Health Sciences Cr. 3
Provides a hands-on approach to grant writing for health sciences programs. Strategies and tactics for seeking out, developing and managing proposals for health programs will be discussed. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HEB - Hebrew

HEB 1010 Elementary Hebrew I Cr. 4
Reading, writing, and speaking. Emphasis on Modern Hebrew. Offered Fall.
Fees: $5

HEB 1020 Elementary Hebrew II Cr. 4
Continuation of HEB 1010. Offered Winter.
Prerequisites: HEB 1010 with a minimum grade of D-
Fees: $5

HEB 2010 Intermediate Hebrew I Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Reading of additional cultural texts. Offered Fall.
Prerequisites: HEB 1020 with a minimum grade of D-
Fees: $5

HEB 3990 Directed Study Cr. 1-4
Assigned readings of intermediate and advanced texts. Offered Every Term.
Repeatable for 4 Credits

HEB 5990 Directed Study Cr. 3-6
Assigned readings of advanced texts; guided texts. Offered Every Term.
Repeatable for 9 Credits

HIS - History

HIS 1000 World Civilization to 1500 Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Survey of ancient and medieval history from the Neolithic Revolution to 1500. Offered Every Term.

HIS 1001 Introduction to History Cr. 3
History is facts and dates, but it's also much more than that. History is produced by historians who marshal evidence to tell stories about those who came before us and make arguments about the past. We work with an ever-growing range of sources – from material culture and popular culture to archival documents and beyond. We think historically. In the process, we attempt to reconstruct and understand the decisions that individuals made and the consequences of those decisions – what happened and why/how does it matter? These are questions about both the past and the present. This course helps break down the act of producing history, introducing you to this process and helping you begin to hone your skills as a historian. Offered Fall.

HIS 1050 History of the Headlines: United States Since World War II Cr. 3
Satisfies General Education Requirement: Civic Literacy, Social Inquiry
Recent American social issues, political movements, institutions, and policy developments within the broad context of global change and conflict. Offered Every Term.

HIS 1060 Law, Citizenship, and American Culture Cr. 3
Satisfies General Education Requirement: Civic Literacy
Explores the foundations, development, and evolution of relations among law, constitutionalism, and American society from early England into the late 20th century. Emphasis on the emergence and expansion first of a republic and then of republican citizenship with its incidents and privileges. Offered Every Other Year.

HIS 1110 Work and Democracy: An Introduction Cr. 3
Satisfies General Education Requirement: Civic Literacy
The course explores the role that labor and the labor movement have played in shaping democracy in the United States over the past two centuries and the limits of democracy in the workplace. It covers key political achievements of labor and workers' organizations and the contemporary challenges they face today. Key themes include labor and citizenship, industrial democracy, the role of the state in mediating labor relations, gender, race, sexuality and labor, the labor movement as a social movement, and power and politics in the workplace. Offered Every Term.
Equivalent: ANT 1110, ELR 1110, PS 1110

HIS 1300 Europe and the World: 1500-1945 Cr. 4
Satisfies General Education Requirement: Social Inquiry
The rise of the modern West and the response of the non-West from the age of exploration to the end of World War II. The foundations of the contemporary world. Offered Every Term.

HIS 1400 The World Since 1945 Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Selected topics in world history since 1945, including: impact of World War II on Europe and European empires; bipolar division of the world between the United States and the Soviet Union; the international order and relations between the industrial nations (First World) and the developing nations (Third World). Offered Every Term.

HIS 1600 African Civilizations to 1800 Cr. 3-4
Satisfies General Education Requirement: Social Inquiry
Africa from ancient Egypt to the Atlantic slave trade. Emphasis on state-building; regional and international commercial networks and their role in economic, political, and socio-cultural change. Offered Fall, Winter.

HIS 1610 African Civilizations Since 1800 Cr. 3-4
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
The origins of contemporary Africa, nineteenth century state-building, spread of Islamic religion, establishment of European empires, independence struggles, and problems of independence. Offered Fall, Winter.

HIS 1700 East Asia to the 1700s Cr. 3
Satisfies General Education Requirement: Social Inquiry
From antiquity to the 1700s; emphasis on political, economic, social, and cultural developments in China, Japan, and Korea, and the nature and impact of their interactions. Offered Intermittently.
Equivalent: ASN 1700

HIS 1710 History of Modern East Asia Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
From beginning of nineteenth century to the present; emphasis on political, social and economic developments in China, Japan and Korea. Offered Yearly.
Equivalent: ASN 1710

HIS 1800 The Age of Islamic Empires: 600-1600 Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Historical evolution of the Islamic world from birth of Islam to height of Ottoman Empire. Islamic history and civilization in a world-historical context; developments indigenous to specific regions, such as Islamic Spain. Offered Every Term.
Equivalent: NE 2030

HIS 1810 The Modern Middle East Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Survey of Middle East history in modern era, focusing on the nineteenth and twentieth centuries. Ottoman history from 1600: impact of European imperialism and nationalist movements, resulting in development of modern state systems, regional/national conflicts, and Islamic response to modernization. Offered Every Term.
Equivalent: NE 2040

HIS 1900 History of Colonial Latin America Cr. 3
Satisfies General Education Requirement: Social Inquiry
The Spanish and Portuguese conquests in the Americas; the multi-racial and class social structures they established as colonies, and the movements for independence, 1492-1822. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: LAS 1900

HIS 1910 Latin America from Independence to the Present Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry, Social Inquiry
Latin America from early nineteenth century to the 1980s. Major themes include: 1) colonial pasts and political independence; 2) state formation, and the construction of identities at local and national levels; 3) elite and popular relations, including cases of rebellion, revolution, and state repression; 4) forms of capitalist development and transformations in class relations, ideologies of economic development, and linkages to the United States. Offered Yearly.
Equivalent: LAS 1910

HIS 1995 Nature and Societal Transitions Cr. 3
Satisfies General Education Requirement: Social Inquiry
A survey of the historical evolution of human societies and the accompanying technological transformations of our relationship with the natural world. Examines the most significant transformations in our way of life as a species: our evolutionary development as hunter-gatherers, the invention of agriculture, the rise of civilizations, and the industrial revolution. Offered Yearly.

HIS 2000 Introduction to Urban Studies Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
In this introductory urban studies course, students learn about the historic and contemporary forces driving urbanization with an emphasis on US cities and urban areas; the effects of these forces on diverse population groups; and challenges facing cities and strategies to resolve them. Although the course will draw from international contexts, wherever possible, experiences of and from the Detroit metro—city and suburbs—will be used to illustrate particular themes. Student learning centers on an examination of issues related to diversity, equity, and inclusion, and broader social phenomena. Offered Every Term.
Equivalent: GPH 2000, PS 2000, SOC 2500, US 2000

HIS 2040 American Foundations to 1877 Cr. 3-4
Satisfies General Education Requirement: Civic Literacy, Social Inquiry
A survey of America's experience with colonialism, revolution, and nation building, with special attention paid to freedom and slavery, democracy and citizenship, social and cultural change, American identity, and institutional responses to political, social, and economic issues. Offered Every Term.

HIS 2050 Modern America: Since 1877 Cr. 3-4
Satisfies General Education Requirement: Civic Literacy, Social Inquiry
A survey of America's modern experience, with a focus on industrialization, urbanization, social change, cultural development, and political life during the emergence and evolution of the United States as a world power. Offered Every Term.

HIS 2240 History of Michigan Cr. 3-4
Social and economic development of the state, from French explorations to the present. Offered Every Term.

HIS 2350 Black Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Explores the historical, cultural and structural aspects of the Black urban experience in Detroit from the late 19th Century to the present, including the role that racism, urbanization and suburbanization have played in shaping racial, spatial and economic inequality in the Detroit Metropolitan area. Utilizes an interdisciplinary approach: to interrogate the social and cultural history of Black Detroit, to examine the various forms of Black social movement activism used by Black Detroiters in the 20th Century, and to analyze ways the shifting economic and political currents shaped, and reshaped racism, class, space, and resistance in the Detroit metropolitan area. Offered Fall, Winter.
Equivalent: AFS 2350, US 2350

HIS 2420 History of Puerto Rico and Cuba Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Historical development of Puerto Rico and Cuba from the pre-Columbian period to the present. Interaction of political, social, economic and cultural influences. Offered Intermittently.
Equivalent: LAS 2420

HIS 2430 History of Latino/as in the United States Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Historical development of people of Hispanic descent in the United States from the early nineteenth century to the present. Cultural conflict, and interaction of political, social, and economic forces. Offered Yearly.
Equivalent: LAS 2430

HIS 2435 Introduction to Digital Humanities Cr. 3
Digital humanities scholarship has exploded over the last ten years. Early DH scholarship represented a niche in humanities fields like English and History, dominated by unique individuals who had both technical programming skills and experience in humanities research. Since its early days, the field of digital humanities has expanded significantly. New tools and platforms make DH research more accessible. Today, DH scholars work in a highly collaborative, interdisciplinary environment that place programmers and developers, information science specialists, and humanities scholars in active conversation. In this course, students will be introduced to these different elements – tools, methods, theories, and critical analysis – of the digital humanities in order to learn new ways to interpret artistic or cultural objects or ideas, social relationships, and historical processes. Offered Yearly.
Equivalent: ENG 2435

HIS 2440 History of Mexico Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Historical development of Mexico and the Mexican people from the Spanish conquest to the present. Interaction of political, social, economic and cultural influences. Offered Yearly.
Equivalent: LAS 2410

HIS 2500 Introduction to Peace and Conflict Studies Cr. 3
Introduction to the peace and conflict studies co-major. Survey, ranging from biology and conflict among animals to disputes involving the individual, the family, the neighborhood and region, the nation and global or international community. Definitions and approaches to peace. (Some sections linked to Peace and Justice Learning Community.) Offered Yearly.
Equivalent: PCS 2000, PS 2820

HIS 2510 Science, Technology, and War Cr. 4
Modern weapons, nuclear and otherwise are becoming increasingly available and dangerous; people with grievances seem eager to use them. Science and technology, as well as constraints of bureaucracy and society underpin weapons development and use, as technologies affect prospects and results of war and peace. History of humanity and its tools of war. Offered Yearly.
Equivalent: PCS 2020, PHY 2020, PS 2440

HIS 2520 Topics in Peace and Conflict Studies Cr. 1-4
Special topics relating to peace and conflict studies. Offered Every Term.
Equivalent: PCS 2010, PS 2830
Repeatable for 12 Credits

HIS 2530 The Study of Non-Violence Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Intellectual and social roots of non-violence and the practice of non-violence in different people's life styles. Historical and political forces and movements related to non-violence. (Some sections linked to Peace and Justice Learning Community.) Offered Every Term.
Equivalent: PCS 2050, PS 2550, SOC 2050

HIS 2605 History of Women, Gender and Sexuality in the Modern World Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Examination of change over time, using different historical approaches to try to account for change as specifically applicable from a comparative perspective to the experiences of women and constructions of gender and sexual identity. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: GSW 2600

HIS 2700 Introduction to Canadian Studies Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Survey of Canada in its cultural, literary, historical, geographical and political aspects; key concepts and social patterns that define the Canadian experience. Offered Intermittently.
Equivalent: ENG 2670, GPH 2700, PS 2700

HIS 2800 Introduction to Global Issues and Institutions Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Provides a broad overview of some of the big and controversial questions facing our increasingly globalized world today and introduces some of the tools we have to confront these issues. Topics include the conflict and security threats, protection of human rights, global warming, and resource management. Offered Fall, Winter.
Equivalent: GLS 2800

HIS 2900 Introduction to Public History Cr. 3
This course will introduce students to the ways history is understood and practiced in varied cultural and public institutions such as museums, archives, historic preservation projects, non-profits and, more generally, in public debate around what the past means and how we should remember. Public historians help engage the public in discussions of the legacy of our collective past, helping to engage communities in history in real world settings. Offered Fall.

HIS 3000 The Historian's Craft Cr. 3
Provides an introduction to the discipline of history and the methodological skills that historians need to explore their areas of interest. Offered Fall, Winter.

HIS 3010 Jewish History from the Bible to Present Cr. 3
This course will survey the 3000-year history of the Jews from biblical antiquity to the present. The course will explore a wide variety of topics, but will focus around three central themes: the emergence of Judaism and the Jewish life in the diaspora out of the religious and social matrix of ancient Israelite society, in response to the challenges of Hellenistic culture; the disparities between Jewish life under Christianity and Islam; and the challenges of being Jewish in the modern world. Throughout the course, the dual emphasis will be placed on the broader context in which Jews lived as an ethnic and religious minority — the Ancient Near East, the Hellenistic world, the Roman Empire, Christendom, Islam, Europe, Russia, America, and the modern Middle East — and the internal development of Judaism and the Jewish community in these diverse situations. Offered Intermittently.
Equivalent: NE 3010

HIS 3140 African American History I: 1400-1865 Cr. 3-4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
African origins of African Americans; transition from freedom to slavery; status of African Americans under slavery. Offered Yearly.
Equivalent: AFS 3140

HIS 3150 African American History II: 1865-1968 Cr. 3-4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
African American history from Reconstruction through the Civil Rights Movement. Offered Yearly.
Equivalent: AFS 3150

HIS 3155 African American History III: 1968 - Present Cr. 3-4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
History of African Americans' struggle against persistent and stubborn racism, efforts to achieve full citizenship, and legal and economic justice after 1968. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: AFS 3155

HIS 3160 Black Urban History Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Historical experience of African Americans in urban areas; impact of their communities on urban development from 1860 to contemporary times. Offered Fall, Winter.
Equivalent: AFS 3160

HIS 3170 Ethnicity and Race in American Life Cr. 3-4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Exploration of complicated relationship between ethnic and racial diversity and the making of America. Using historical, literary, and cultural readings and sources to examine key themes: Who was the ""Other""? What is an ""American""? Offered Yearly.
Equivalent: AFS 3170

HIS 3180 Black Social Movements Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Survey of mass or popular Black movements with emphasis on their political and cultural impact, historical continuity and organization. Offered Yearly.
Equivalent: AFS 3180

HIS 3205 Queer American History Cr. 3
Queer American History will provide students with a comprehensive course on US History from a queer theoretical framework, introducing students to core concepts in queer history, LGBTQ+ history, gender history and gender studies in the process. Topics addressed in this course range across a variety of interdisciplinary subjects including discussions pertaining to sexual and family politics, bodily autonomy, federal welfare and employment policy, public health, psychological approaches to identity, sexual orientation, gender identity and expression, intersectional identity, and gender and sexual performativity, among others. Offered Yearly.

HIS 3220 Labor in Media and Popular Culture Cr. 3
The course explores labor behind and in popular culture in the United States. We will use themes of race, gender, technology, and class to explore popular culture, cultural workers, and their relationship to labor organizations in the 20th and 21st centuries. Our topics include music, video games, television and films, animation, streaming and influencer culture, the fast food industry, fashion, sports, and more. Offered Yearly.
Equivalent: ELR 3220

HIS 3240 Detroit Politics: Continuity and Change in City and Suburbs Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Detroit area political systems and processes; historical, economic, and social influences on local politics. Traditions, changes, and future challenges in Detroit and metropolitan area. Offered Every Other Year.
Equivalent: PS 3250

HIS 3250 The Family in History Cr. 3-4
Satisfies General Education Requirement: Social Inquiry
Comparative survey emphasizing the transformation from traditional patterns of family life to family and kin in modern industrial society; students research their own family histories. Offered Every Other Year.

HIS 3320 Twentieth Century Middle East Cr. 3
The contemporary Middle East; emphasis on social and economic development. Investigation of issues that identify the region, such as oil, gender issues, fundamentalism, and regional conflicts. Offered Every Term.
Equivalent: NE 3040

HIS 3330 Civilizations of the Nile Valley: Egypt and Nubia Cr. 4
From Neolithic era to the seventh century of our era. Offered Every Other Year.

HIS 3360 Black Workers in American History Cr. 4
Satisfies General Education Requirement: Social Inquiry
Survey course. Slave and free workers during antebellum period; skill trades, sharecropping, menial labor, and coal mining during Reconstruction; labor struggles and job discrimination in the twentieth century. Offered Fall, Winter.
Equivalent: AFS 3360

HIS 3400 The Car in American Life and Labor Cr. 4
This course focuses on the history and current role of the automobile in the American economy and society. It teaches students to think about labor and workplace dynamics and develop a historical perspective on current labor questions. The course seeks to expand students' understanding of what work is, where it happens, and the spectrum of workplace issues by examining automotive manufacturing, advertising, sales, trucking and taxi driving, design, urban planning, and the gig economy. Finally, this course asks how labor issues intersect with other important dynamics of American life. By connecting life and work in a consumer capitalist economy with energy and environmental history, students will gain a fuller understanding of how consumption and climate change are labor issues, too. Offered Every Other Year.
Equivalent: ELR 3400

HIS 3431 Revolutionary Movements in Latin America Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
This course examines revolutionary movements in twentieth-century Latin America with special emphasis on Central America, the Caribbean, and the Southern Cone. The course also explores the relationship between these movements, U.S. involvement in the region, and the Latin American diaspora. Offered Fall.
Equivalent: LAS 3431

HIS 3432 Latin American History Through Film Cr. 3
This course explores the histories and cultures of Latin America as represented through the medium of film, as well as how film has portrayed the people, politics, and cultures of Latin America in return. The class considers how and why various historical topics have been depicted in movies, how the historical events were interpreted through the filmmaker's imagination, and to what extent the film version reflected the reality of the historical episode. When used in conjunction with textbooks, primary sources, and articles, chapters, and/or monographs, films are a useful tool to analyze themes such as the constructed nature of history, and the interpretation and contextualization of primary sources. Offered Fall.
Equivalent: LAS 3432

HIS 3433 Gender and Sexuality in Latin American History Cr. 3
This course covers the Conquest/Encounter through the late 20th century and will explore Caribbean and Latin American history through the lenses of gender and sexuality. This course focuses on women and explores homosexuality and transgenderism in the Latin American and Caribbean context. Readings, lectures, and film discussions will focus on the intersectional experiences of people of different ethnicities and socioeconomic backgrounds. Offered Winter.
Equivalent: GSW 3433, LAS 3433

HIS 3434 Labor in Latin America Cr. 3
The aim of this course is to introduce students to the history of labor and the working-class throughout Latin America from pre-Hispanic times to the present. The class begins by looking at indigenous labor in the pre-Colombian context. This section will include readings on communal labor with emphasis on peasant classes. The second section moves to the Conquest of Latin America. Students will learn how colonialism influenced and drastically changed how people participated in the workforce. There will be readings on slave and indigenous labor. The third section deals with the independence and nation-building periods of the 19th and 20th centuries. Here students will examine how the working-class and peasants negotiated aspects of national identity in several case studies. This will involve exploring labor activism and other labor movements in Chile, Argentina, Peru, Brazil, and Mexico. Finally, the class will end with the neoliberal period and its impact on workers. Offered Every Other Year.
Equivalent: ELR 3434, LAS 3434

HIS 3440 American Medicine in the Twentieth Century Cr. 3
Major historical benchmarks in the making of the medical system in the U.S., including developments in medicine and medical knowledge, as well as social and political factors that influenced their reception and implementation. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: SOC 3440

HIS 3490 History of Russia and Eurasia to 1917 Cr. 4
Interaction of cultures, politics and societies of Russia and Eurasia to the Russian Revolution of 1917. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

HIS 3540 Jane Austen's World Cr. 3
Jane Austen's novels have generated great—and well deserved—interest in the world she inhabited. Austen wrote during one of the most turbulent periods of British and World history. This class will place her writings into a historical and cultural context. Over the course of the semester we will address a number of questions that shaped Austen's era and resonate for our own: How does her work interpret and reflect changing views of love and family? How do they reflect rising consumer capitalism and new styles of fashion? What do they say about women's rights to property? About the Napoleonic Wars and the British slave trade? How can novels help us understand the conflicts of an era? This course will deepen our understanding of British, and global, society and culture. Offered Every Other Year.

HIS 3550 Shakespeare's England: Renaissance, Reformation, Revolution Cr. 4
The sixteenth and seventeenth centuries in English history are often looked upon as a cultural "golden age"—the days of King Henry VIII, Queen Elizabeth, William Shakespeare, Francis Drake, Walter Raleigh, Isaac Newton, and other larger-than-life figures. In fact, for those living through this "early modern period," it was also a time of great uncertainty, upheaval, and even violence. This class will explore the key events, issues, and personalities of this tumultuous era. We will focus in particular on the Protestant Reformation, and on the clash between the monarchy and Parliament over how much power a king should command. We'll also examine the lives of everyday Englishmen and women, the age of exploration and colonization in the New World, and important cultural developments such as the rise of Shakespearean theater and the Scientific Revolution. The events, conflicts, settlements, and innovations of early modern England continue to shape our world. Offered Every Other Year.

HIS 3570 The Emerald Isle: A History of Ireland Cr. 3
Ireland is a small place, but it has a great deal of history! This class will present a broad sweep of Irish history from the Iron Age down to the present day, with particular emphasis on the cultural mixing (and clashing) that has always characterized the place--Celts, Vikings, Anglo-Saxons, Highland Scots, and many other peoples have made Ireland their home through the centuries. We'll look at prominent events, personalities, battles, and milestones, but also at the day-to-day life of common Irishmen and women across the ages, as we consider what it means to be Irish and how that idea has changed over time. Offered Every Other Winter.

HIS 3585 Science, Technology, and Society Cr. 3
Introduction to the field of Science and Technology Studies; how conflicts about science and technology are generated and resolved; how broader societal institutions help shape, and are shaped by, science and technology. Offered Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

HIS 3650 History of Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
History of Detroit from European contact to the present, with emphasis on the late-19th and 20th centuries. Offered Fall, Winter.
Equivalent: US 3650

HIS 3870 History of Japanese Pop Culture Cr. 3
Explores the history of Japanese pop culture and its global spread, with both an emphasis on historical influences, intended messages, and appeal in Japan and around the world, and examination of manga, anime, video games, sports, fashion, literature, music, film, and food. Offered Every Other Year.
Equivalent: ASN 3870

HIS 3991 Directed Study: Salford - WSU Exchange Cr. 3-9
Directed study at University of Salford, England. Offered Fall, Winter.
Repeatable for 9 Credits

HIS 3995 Special Topics in History Cr. 1-4
Specialized and topical studies in historical events, personalities and themes. Topics to be announced in Schedule of Classes . Offered Every Term.
Repeatable for 8 Credits

HIS 3998 Topics in American History Cr. 1-4
Topics to be announced in Schedule of Classes . Offered Intermittently.
Repeatable for 8 Credits

HIS 4435 Beyond Human Nature: The New Sciences of Cultural Evolution Cr. 3
Examines the history of debates in biology and the social sciences over the biological roots of human nature and culture. Traces the emergence of hybrid, interdisciplinary approaches since the 1970s employing the concept of cultural evolution, understood as distinct from genetic evolution. Considers how cultural evolution theory sheds new light on the historical transformation of egalitarian foraging societies into complex, hierarchical states after the development of agriculture, tracing their development to the present day. Offered Fall.

HIS 4990 Directed Study Cr. 1-6
Offered Every Term.
Repeatable for 6 Credits

HIS 4994 Digital History Seminar Cr. 3
Explores both the opportunities and the challenges of digital history. Throughout the semester, students work in groups to construct a digital project for the Reuther Archive in which they will digitize sources and create content based on distinct parts of the Reuther's collection. The end goal is a digital exhibit that will both make these materials more accessible and help communicate their significance for the general public. Offered Every Other Fall.

HIS 4997 Internship in Public History Cr. 3
Professional experience in public history under the supervision of a public history practitioner and a departmental advisor. Offered Every Term.
Prerequisites: HIS 3000 with a minimum grade of C and HIS 4000-ZZZZ with a minimum grade of C

HIS 5010 Colonial North America Cr. 4
European expansion to North America, interaction among European, Native American, and African peoples, and imperial competition over the New World through the Seven Years' War. Offered Intermittently.

HIS 5020 Revolutionary America Cr. 4
Social, political, and cultural background to America's independence movement; development of American national identity, social relations, and early politics through the election of 1800. Offered Intermittently.

HIS 5070 Contemporary American History: 1945 to the Present Cr. 4
Social, political, intellectual, economic, diplomatic, and cultural trends in the United States since World War II. Offered Yearly.

HIS 5130 American Foreign Relations Since 1933 Cr. 4
United States involvement in the international system from the twenties to the present. Emphasis on World War II to Vietnam and the role of the United States in the Cold War and the Third World. Offered Every Other Year.

HIS 5200 Women, Gender, and Sexuality in US History Cr. 3
the history of women in the United States and the role of gender and sexuality in shaping women/qs and men/qs experience and identity. Offered Every Other Year.

HIS 5205 Queer American History Cr. 3
Queer American History will provide students with a comprehensive course on US History from a queer theoretical framework, introducing students to core concepts in queer/LGBTQ+ history, gender history and gender studies in the process. Topics addressed in this course include sexual and family politics, bodily autonomy, federal welfare and employment policy, public health, psychological approaches to identity, sexual orientation, gender identity and expression, intersectional identity, and gender and sexual performativity. Offered Yearly.

HIS 5231 The Conquest in Latin America Cr. 3
Varying perspectives on European conquests in Latin America. Offered Intermittently.
Equivalent: LAS 5231

HIS 5240 Michigan History in Perspective Cr. 3
Social, economic, environmental, and political history of Michigan from prehistory to the present. Offered Winter.
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.

HIS 5251 History of Feminism Cr. 4
An upper-division/graduate-level course on the main ideological, intellectual, and political sources and developments in the history of feminism in the United States. Offered Every Other Year.
Restriction(s): Enrollment limited to students with a class of Unranked Grad, Junior or Senior; enrollment is limited to Graduate or Undergraduate level students.

HIS 5261 American History and Memory Cr. 3
An examination of the ways different groups and institutions remember and forget American history and Americans' historic fights over the commemorative landscape. Offered Fall.
Repeatable for 6 Credits

HIS 5290 American Labor History Cr. 4
Analysis of American workers and unions in the nineteenth and twentieth centuries. Offered Every Other Year.
Equivalent: ECO 5490

HIS 5300 American Capitalism Since 1945 Cr. 4
History and development of American capitalism from the Second World War through the 2008 financial crisis. Offered Every Other Year.

HIS 5330 History of Ancient Greece Cr. 3
Ancient Greek culture, emphasizing political events, social and economic institutions, and cultural achievements. Offered Every Other Year.

HIS 5340 History of Ancient Rome Cr. 3
Institutional and cultural development. Offered Every Other Year.

HIS 5345 Rome and the Barbarians Cr. 3
The relationship between ancient Rome and the pre-state societies that existed beyond its frontiers from about 300 B.C.E to about 500 C.E. Offered Every Other Year.

HIS 5360 The Early Middle Ages: 300-1000 Cr. 3
Interaction of Roman, Christian, and barbarian elements in the emergence of Europe as a cultural entity between the fourth and tenth centuries. Offered Every Other Year.

HIS 5370 The High Middle Ages: 1000-1300 Cr. 3
Economic, social, and cultural developments that transformed Western European civilization during the eleventh, twelfth and thirteenth centuries. Offered Every Other Year.

HIS 5385 History of Christianity to the Reformation Cr. 3
Survey of Christianity from Jesus to the Reformation. Balanced coverage of Christianity in Europe, Asia, and Africa. Offered Yearly.

HIS 5407 The Scientific Revolution Cr. 3
Rise of modern science; major changes in study of astronomy, medicine, physics, mathematics, and other sciences from 1500 to 1700. Offered Intermittently.

HIS 5410 France's Global Revolutions Cr. 4
Beginning at the end of the eighteenth century, France experienced a series of political and social revolutions, resulting in the overthrow of the monarchy and the long process of establishing a democratic form of government. At the same time, France's colonial settlements pursued a path of revolution, one eventually leading to the emancipation of Haiti. This course will examine the ideas, process and outcome of the Revolution that began in Paris and ended in Port-au-Prince, creating a global era of political change. Offered Every Other Year.

HIS 5440 Twentieth Century Europe Cr. 4
Total war and disillusionment, attempts to restore stability and security, totalitarianism as an answer, more war and reconstruction, a divided Europe, and the search for Europe's place in the world. Offered Every Other Year.

HIS 5460 History of the Holocaust Cr. 4
Holocaust as a tragic conjuncture of general European and Jewish history. Topics include: development of anti-Semitism in Europe and the rise of Nazism; European Jewry in the interwar period; the Third Reich's treatment of the ""Jewish Question"" in the 1930s; Jewish resistance; fate of the survivors; implications of the Holocaust for contemporary society. Offered Yearly.

HIS 5470 Modern Germany Cr. 3-4
The history of modern Germany against the background of its tradition and culture. Concentration on the Prussian-Austrian conflict, the emergence of German intellectual life, unification and modernization, and the crises and wars of the twentieth century. Offered Intermittently.

HIS 5480 Nazi Germany Cr. 3-4
Hitler and Nazi Germany. Topics include: impact of World War I, the Weimar Republic, the growth of the Nazi party, the seizure of power, internal and foreign policies, and the war experience. Offered Every Other Year.
Equivalent: HIS 7480

HIS 5490 History of Russia and Eurasia to 1917 Cr. 4
Interaction of cultures, politics and societies of Russia and Eurasia to the Russian Revolution of 1917. Offered Intermittently.

HIS 5495 History of the Russian Revolution Cr. 3-4
The Russian Revolution, including fall of tsarist Russia, reign of the Provisional Government, and establishment of power by the Communist Party. Offered Yearly.

HIS 5500 The Soviet Union Cr. 4
Bolshevik seizure of power, collectivization of agriculture and forced-draft industrialization, Nazi German invasion, Khrushchev and deStalinization, predominance of the new middle class, nationality problems, and problems of detente. Offered Every Other Year.

HIS 5530 History of World War I and II: A Social and Political History of Two World Wars Cr. 4
Provides an in-depth and truly global look at the history of both wars. Topics will include the political events leading up to the wars and their political aftermath, as well as their short- and long-term effects on societies. Offered Every Other Year.

HIS 5535 History of Terrorism Cr. 3
Examines terrorism from its beginnings until its most recent manifestations. It starts with a critical examination of the term terrorism itself, but the main focus of this course will not be on discussions about the concept and its various meanings, but rather on high profile instances of what is commonly referred to as terrorism. The course will take a transnational approach and engage in comparative history. Offered Every Other Year.

HIS 5540 World Environmental History since 1900 Cr. 4
This course examines the transformation of the relationship between human society and the natural environment in global context since 1900. Available for undergraduate credit only. Offered Fall.
Equivalent: GLS 5540

HIS 5550 Britain 1485-1714 Cr. 4
Impact of religious, political and social change on British people during sixteenth, seventeenth, and early eighteenth centuries. Offered Every Other Year.

HIS 5555 Britain in the Age of Empire Cr. 4
History of Britain and the rise of the British Empire, 1700-1800, focusing on political, economic, intellectual, and social developments. Special emphasis on shifting notions of what it meant to be ""British"" during the period. Offered Every Other Year.

HIS 5556 History of Modern Britain Cr. 4
Modern British history from 1815 to the present day: political, economic, intellectual, and social developments, in Britain itself and across the Empire. Offered Every Other Year.

HIS 5585 Studies in Science, Technology, and Society Cr. 3
Introduction to the field of Science and Technology Studies; how conflicts about science and technology are generated and resolved; how broader societal institutions help shape, and are shaped by, science and technology. Offered for graduate credit only. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 5670 Modern American Cities Cr. 3
History of U.S. cities since World War II. Topics include suburbanization, deindustrialization, gentrification, and globalization. Offered Intermittently.
Equivalent: UP 5670

HIS 5832 History Practicum Cr. 3
The History Practicum enables career exploration, facilitates professional development, and introduces students to what they can do with a history or public history degree. The course will explore how an undergraduate degree in history or public history can translate into a range of professional opportunities. It will investigate what it means to apply historical knowledge in a variety of settings; and it will help students think about how to build skills required to find gainful employment in their chosen field(s). Students will leave the course with knowledge about a range of fields where they can apply their history training, and a portfolio of materials they can use when they apply for jobs. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

HIS 5855 Pre-Modern Japan Cr. 4
Japanese history from its mythical origins to early nineteenth century; political, economic, social, cultural developments. Offered Every Other Year.
Equivalent: ASN 5855

HIS 5865 Modern Japan Cr. 4
Japanese history from the early nineteenth century to the present; emphasis on political, economic, and social developments. Offered Yearly.
Equivalent: ASN 5865

HIS 5875 Gender in Modern East Asia Cr. 4
History of gender in China, Japan, and Korea, with topics to include Confucianism, the state's role in gender construction, nationalism, imperialism, marriage, family, labor, sexuality, and feminism. Offered Every Other Year.
Equivalent: ASN 5875, GSW 5875

HIS 5960 Globalization, Social History and Gender in the Arabian Gulf Cr. 3
Social history of the Arabian Gulf (especially Bahrain, Qatar, and the UAE) in the age of globalization. Contemporary history with special emphasis on gender relations as an index of current social developments in the region. Offered Every Other Year.
Equivalent: NE 5000

HIS 5991 Directed Study: Salford - WSU Exchange Cr. 3-9
Directed study at University of Salford, England. Offered for undergraduate credit only. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

HIS 5993 Writing Intensive Course in History Cr. 0
Must be selected in conjunction with HIS 5996: Junior/Senior Research Seminar. For HIS 5996, students write a research paper of approximately twenty typed pages, including footnotes and a bibliography, and using primary sources. A C or higher on that paper is required to earn a Satisfactory for HIS 5993 and to fulfill the University General Education Writing Intensive requirement for the History major and History Honors major. Offered Fall, Winter.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major in History or History Honors.

HIS 5994 Capstone Seminar in Public History Cr. 3
This Capstone Seminar is the final required course in undergraduate training in Public History. It is an opportunity for students to carefully assess the evolution of Public History as a discipline and to develop and convey their own interpretation of its purpose and possibilities. This seminar also provides students the occasion to demonstrate the knowledge and skills they have developed as a Public History major including research, analysis, project management, and engagement with various audiences. Offered Winter.
Prerequisites: HIS 3000 with a minimum grade of C and HIS 3001-6999 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major, minor, or concentration in History, History Honors or Public History; enrollment limited to students in a Bachelor of Arts degree.

HIS 5995 Honors Seminar Cr. 3
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in History Honors; enrollment limited to students in a Bachelor of Arts degree.

HIS 5996 Junior or Senior Research Seminar Cr. 3
Examines what historians have written about a particular topic, theme, or period, along with what has shaped their interpretations. Students will also conduct independent research on a self-chosen aspect of that topic, theme, or period using primary sources and construct a paper based on that research. Offered for undergraduate credit only. Offered Intermittently.
Prerequisites: HIS 3000 with a minimum grade of C and HIS 3001-6999 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

HIS 6000 Studies in Comparative History Cr. 2-4
Topics to be announced in Schedule of Classes. Offered Every Other Year.

HIS 6440 Studies in American Medicine in the Twentieth Century Cr. 3
Major historical benchmarks in the making of the medical system in the U.S., including developments in medicine and medical knowledge, as well as social and political factors that influenced their reception and implementation. Offered for graduate credit only. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 6540 Jane Austen's World Cr. 3
Jane Austen's novels have generated great—and well deserved—interest in the world she inhabited. Austen wrote during one of the most turbulent periods of British and World history. This class will place her writings into a historical and cultural context. Over the course of the semester we will address a number of questions that shaped Austen's era and resonate for our own: How does her work interpret and reflect changing views of love and family? How do they reflect rising consumer capitalism and new styles of fashion? What do they say about women's rights to property? About the Napoleonic Wars and the British slave trade? How can novels help us understand the conflicts of an era? Our course will deepen our understanding of British, and global, society and culture. Offered Every Other Year.

HIS 6550 Readings in Shakespeare's England: Renaissance, Reformation, Revolution Cr. 4
The sixteenth and seventeenth centuries in English history are often looked upon as a cultural "golden age"—the days of King Henry VIII, Queen Elizabeth, William Shakespeare, Francis Drake, Walter Raleigh, Isaac Newton, and other larger-than-life figures. In fact, for those living through this "early modern period," it was also a time of great uncertainty, upheaval, and even violence. This class will explore the key events, issues, and personalities of this tumultuous era. We will focus in particular on the Protestant Reformation, and on the clash between the monarchy and Parliament over how much power a king should command. We'll also examine the lives of everyday Englishmen and women, the age of exploration and colonization in the New World, and important cultural developments such as the rise of Shakespearean theater and the Scientific Revolution. The events, conflicts, settlements, and innovations of early modern England continue to shape our world. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 6780 Introduction to Records and Information Management Cr. 3
Management of information, including records creation, records inventory and appraisal, retention/disposition scheduling, filing systems, maintenance of inactive records, micrographics, vital records protection, and electronic impact on records management. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 6780

HIS 7010 Readings in Colonial North America Cr. 4
Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7020 Readings in Revolutionary America Cr. 4
Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7070 Readings in Contemporary American History: 1945 to the Present Cr. 4
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7130 Readings in American Foreign Relations Since 1933 Cr. 4
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7160 Readings in American Legal Culture to 1857 Cr. 4
The emergence of distinctively Anglo-American legal cultures in the Atlantic basin and then in North America, from early exploration and settlement until the early stages of Civil War. Special attention is paid to law's ongoing relationship to state making, the shifting terrain of citizenship, the emergence of capitalism, and the construction within society of racial, gendered, and class distinctions. Not a prerequisite for HIS 7170. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students.

HIS 7200 Readings in Women, Gender, and Sexuality in US History Cr. 3
An advanced graduate course that explores the history of women in the United States and the role of gender and sexuality in shaping women's and men's experience and identity and the approaches to its study. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7231 The Conquest in Latin America Cr. 3
Varying perspectives on European conquests in Latin America. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7261 American History and Memory Cr. 3
An examination of the ways different groups and institutions remember and forget U.S. history. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

HIS 7290 Readings in American Labor History Cr. 4
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7300 Readings in the History of American Capitalism Cr. 4
Advanced graduate course in the history and development of American capitalism from the colonial period through the 2008 financial crisis. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7330 Readings in the History of Ancient Greece Cr. 3
Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7340 Readings in the History of Ancient Rome Cr. 3
Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7345 Readings in Rome and the Barbarian Cr. 3
The relationship between ancient Rome and the pre-state societies that existed beyond its frontiers from about 300 B.C.E to about 500 C.E. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7360 Readings in the Early Middle Ages: 300-1000 Cr. 3
Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7370 Readings in the High Middle Ages: 1000-1300 Cr. 3
Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7385 Readings in the History of Christianity to the Reformation Cr. 3
Survey of Christianity from Jesus to the Reformation. Balanced coverage of Christianity in Europe, Asia, and Africa. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7407 Readings in The Scientific Revolution Cr. 3
Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7410 Readings in the French Revolution and Napoleon Cr. 4
This course will explore France's complex revolutionary experience both in the metropole and in its eighteenth century colonial territories. It will compare the experience of the Revolution in France to that in Haiti to consider global impacts and experiences of political, social and cultural revolution. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7435 Beyond Human Nature: The New Sciences of Cultural Evolution Cr. 3
Examines the history of debates in biology and the social sciences over the biological roots of human nature and culture. Traces the emergence of hybrid, interdisciplinary approaches since the 1970s employing the concept of cultural evolution, understood as distinct from genetic evolution. Considers how cultural evolution theory sheds new light on the historical transformation of egalitarian foraging societies into complex, hierarchical states after the development of agriculture, tracing their development to the present day. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7440 Readings in Twentieth Century Europe Cr. 4
Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7465 Readings in the History of the Holocaust Cr. 4
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7470 Readings in Modern Germany Cr. 3-4
History of Twentieth-century Germany. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7480 Readings in Nazi Germany Cr. 3-4
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7495 Readings in the History of the Russian Revolution Cr. 3-4
The Russian Revolution, including fall of tsarist Russia, reign of the Provisional Government, and establishment of power by the Communist Party. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7500 Readings in the Soviet Union Cr. 4
Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7530 Readings in the History of World War I and II: A Social and Political History of Two World Wars Cr. 4
Provides an in-depth and truly global look at the history of both wars. Topics will include the political events leading up to the wars and their political aftermath, as well as their short- and long-term effects on societies. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7535 Readings in the History of Terrorism Cr. 3
Examines terrorism from its beginnings until its most recent manifestations. It starts with a critical examination of the term terrorism itself, but the main focus of this course will not be on discussions about the concept and its various meanings, but rather on high profile instances of what is commonly referred to as terrorism. The course will take a transnational approach and engage in comparative history. Offered Every Other Year.

HIS 7540 Readings in World Environmental History Cr. 4
This course examines the transformation of the relationship between human society and the natural environment in global context since 1900. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7550 Readings in Britain: 1485-1714 Cr. 4
Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7555 Readings in Britain in the Age of Empire Cr. 4
Readings in the history of Britain and the rise of the British Empire, 1700-1880, focusing on political, economic, intellectual, and social developments. Special emphasis on shifting notions of what it meant to be ""British"" during the period. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7556 Readings in the History of Modern Britain Cr. 4
Readings in modern British history from 1815 to the present day: political, economic, intellectual, and social developments, in Britain itself and across the empire. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7670 Modern American Cities Cr. 3
History of U.S. cities since World War II. Topics include suburbanization, deindustrialization, gentrification, and globalization. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7685 Practicum: Archives Cr. 3
On-site experience in archival center under direction of professional librarian or archivist and supervision of faculty member. Theory and competencies relevant to the environment. Offered Every Term.
Prerequisite: INF 6010 with a minimum grade of C and INF 6080 with a minimum grade of C and INF 6120 with a minimum grade of C and INF 6210 with a minimum grade of C and INF 7040 with a minimum grade of C and INF 7710 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 7970

HIS 7745 Archives and Libraries in the Digital World Cr. 3
Overview of electronic tools and the role of digital process in libraries and archives. Offered Spring/Summer.
Prerequisite: INF 6010 with a minimum grade of C or INF 7710 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 7740

HIS 7810 Introduction to Archival and Library Conservation Cr. 3
Fundamentals of archival and library conservation problems and methods essential for effective preservation management of paper and associated materials. Offered Spring/Summer.
Prerequisite: INF 6010 with a minimum grade of C or INF 7710 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 7750

HIS 7820 Description and Access for Archives Cr. 3
Investigation of description of archival materials emphasizing the electronic technologies and standard practices. Offered Yearly.
Prerequisites: INF 7710 with a minimum grade of C (may be taken concurrently) or HIS 7840 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 7780

HIS 7830 Methods and Research in History Cr. 3
Methods and tools of research and documentation. Use of aids and guides. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7832 History Practicum Cr. 3
Enables career exploration for graduate students, facilitates professional development, and introduces students to the basics of teaching history. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7835 Public History Cr. 3
Theory and practice of public history, including research and interpretation for popular audiences. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7840 Archival Administration Cr. 3
Basic training in archival methods. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 7710

HIS 7855 Memory and History Cr. 3
Introduction to the study of collective and public memory in history; interdisciplinary theories and approaches; case studies. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7860 Oral History: A Methodology for Research Cr. 3
Techniques of gathering data from individuals for use in research, classroom teaching, historical, cultural or other contexts. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 7770

HIS 7880 Cultural Heritage Institutions: Management and Leadership Cr. 3
The operation of public and private historical agencies, archives and museums. Determination of agency priorities, problems of staffing and finance, governmental regulations, community relations, and professional ethics. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 7885

HIS 7890 Administration of Audio Visual Collections Cr. 3
Basic course in the fundamentals of administering a visual collection: evaluation, organization, and control of visual collections in archives, librarians, historical agencies, and museums. Offered Winter.
Prerequisite: HIS 7840 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 7730

HIS 7990 Directed Study Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

HIS 7994 Digital History Seminar Cr. 3
Explores both the opportunities and the challenges of digital history. Throughout the semester, students work in groups to construct a digital project for the Reuther Archive in which they will digitize sources and create content based on distinct parts of the Reuther's collection. The end goal is a digital exhibit that will both make these materials more accessible and help communicate their significance for the general public. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.

HIS 7998 Internship in Public History Cr. 1-3
Professional experience in public history under the supervision of a public history practitioner and departmental advisor. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

HIS 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

HIS 8010 Seminar in Early American History Cr. 3
From first contact between Europeans and Native Americans through the American Revolution. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

HIS 8030 Seminar in Modern American History Cr. 3
Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

HIS 8050 Seminar in Legal History Cr. 3
Research seminar in legal history. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Equivalent: LEX 8386
Repeatable for 6 Credits

HIS 8060 Seminar in North American Labor History Cr. 3
Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

HIS 8150 Seminar in the History of Gender, Women and Sexuality Cr. 3
Research seminar in the History of Gender, Women, and Sexuality. Topics vary by Term. Offered Yearly.
Prerequisites: HIS 7830 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: GSW 8150
Repeatable for 6 Credits

HIS 8235 Seminar in Early Modern European History Cr. 3
Historiographical, methodological and epistemological issues in doing research in early modern European history. Readings, discussions, focused research. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

HIS 8240 Seminar in Modern European History Cr. 3
Offered Every Other Year.
Prerequisite: HIS 7830 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

HIS 8310 Seminar in World History Cr. 3
Concepts, methodologies and theories of world history; readings, discussions, and written critiques of various schools in the field. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

HIS 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

HIS 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

HIS 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

HIS 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: HIS 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

HIS 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: HIS 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

HIS 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: HIS 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

HIS 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

HMB - Healthcare MBA

HMB 7060 Emerging Technology in Healthcare Cr. 3
This course will cover three critical areas of the Healthcare Information Systems: fundamental technologies, management strategies related to economic drivers and legal themes, and current and new issues of healthcare information technology (HIT). The focus of the class will be on the high level, strategic issues about how you can successfully harness the strategic and health benefits from the tools of healthcare information technology (HIT) systems in your organization. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

HMB 7090 Healthcare Supply Chain Management Cr. 3
Introduction to industries and disciplines within healthcare supply chain management. Topics include medical device manufacturing, pharmaceuticals, lean principles in healthcare, quality management, logistics, hospital materials management, purchasing and disaster preparedness. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

HON - Honors

HON 1000 The City: Changing Detroit Cr. 4
Satisfies General Education Requirement: Civic Literacy, Diversity Equity Incl Inquiry
Honors 1000 is the first half of the Honors Foundation Sequence. The course explores the history and development of the city of Detroit, including the challenges of de-industrialization and segregation, and guides students through the steps of civic engagement including how to identify and specify social problems, formulate workable solutions and advocate effectively for their implementation. Offered Fall.

HON 1110 Passport to Success Cr. 1
Satisfies General Education Requirement: Wayne Experience
Passport to Success is a participatory-learning course designed to prepare students for life in college and life in Detroit designed to use the personal exploration as a frame through which students develop (or improve) essential college-level skills. Offered Intermittently.

HON 2000 Foundation Seminar Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Social Inquiry
Honors foundation seminars are rigorous small, seminar-style classes of incoming Honors students designed to help them deepen their understanding of scholarly inquiry and important issues with relevance to the Detroit metropolitan area. The object of the course is to prepare students to function well in a college setting and in the broader world, using the tools of scholarship to explore important questions of everyday life. Offered Yearly.

HON 3000 Field Learning Cr. 0
Required for all students graduating with University Honors. Students are involved in community-based education and promotion of civic engagement. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.

HON 4200 Seminar in Philosophy and Letters Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Analysis of meanings given to human experience through study of philosophy or letters. Offered Yearly.
Repeatable for 9 Credits

HON 4220 Seminar in Life Science Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
Analysis of aspects, methods, and important issues in various areas of the life sciences. Offered Yearly.
Repeatable for 9 Credits

HON 4230 Seminar in Physical Science Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
Analysis of modern theory and data, implications and possibilities in the physical sciences. Offered Yearly.
Repeatable for 9 Credits

HON 4250 Seminar: Global Perspectives on Historical Studies Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Studies of periods of history in which there has been major transition or change. Offered Yearly.
Repeatable for 9 Credits

HON 4260 Seminar in Foreign Culture Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Humanistic or social science investigation of peoples and institutions in other cultures. Offered Yearly.
Repeatable for 9 Credits

HON 4280 General Honors Seminar Cr. 3
In-depth exploration of important concepts and approaches in liberal studies. Topics to be announced in Schedule of Classes. Offered Yearly.
Repeatable for 9 Credits

HON 4930 Detroit Fellows Tutoring Project Cr. 2-4
Community-based service-learning project designed to improve the reading skills of elementary school students through one-on-one mentoring. Monthly seminar sessions to discuss progress and techniques required. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 16 Credits

HON 4940 Service-Learning Internship Cr. 1-3
Service-learning project with a local community partner. Collateral reading, written work, arranged conferences with faculty supervisor. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

HON 4950 Wayne Med-Direct Seminar Cr. 1
Explorations of various dimensions of health care through seminars with healthcare experts and leaders in the field, group/individual research projects, and experiential learning. This course is intended for students in the Wayne Med-Direct program. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 8 Credits

HON 4980 University Scholars Seminar Cr. 1
International learning and experiences of designated scholarship students in the Honors College. Reflection and presentation on specific topics related to the local, regional, national and international landscapes. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 8 Credits

HON 4990 Honors Directed Study Cr. 1-4
Offered Yearly.
Repeatable for 8 Credits

HON 4998 University Honors Thesis Cr. 3-6
Independent research project, essay, or creative project. Students are responsible for identifying their own research project and full-time faculty member. At the end of the first semester a deferred grade of Y will be assigned, with a grade change processed at the completion of the thesis in a subsequent semester. Offered Every Term.

HPE - Health and Physical Education

HPE 6120 Sports I Cr. 3
This course is designed for students to learn sports across three different categories: tag, new/wall, and invasion games. It will include skill/techniques, instructional strategies, basic concepts, as well as planning for effective teaching in the sports. Offered Every Other Year.

HPE 6130 Sports II Cr. 3
This course is designed for students to learn sports across two different categories: target, fielding/striking games. It will include skill/techniques, instructional strategies, basic concepts, as well as planning for effective teaching in the sports. Offered Every Other Year.

HPE 6140 Fitness and Dance Cr. 3
Introduces students to health and skill-related fitness concepts as well as different genres of dance. Additionally, skill competencies will be sought in both health-related fitness and dance. Students will work towards mastery of skills as well as how to begin instructing children, youth, and adolescents, in group fitness and dance environments. Offered Winter.

HPE 6150 Adventure and Outdoor Pursuits Cr. 3
Provides an introduction to instructing youth in adventure activities and outdoor pursuits. Includes basic principles and concepts of adventure education as well as appropriate instructional strategies. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Education.

HPE 6160 Aquatic Leadership Cr. 3
This course is designed to prepare students for leadership responsibilities in the area of aquatics. It will emphasize a broad range of aquatic experiences and teaching methodologies and will include swimming and rescue skills necessary to complete certification as an American Red Cross Water Safety Instructor and Lifeguard. It will also include program development, risk management, and staff management. Offered Winter.
Restriction(s): Enrollment limited to students in the College of Education.

HPE 6200 Management and Instruction in Health and Physical Education Cr. 3
This course is the study of effective teaching and instructional practices in health and physical education. It will include the study of the learning process, factors that influence the learning process, effective teaching skills, effective task presentation and content development, and management of and motivation in the learning environment. Students will also investigate teaching styles that lead to effective instruction. Offered Fall.

HPE 6210 Curriculum and Instruction in Health and Physical Education Cr. 3
The purpose of this course is to introduce the student to a variety of curriculum models in health and physical education and to provide the student with experience in long-range planning, developing, and evaluating health and physical education curriculum. Emphasis will be on planning lessons that are standards-based, developmentally-appropriate, and progressive in nature. Candidates will evaluate completed curriculums using an existing curriculum evaluation tool. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.

HPE 6220 Technology in Health and Physical Education Cr. 3
Current best practices for the use of technology in health and physical education and physical activity programming. Course includes how to use technology including apps, mobile devices and online assessment tools to implement instruction and evaluation. Offered Winter.
Restriction(s): Enrollment limited to students in the College of Education.

HPE 6230 Socio-cultural Issues in Physical Activity Cr. 3
Contemporary and historical perspective on socio-cultural and philosophical issues that influence American youth and instruction in a physical activity setting, including race, gender, sexuality, obesity, and urbanization. Offered Fall.

HPE 6400 Physical Activity in Pediatric Disabilities Cr. 3
This course is designed to discuss historical and contemporary issues in adapted physical activity including evidence-based interventions; techniques for adapting the environmental conditions; and designing, implementing, and evaluating individualized programs for individuals with disabilities. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.
Repeatable for 6 Credits

HPE 6410 Teaching Adapted Physical Activity and Sport Cr. 3
Teaching and coaching of developmental, recreational, and competitive sports across school and community-based settings. Includes assessment, teaching, conditioning, and coaching strategies for individuals with disabilities as well as administrative/management strategies. Offered Winter.
Repeatable for 6 Credits

HPE 6420 Teaching Aquatics to Special Populations Cr. 3
Developing and implementing swimming and water-related activities designed to meet the needs of special populations including water orientation, swim instruction, fitness instruction, facilities and equipment considerations, and research on adapted aquatics. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.
Repeatable for 6 Credits

HPE 6430 Physical Activity Assessment in Special Populations Cr. 3
Appropriate and accurate selection, administration and interpretation of assessment results for adapted physical education purposes. Includes use of assessment results to design effective adapted physical education programs and participate in the IEP process. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.
Repeatable for 6 Credits

HPE 6440 Leadership Training and Practicum in Adapted Physical Education Cr. 3
Directed fieldwork placement in teaching physical education to students with special needs in schools. Required for State of Michigan Approval as a Teacher of Students Requiring Adapted Physical Education (SP Endorsement). Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.
Repeatable for 6 Credits

HPE 6510 Elementary Health and Physical Education Methods Cr. 3
Developmental approach to teaching elementary physical education and health in the schools. Beginning movement concepts, Michigan Health Education Model, and fundamental motor skills that are developmentally appropriate for children to participate in games, gymnastics, dance, and fitness activities. Curriculum design and implementation of activities in the practicum application. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.

HPE 6520 Secondary Physical Education Methods Cr. 3
The purpose of the course is to prepare students for secondary instruction of physical education and includes authentic classroom experience, planning for instruction in physical education with emphasis on unit and lesson planning, assessment, and developmental curriculum planning. It is meant to help future secondary physical education teachers know what to teach in the physical education classroom and how to teach it. Offered Winter.
Restriction(s): Enrollment limited to students in the College of Education.

HPE 6600 Student Teaching and Seminar Cr. 10
Prepares students for initial teaching certification through K-12 student teaching experience and seminars. The regular seminar will cover a variety of issues and topics related to teaching methods and becoming an effective teacher. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Education.

IBS - Interdisciplinary Biomedical Sciences

IBS 7015 Interdisciplinary Cell and Molecular Biology Cr. 6
The fundamental biochemistry, molecular biology, and function of eukaryotic cells. Includes study of the structure and purpose of the basic components of eukaryotic cells; how eukaryotic cells obtain and utilize energy, process information, and replicate or self-destruct; and examples of how specific cell types contribute to multicellular biological processes and systems in normal and disease states. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree; enrollment limited to students in the School of Medicine.

IBS 7030 Functional Genomics and Systems Biology Cr. 2
Exploration of several new technologies for determining gene function on a genome-wide scale and for integrating information into a systems-level view of biological processes. Offered Winter.
Prerequisite: IBS 7015 with a minimum grade of C or MGG 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree; enrollment limited to students in the School of Medicine.
Equivalent: MGG 7030

IBS 7050 Molecular Neuropsychopharmacology Cr. 2
Sensory, motor, and integration of nervous systems, including anatomic and cellular organization, systemic and cellular-molecular functions, and diseases. Offered Winter.
Prerequisites: IBS 7015 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree; enrollment limited to students in the School of Medicine.

IBS 7090 Fundamentals of Immunology Cr. 2
Cellular-molecular and systemic functions, and diseases of the immune system. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IM 7010

IBS 7100 Biomedical Neuropharmacology Cr. 2
General principles, including cellular and molecular basis of drug action with special emphasis on neuronal systems. Offered Winter.
Prerequisites: IBS 7015 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate or Medical level students; enrollment limited to students in the School of Medicine.

IBS 7140 Foundations of Machine Learning and Artificial Intelligence with Python, Scikit-Learn, and PyTorch Cr. 3
Introduction to basic concepts of linear algebra and their application to data analysis. MATLAB and PYTHON programs are introduced and employed as tools for practical implementation of computational methods. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BMB 7140

IBS 7141 Computational Modeling of Cellular Metabolism Cr. 3
This course introduces medical and graduate students to computational systems biology, focusing on metabolic network analysis using Python-based tools. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BMB 7141

IBS 7320 Protein Structure and Function Cr. 3
Structure, function, and design of proteins: architecture, function, regulation, assembly and evolution of proteins and protein complexes; theory and techniques of kinetic analysis; newer techniques of protein design and engineering. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BMB 7320

IBS 7330 Advanced Molecular Biology Cr. 2
Modern topics in biochemistry, including nucleic acid dynamics, genomic structure, DNA replication and repair, transcription, RNA processing, translation and protein synthesis. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

IBS 7690 Principles and Techniques of Reproductive Biology Cr. 3
Principles and techniques in reproduction including endocrinology, gametogenesis, fertilization, implantation, embryogenesis, stem cell determination, pregnancy and parturition. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PSL 7690

IE - Industrial Engineering

IE 1000 Industrial Engineering & Systems Thinking Cr. 3
This course introduces the fundamentals of industrial engineering and systems thinking through a hands-on, project-centric approach. Working in teams, students will develop a comprehensive solution for a chosen real-world scenario. Students will progress through key phases—from market research and stakeholder analysis to concept development, refinement, and the creation of an integrated operational plan—while integrating domain-specific challenges such as logistics, facility design, or energy production. Examples of project scenarios include a) foreign retailer planning to enter an emerging market; b) designing and setting up a new hospital in a community (addressing location, size, facilities design, supported specialties, etc.); and c) establishing an alternative energy production network (addressing market interest, energy mix, locations, production capacity, etc.). Offered Fall.
Restriction(s): Enrollment limited to students with a class of Freshman or Sophomore; enrollment limited to students in the College of Engineering, Liberal Arts & Sciences or School of Business.

IE 3120 Work Design Cr. 3
Role of the human as an element of the work environment. Traditional issues of work standards, productivity analysis and occupational safety are introduced. Examination of functional and organizational role of the worker; impact of emerging computer-based technologies on work design and implementation strategies is discussed. Offered Fall.
Prerequisite: BE 2100 with a minimum grade of C
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

IE 3450 Manufacturing Processes I Cr. 3
A study of the field of manufacturing processes from a mechanical engineering design standpoint. Topics include: processing of metals, polymers and ceramics, and computer-aided manufacturing. Offered Fall, Winter.
Prerequisites: BE 1500 with a minimum grade of C-, ME 2420 with a minimum grade of C-, BE 1300 with a minimum grade of C-, and BE 1310 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $25
Equivalent: ME 3450

IE 4250 Data Science and Analysis Cr. 3
This course is designed to explore the must-knows of data analysis and data science for engineering students. As data analysis focuses on processing and performing statistical analysis to solve problems for well-defined questions, data science complements it by fixating on unearthing answers to the questions that are not well-defined. This course not only covers how to perform descriptive statistics, design of experiment, and hypothesis testing for drawing conclusions, but also introduces how to apply machine learning and predictive analytics to extract critical information from the datasets. This course equips students with methods which are the key tools that enable engineers with descriptive as well as predictive methods to identify and deal with viability of measurements in stochastic environments. Offered Winter.
Prerequisite: BE 2100 with a minimum grade of C
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

IE 4260 Principles of Quality Control Cr. 3
Statistical quality control including process capability, control charts, and acceptance sampling procedures. Procedures for measurement of dimensional tolerance are introduced. Computer-based data collection and analysis. Offered Fall.
Prerequisite: BE 2100 with a minimum grade of C
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

IE 4310 Production Control Cr. 3
The design of production planning and control systems. Materials management, forecasting, planning, scheduling of production systems, the planning and scheduling for large scale projects and introduction to the design of computerized materials management systems. Applications of operations research models to production control problems. Offered Winter.
Prerequisite: ENG 3050 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

IE 4330 Facilities Design Cr. 3
Design of manufacturing, warehouse and material handling facilities. Use of analytic and computer-aided methods in the facilities design process. Offered Winter.
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

IE 4355 Product Engineering Cr. 3
Current principles and processes of product engineering. Use of integrated product engineering processes and methods. Offered Winter.
Prerequisite: BE 2100 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.

IE 4420 Systems Simulation Cr. 3
Systems modeling and discrete event simulation. Methodology applied to analysis and design of a broad range of systems including both production and service systems. Computer assignments and a term project are required. Offered Yearly.
Prerequisites: BE 1200 with a minimum grade of C-, BE 2100 with a minimum grade of C, and (BE 1500 with a minimum grade of C- or BE 1600 with a minimum grade of C-)
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

IE 4560 Operations Research Cr. 3
An introduction to the philosophy of operations research. Formulation of linear programming models and their solution. Duality and sensitivity analysis. The transportation model. Introduction to probabilistic modeling and applications of queueing models. Offered Fall.
Prerequisite: BE 2100 with a minimum grade of C and MAT 2150 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

IE 4710 Labor Relations in Manufacturing Cr. 3
Knowledge and skills in administering labor agreements. Technical elective for Production Leadership Management Program (PMLP) students. Offered Winter.
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment is limited to Undergraduate level students.

IE 4800 Engineering Design I: Project Management Cr. 2
Project selection, team building, and methodological preparation required for Engineering Design Project II. Offered Every Term.
Prerequisites: IE 3120 with a minimum grade of C-, IE 4250 with a minimum grade of C-, IE 4850 with a minimum grade of C-, and 2 of (IE 4420 with a minimum grade of C- (may be taken concurrently), IE 4330 with a minimum grade of C- (may be taken concurrently), or IE 4560 with a minimum grade of C- (may be taken concurrently))
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.

IE 4850 Engineering Economy Cr. 3
Economic analysis of engineering projects. Selection of appropriate financial parameters (e.g., interest rates) and methods of analysis for depreciation, tax considerations, and use of accounting data for comparison among investment options. Offered Fall.
Prerequisite: BE 2100 with a minimum grade of C
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Equivalent: CE 4850

IE 4880 Engineering Design II Cr. 2
Intensive design experience defined and executed by the student. Requires synthesis and application of skills and knowledge gained in the program. Offered Winter, Spring/Summer.
Prerequisites: IE 4260 with a minimum grade of C- (may be taken concurrently), IE 4310 with a minimum grade of C- (may be taken concurrently), IE 4330 with a minimum grade of C- (may be taken concurrently), IE 4420 with a minimum grade of C- (may be taken concurrently), IE 4560 with a minimum grade of C- (may be taken concurrently), and IE 4800 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.

IE 4990 Directed Study Cr. 1-4
Supervised study and instruction in a field selected by the student. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Computer Science, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Repeatable for 4 Credits

IE 4991 Undergraduate Internship Cr. 1-2
The objective is to prepare students for roles in industrial and systems engineering by providing students with the opportunity to gain professional experience while engaging in rigorous classroom academics. Students who select this course can only perform work relevant to industrial engineering, therefore, some jobs may not be eligible for internship credit; the work must support the BSIE curriculum. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.
Repeatable for 3 Credits

IE 5490 Creative Problem Solving in Design and Manufacturing Cr. 3
Concepts of laws of natural development of engineering systems. Algorithm for inventive (creative) problem-solving (AIPS-85). Creative use of physical and geometrical effects in design of mechanical and manufacturing systems. Concepts of strength, stiffness, vibratory effects, reliability in mechanical design. Offered Yearly.
Equivalent: ME 5470, SYE 5470

IE 5995 Special Topics in Industrial Engineering Cr. 1-4
Special subject matter in industrial engineering. Topics to be announced in Schedule of Classes . Offered Intermittently.

IE 6000 Digital Automation Cr. 3
Fundamentals of digital control and logic; integration and automation solution technologies (barcode systems, vision systems, etc.); data acquisition. Offered Fall.

IE 6005 Automotive Engineering Statistics Cr. 3
Introduction to probability and statistics for engineering students: analysis of random component in problems, understanding probability and statistics, opportunities for application, analysis of data using statistical software. Offered for graduate credit only. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

IE 6010 IoT and Edge AI Programming Cr. 3
Learn sensor programming on an embedded device; use Wi-Fi, Bluetooth and MQTT to implement data streaming, remote control, and multi-device networking; explore the IoT data processing life cycle which includes capturing, cloud storage, and data analysis; develop and deploy machine learning models for use in mobile and edge computing environments. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

IE 6020 Digital Twinning and Immersive Modeling Cr. 3
This course presents an introduction to virtual and augmented reality (VR and AR) technologies, with an emphasis on designing and developing interactive virtual and augmented reality experiences. Learn the strengths and limitations of VR/AR technology and the need for consideration of human factors and cognitive issues. Beyond immersive technology, the course also covers Digital Twins, as a response to the increasing digitalization of product development, production, and products themselves. Offered Every Other Fall.

IE 6040 Simulation in Robotics Using ROS Cr. 3
Robotic systems are increasingly used for various tasks and applications. The applications include transportation safety, search and rescue, space exploration, and military operations, to name a few. ROS, the Robot Operating System, is an open-source framework used to direct the robots to perform tasks. ROS provides a software infrastructure for people who are interested in building and using robots. This framework is commonly used by people to share and collaborate on code and common ideas. Offered Winter.

IE 6125 Human Factors Engineering Cr. 3
Current methods and topics in engineering research on human capabilities and limitations as a system component. Advanced analysis, modeling and design of human-centered systems. Offered Winter.

IE 6210 Applied Engineering Statistics Cr. 3
An applied statistics course for students in engineering that will build upon introductory statistical knowledge. Students will learn to identify the phenomena they would like to study, design, and run experiments; collect data and analyze it by applying statistical tools such as multiple regression, ANOVA, and non-parametric statistical tools; and report on the statistical results and their implication to engineering phenomena. No credit for AGRADE undergraduates after taking IE 4250. Offered Fall, Winter.

IE 6220 Value Engineering Cr. 3
Resource management; systematic approach to solving problems and making decisions; forcing latent capabilities to be applied to challenging assumptions; application of unbiased logic techniques to produce superior results. Offered Spring/Summer.

IE 6240 Quality Management Systems Cr. 3
Design of quality management systems. Topics include: QFD, quality planning, business operating systems, TQM, standards, and auditing. Quality management tools such as PDCA and root case analysis. Offered Winter.

IE 6255 Quality Engineering Cr. 3
Quality Engineering means achieving quality by design, so this course covers several important methods in supporting engineering design activities. These methods include quality function deployment, axiomatic design, Theory of Inventive Problem Solving (TRIZ), Taguchi method (robust design) and tolerance design. Offered Fall, Winter.
Prerequisite: IE 6210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

IE 6270 Engineering Experimental Design Cr. 3
The design of engineering experiments for manufacturing process analysis, human factors experimentation, societal systems analysis and life testing; basic experimental design models, blocking, factorial experiments, nested designs, covariance analysis, response surface analysis, estimation of effects. Offered Fall.
Prerequisite: IE 6210 with a minimum grade of C or IE 4250 with a minimum grade of C-

IE 6275 Reliability Estimation Cr. 3
The course is designed for graduate students specializing in quality engineering. These individuals play a significant role in designing and developing new products and manufacturing systems and processes. Topics include: reliability measures, failure distributions, reliability block diagrams, reliability estimation using exponential and Weibull distributions, sequential life testing, test planning, and Bayesian reliability. Offered Fall.
Prerequisite: IE 4250 with a minimum grade of C- or IE 6210 with a minimum grade of C

IE 6290 Nonparametric Statistics Cr. 3
The focus is on standard nonparametric procedures useful for the analysis of experimental data. One-sample, two-sample, matched pairs, one-way layout, and two-way layout procedures are covered. Tests for lack of independence, tests of randomness, and goodness-of-fit tests are also covered. Applications are emphasized, but theory is not completely neglected. State-of-the-art software for exact nonparametric inferences is to be used throughout the semester. Offered Spring/Summer.
Prerequisite: IE 6210 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

IE 6310 Lean Operations and Manufacturing Cr. 3
Fundamental theories and concepts in lean manufacturing, six-sigma, mistake proofing, problem solving, process management. Students develop competency in identifying causes and sources of waste in manufacturing, industrial, and business operations. Offered Fall, Winter.
Prerequisite: IE 4250 with a minimum grade of C- or IE 6210 with a minimum grade of C

IE 6315 Production and Service Systems Cr. 3
Fundamental theories and concepts in the design and operation of production systems for manufacturing and service organizations. Topics may include: Inventory Management, Production Planning (MRP, JIT, ERP), Factory Physics, Production Control, Introduction to Supply Chain Management Offered Winter.
Prerequisite: IE 6210 with a minimum grade of C

IE 6325 Supply Chain Management Cr. 3
Supply chain management and logistics is unique and, to some degree, represents a paradox because it is concerned with one of the oldest and also the most newly discovered activities of business. Supply chain system activities - communication, inventory management, warehousing, transportation, facility location, and production - have been performed since the start of commercial activity. It is difficult to visualize any product that could reach a customer without logistical support. Yet, it is only over the last decade that firms have started focusing on logistics and supply chain management as a source of competitive advantage. Logistics and supply chain management today represents a great challenge as well as a tremendous opportunity for most firms. Another term that has appeared in business jargon recently is demand chain. From our perspective, we will use the phrases logistics management, supply chain management, and demand chain management interchangeably. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

IE 6405 Integrated Product Development Cr. 3
Product development process: product architectures, concurrent engineering. Integration of marketing, design, and manufacturing functions for product development. How such processes are designed to account for various manufacturing and other business constraints to ensure that customer needs are met. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Engineering.
Equivalent: AET 5600, EVE 5600

IE 6420 CAD/CAM Cr. 3
This course aims to provide students with an in-depth introduction to CAD/CAM and computer-aided process planning. Students will have the scientific foundations for understanding the issues and technologies of modern CAD/CAM and related design and modeling activities. The course covers the major topics of CAD/CAM by learning fundamental theory and modern CAD/CAM software. It will provide an integrated view of engineering so that students may gain a complete view of product design, modeling, and manufacturing. Offered Winter.

IE 6422 Flexible Manufacturing Systems Cr. 3
Flexible manufacturing systems are a highly automated group technology machine cell, consisting of a group of processing stations, interconnected by an automated material handling and storage system, and controlled by an integrated computer system. The analysis and design of flexible manufacturing systems will be covered, including: FMS control and communication architecture, FMS material handling architecture, flexibility analysis, and computer-integrated manufacturing (CIM). Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

IE 6425 Product Lifecycle Management and Sustainable Design Cr. 3
The aim of this class is to familiarize the current principles, practices, and applications of Product Lifecycle Management (PLM). The sustainable design of products and processes, as well as the early consideration of constraints and factors, are important in the successful development of competitive products. PLM is an integrated, information driven approach to all aspects of a products life from its design inception, through its manufacture, deployment and maintenance, culminating in its removal from service and final disposal. PLM technology plays a critical role in most modern industries including aerospace, automobile, and medical. Effective integration of PLM technologies into the product development process can put the industry at a competitive advantage to deliver innovative products. Offered Winter.

IE 6430 Computer Simulation Methods Cr. 3
The application of discrete, continuous and combined simulation methods to the solution of a variety of production and service systems problems. Computer simulation and a term project involving an application are required. No credit after IE 4420. Offered Fall, Winter.

IE 6435 Fundamentals of Sustainable Manufacturing Cr. 3
Sustainable manufacturing, as defined by the U.S.A. Department of Commerce, is "the creation of manufactured products that use processes that minimize negative environmental impacts, conserve energy and natural resources, are safe for employees, communities, and consumers and are economically sound." This course is designed to introduce the fundamental concepts of sustainable manufacturing. While the focus will be on sustainable manufacturing, topics will also include connections of sustainable design, environmental sciences, and the social sciences with sustainable manufacturing. Offered Every Other Fall.

IE 6442 Facilities Design and Materials Flow Cr. 3
Presents the fundamental concepts, theory and procedures required for effective facilities design and planning. Includes models for determining plant size and time phasing; design of manufacturing, warehouse and material handling facilities; and use of analytic and computer-aided methods in the facilities design process. No credit after IE 4330. Offered Fall, Winter.

IE 6510 Information Systems for the Manufacturing Enterprise Cr. 3
Information systems are used to make organizations leaner and more integrated across the entire Manufacturing Enterprise. A suite of information systems is to provide an environment that allows an engineer to consider both product and manufacturing requirements throughout the design, development, manufacturing cycle, resulting in a single unified concurrent engineering process, an integral knowledge management process, and rapid response to market changes. This course will teach information technologies and applications in the manufacturing industry. Offered Fall.

IE 6520 Negotiating in an IE Environment Cr. 3
Analytic and interpersonal skills needed to negotiate effectively. Students integrate the analytic and interpersonal skills necessary to be an effective negotiator in a rapidly-changing technical environment. Offered for graduate credit only. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

IE 6530 Global Automotive Marketing Strategy Cr. 3
Over the course of the term, we will examine the various steps necessary in order to develop, design, and analyze a marketing plan. We will cover strategic issues of specific interest to the automotive industry. Offered Every Other Spr/Sum.
Restriction(s): Enrollment limited to students in the MS in Engineering Management program.

IE 6560 Deterministic Optimization Cr. 3
The primary goals are to develop the ability to formulate fairly complex optimization problems, provide an appreciation of the main classes of problems that are practically solvable, describe the available solution methods, and build an understanding of the qualitative properties of the solutions they provide. The class participant will develop skills in recognizing and formulating deterministic optimization models and gain an appreciation for the role of sensitivity analysis in analyzing a problem. Covers methods for quantifying the impact of specific constraints on the overall performance of the system. Application areas include production scheduling, product mix planning, manpower planning, routing and scheduling, financial planning, and prototype builds. Offered Fall, Winter.

IE 6570 Engineering Leadership and Management Cr. 3
This course is intended for students in the off-campus Engineering Management Master's Program. It provides students with a global perspective on engineering leadership. It investigates leadership at multiple levels - individual, organizational and societal - and it explores multiple contexts including different organizational cultures, countries and virtual teamwork. Topics covered include the leader's role in developing and changing organizational culture and leadership differences across cultures. Participants explore issues surrounding global leadership competencies such as leading virtually, the new ways of work, leading innovation, workforce diversity and ethics. They also assess their own cultural intelligence. Offered Yearly.

IE 6580 Engineering Financial Practice Cr. 3
Combines the central concepts of engineering financial and engineering managerial economics. Demonstrates, from an engineering financial perspective, how engineering decisions can impact the economic goals of the company. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

IE 6590 Engineering Leadership: Strategic Communications Cr. 3
Leaders in an engineering work environment face unique team and organizational communication challenges. Strong and precise communication is key to effective leadership and organizational efficiency. Participants in this course will engage in the practical and theoretical aspects of verbal and nonverbal communications in leadership and in the workplace. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

IE 6611 Fundamentals of Six Sigma Cr. 3
The attraction of Lean Six Sigma is obvious — designs that work, fewer defects and wastes in manufacturing, faster processes, lowered production costs, and greater customer satisfaction. With these pluses, it's no wonder the world's leading companies are adopting the Six Sigma approach to product development in ever-growing numbers. This comprehensive course covers the fundamental aspects of Lean and Six Sigma, Lean operation principles and tools, and the Six Sigma process improvement, that is Define-Measure-Analyze-Improve-Control (DMAIC). Offered Winter, Spring/Summer.

IE 6620 Lean Six Sigma Capstone Cr. 3
Covers extended aspects of Lean and Six Sigma, both the Six Sigma process improvement, that is, Define-Measure-Analyze-Improve-Control (DMAIC), and Lean operation principles and tools. The course also covers Design for Six Sigma and its utilization earlier in Product Development (PD). We extend the DMAIC process steps with DFSS's IDOV (Identify, Design, Optimize, Verify) process steps that cover the earlier PD phases. Offered Spring/Summer.
Prerequisite: IE 6611 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

IE 6720 Engineering Risk and Decision Analysis Cr. 3
Structure, modeling and analysis of technical management decisions with emphasis on multiple objectives and trade-offs, and significant uncertainty. Explores barriers to rational decision making. Offered Fall, Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

IE 6830 Management of Technology Change Cr. 3
Focuses on technology change and use of systems approach to plan for, manage and implement the diffusion and dynamics of product, process and business model innovation. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

IE 6840 Project Management Cr. 3
Provides an appreciation for the role and importance that project management has in delivering complex engineering projects on time, within budget, within performance specifications, and satisfying the customer. Reviews the fundamental content of the nine knowledge areas and five process groups included in the PMI's Project Management Body of Knowledge and how they apply to the general stages of a product development project with a look at some basic techniques and tools. Offered Winter.

IE 6850 Manufacturing Strategies Cr. 3
Manufacturing strategy is one aspect of a company's business strategy that also includes marketing, finance, and research and development. Each strategy development must coexist to achieve the company's goal, meet customer demands, and stay competitive. The objective of this course is to introduce and discusses key components of manufacturing strategy and how this fits within an overall business strategy. Offered Intermittently.

IE 6991 Industrial Internship Cr. 1-3
Offered Fall, Winter.
Repeatable for 99 Credits

IE 7100 Mathematical Modeling in Impact Biomechanics Cr. 4
Review of models created for impact simulations. Regional impact simulation models. Human and dummy models subject to various restraint systems. Offered Intermittently.
Prerequisite: BME 5010 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7100, ECE 7100, ME 7100

IE 7220 Advanced Statistical Methods Cr. 3
Statistics is the science to collect, descript, analyze, interpret, and draw conclusions on data. This course introduces students to the conceptual underpinnings of statistical methods and how to apply them to address more advanced statistical questions than are covered in an introductory statistics course. The statistical methods covered in this course are useful for many types of questions that relate to multiple variables and/or multiple groups. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

IE 7290 Experiment Design and Reliability for the Automotive Industry Cr. 3
The course is a combination of experiment design/analysis and reliability methods commonly used in the automotive engineering including but not limited to: one-factor experiments, two factor experiments, factorial and fractional designs, optimization, failure distribution analysis, accelerated life data analysis, and life data regression analysis. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

IE 7445 Manufacturing Analytics Cr. 3
Provides a deep understanding of the intersection of manufacturing and analytics and its application in current manufacturing industries to improve operations and gain competitive advantages. Covers fundamental concepts from data acquisition to analysis to decision making in manufacturing, specifically, manufacturing process and systems data acquisition; manufacturing data and information systems hierarchies and flows (IT/OT layers); manufacturing analytics, both real-time and historical; and data driven manufacturing decision making. Offered Every Other Fall.
Restriction(s): Enrollment limited to students in a Doctor of Philosophy degree.

IE 7480 Knowledge-Based Design Cr. 3
Provides in-depth understanding of knowledge roles, knowledge elicitation techniques, knowledge based system and system modeling issues, and semantic modeling to support product design. Students will learn the concepts via lecture, articles, and semantic product model implementation projects. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

IE 7511 Linear and Nonlinear Optimization Cr. 3
The primary goal of the course is to provide a solid foundation in the deterministic optimization field. The basic concepts in linear programming and nonlinear programming will be covered. Topics include: convex sets/functions, duality, and sensitivity from different perspectives; simplex algorithm for solving linear programming problems; unconstrained and constrained optimization, nonlinear duality theory, Lagrangian relaxation, and algorithmic methods for solving nonlinear programs (including descent methods, Newton's method, conjugate gradient methods, and penalty and barrier methods). Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.

IE 7535 Stochastic Programming and Robust Optimization Cr. 3
Introduction to models, theory and computational methods for stochastic programming and robust optimization. Methods include decomposition-coordination algorithms for large-scale mathematical programming such as Benders, regularized Benders, Dantzig-Wolfe, L-shaped and statistically motivated decomposition methods. Applications, theory and practical algorithm implementation and computational experimentation will be emphasized. Particular attention will be given to large-scale problems, and use of cluster and grid computing architectures to solve them to optimality. Offered Every Other Fall.
Restriction(s): Enrollment limited to students in a Doctor of Philosophy degree.

IE 7570 Deterministic System Models and Optimization Cr. 2
Methods for quantifying impact of specific constraints on overall performance of a system; use of journal articles on corporate use of these models. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

IE 7620 Advanced Reliability and Survival Analysis Cr. 3
Focuses on general methods used to analyze the reliability and survival data. Introduces the methods to analyze the expected duration of time until one or more events happen, such as death in biological organisms and failure in mechanical systems. Illustrates the use of proven traditional techniques for reliability and survival data analysis and prediction, and brought up to date with modern computer-based graphical, analytical, and simulation-based methods. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

IE 7710 Stochastic Processes Cr. 3
Fundamental understanding of various probability models from applied and theoretical perspectives. Topics include: probability review, Markov chains, Poisson process, continuous time Markov chains, queuing processes, and inventory applications. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

IE 7811 Data Mining: Algorithms and Applications Cr. 3
Application of various basic/advanced data mining techniques to real-world problems. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CSC 7810

IE 7860 Intelligent Analytics Cr. 3
Neural networks and other machine learning techniques for tackling intricate pattern recognition challenges and crafting proficient decision support systems. Delve into foundational concepts, including dimensionality reduction, feature selection, clustering, function approximation, pattern recognition, and forecasting. Course structure centered around hands-on assignments and projects. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $50

IE 7990 Directed Study Cr. 1-6
Student selects some field of industrial engineering for advanced study and instruction. An outline approved by the instructor must be presented before registration in this course. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

IE 7995 Graduate Special Topics Cr. 1-4
Special subject matter in industrial engineering. Topics to be announced in Schedule of Classes. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

IE 7996 Research Cr. 1-6
Advanced design, investigation or experimental work. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

IE 7999 Engineering Management Leadership Project Cr. 1-6
Integration of knowledge from individual courses in M.S. engineering management curriculum. Team-oriented focus on major industrial problem. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 10 Credits

IE 8920 Decision and Risk Analysis for Research Cr. 3
The course will focus on complex decisions that involve tradeoffs amongst objectives or are made in the face of uncertainty. This is a practical business and engineering course, specifically intended to develop and improve decision making for managers and executives. Course lectures will focus on decision tools and their application. Interactive class discussions will follow the course lectures and case study presentations. Offered Every Other Winter.
Restriction(s): Enrollment is limited to students with a major in Industrial Engineering GET or Industrial Engineering; enrollment limited to students in a Doctor of Philosophy degree.

IE 8930 Global Perspectives and Networks Cr. 3
Provides technical leaders with a system of frameworks to holistically understand and practically manage operations, to be technologically competitive in the global marketplace. Foundation for the Country Courses. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment is limited to Graduate level students.

IE 8941 From Idea through Launch: Products and Services I Cr. 2
Course comprised of twelve modules; the processes and progression from product or service innovation to development and launch. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment is limited to Graduate level students.

IE 8942 From Idea through Launch: Products and Services II Cr. 3
Course comprised of twelve modules; the processes and progression from product or service innovation to development and launch. Offered Every Other Fall.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment limited to students in the PhD in Engineering program; enrollment is limited to Graduate level students.

IE 8943 From Launch through Sustainability: Products and Services I Cr. 2
From when the finished product hits the market to all the steps necessary to make the product sustainable. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment is limited to Graduate level students.

IE 8944 From Launch through Sustainability: Products and Services II Cr. 3
From when the finished product hits the market to all the steps necessary to make the product sustainable. Offered Fall.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment is limited to Graduate level students.

IE 8950 Data Science and Statistics Cr. 3
Data Science and Statistics is a course designed for working executives with a focus on real-world case studies. It explores prerequisites for successful transformation of firms into digital enterprises and also covers core topics surrounding effective application of statistics and data science for analytics and decision making. The course also surveys promising developments in machine learning and AI. Offered Every Other Spr/Sum.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment limited to students in the PhD in Engineering program; enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

IE 8951 Research Design Cr. 3
Focus on qualitative research design and methods. Discussion of conceptual and practical facets of the process of framing a research question, up to development of an instrument for data collection. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

IE 8952 Research Methods Cr. 3
Focus on quantitative research design and methods. Topics such as purpose of statistical models, mathematical representation, interpretation, and methods are covered. Typical methods include: multiple regression, multivariate analysis (including survey data), and structural equation modeling. Offered Fall.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

IE 8960 Literature Review & Research Cr. 3
This course develops students' literature review skills and introduces diverse research methodologies. Students will learn to identify influential authors, key resources, and design effective research frameworks. Emphasis is placed on formulating research questions, understanding research paradigms (quantitative, qualitative, and mixed methods), identifying research gaps, and developing a research proposal. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment limited to students in the PhD in Engineering program; enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

IE 8970 Global Leadership and Strategy for Engineering Management Cr. 3
To provide insight, concepts and tools for those times when, executives are called upon, as leaders of technical organizations, to influence and develop business strategy in the global context including issues related to technology, innovation, business model change, and industry disruption. Offered Every Other Fall.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Industrial Engineering GET or Industrial Engineering GET; enrollment is limited to Graduate level students.

IE 8995 Graduate Seminar Cr. 1
Research and development methods. Leading-edge research topics. Platform for student to present preliminary research findings and obtain feedback. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the PhD in Engineering program; enrollment is limited to Graduate level students.
Repeatable for 99 Credits

IE 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

IE 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

IE 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

IE 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: IE 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

IE 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: IE 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

IE 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

IM - Immunology and Microbiology

IM 7010 Fundamentals of Immunology Cr. 2
Cellular-molecular and systemic functions, and diseases of the immune system. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IBS 7090

IM 7020 Fundamentals of Microbiology Cr. 2
Molecular Mechanisms of Bacterial Pathogenesis uses bacterial pathogens as paradigms to illustrate the disease process. Molecular mechanisms of bacterial colonization, evasion of the host immune response, inflammation, invasion and tissue damage by exotoxin secretion are key learning objectives. Host and pathogen interaction and the role of the microbiome in human health are taught. Antimicrobial resistance is covered at the level of development and transmission. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

IM 7030 Molecular Biology of Viruses Cr. 2
Basic principles of virology including virus host interactions and the molecular biology of virus multiplication and genetics. Offered Winter.
Prerequisite: BMB 7010 with a minimum grade of B or MGG 7010 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

IM 7040 Fundamentals of Research Cr. 2
Lecture/discussion of practical aspects of professional scientific research. Offered Fall.
Restriction(s): Enrollment is limited to Graduate or Medical level students; enrollment limited to students in the School of Medicine.

IM 7060 Laboratory Rotation Cr. 1-4
Students complete 3-4 week rotations in three different research laboratories prior to choosing a thesis research lab. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Biochem,Microbio & Immunology.
Repeatable for 4 Credits

IM 7140 Critical Thinking in Science Cr. 1
The objective of the course is to provide students with opportunities to practice explicit application of critical thinking skills for the analysis of scientific literature through the deliberate practice of reading, writing, and small group discussion. Strong inference and the principles of logic will be used to illustrate how doubt-driven motivation can be applied to a research project without a priori thinking that can result in confirmation bias. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

IM 7450 Current Trends in Immunology Cr. 2
Lectures and discussions on current literature and research problems. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

IM 7520 Molecular Mechanisms of Bacterial Pathogenesis Cr. 2
Molecular Mechanisms of Bacterial Pathogenesis uses bacterial pathogens as paradigms to illustrate the disease process. Molecular mechanisms of bacterial colonization, evasion of the host immune response, inflammation, invasion and tissue damage by exotoxin secretion are key learning objectives. Host and pathogen interaction and the role of the microbiome in human health are taught. Antimicrobial resistance is covered at the level of development and transmission. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Immunology and Microbiology; enrollment is limited to Graduate level students.

IM 7530 Advanced Microbiology Research Cr. 1-4
Independent study between a BMI student and an advisor. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Biochem,Microbio & Immunology.
Repeatable for 4 Credits

IM 7650 Current Trends in Host-Microbiome Interactions Cr. 2
We are each populated by diverse microbial communities that affect our physiological and immunological profiles and ultimately our likelihood of experiencing health or disease. This course will explore the literature related to all aspects of host-microbiome interactions, and will do so from mechanistic, ontogenetic, functional, and phylogentic perspectives. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

IM 7890 Seminar Cr. 1
Weekly BMI seminar series. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Immunology and Microbiology; enrollment is limited to Graduate level students.

IM 7996 Research Cr. 1-9
Lab research. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Immunology and Microbiology; enrollment is limited to Graduate level students.
Repeatable for 30 Credits

IM 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

IM 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

IM 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

IM 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: IM 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

IM 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: IM 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

IM 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: IM 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

IM 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

INF - Information Sciences

INF 4010 Introduction to Informatics Cr. 3
This course introduces students to the discipline of informatics—how information technologies are developed, applied, and utilized in society. It examines the most important issues at the intersection of information technology and society including the economy, health and medicine, business and finance, politics, and the natural environment. The course introduces students to issues of mis- or weak-information, information ethics, and information policy. Students will learn and discuss the basic concepts of Informatics including concepts such as data, information, knowledge, and uncertainty. Distinct aspects of web technology, interface design, programming and application design, and data science may be emphasized in certain sections, including exercises on parsing, managing, analyzing, and archiving data. Offered Every Term.

INF 6010 Information in Society Cr. 3
Foundational information is essential to providing knowledge of and appreciation for the nature and functions of the information professions. This course assists in the development of a conceptual framework to understand the role of information organizations in society, past, present, and future, and promotes a personal philosophy of professional development. Social justice is a critical element to working in information organizations and to the creation of personal beliefs and values. The integration of both professional knowledge and personal values toward working in an information organization creates the structure of the course. Core course. Prerequisite for all MLIS courses. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 6050 Computer Programming Cr. 3
Introduction to the basics of programming, utilizing scripts to connect and retrieve information from a database, and the development of coding skills that will allow creation of more advanced applications. Offered Every Term.

INF 6080 Fundamentals of Information Technology Cr. 3
Students will understand the interactions of computer hardware, software, networks and systems. Students will also apply productivity tools to solve professional problems of practice. Finally, students will have the foundation to recognize and improve accessibility of information technologies for diverse users and information centers. The 21st Century information professional is faced with an ever-changing environment with new and updated technologies as well as an increasingly tech-savvy patronage. The very existence of libraries depends upon the professionals who work there. Providing information to patrons in a way that is appropriate, accessible, and relevant is the key to survival. This course provides the framework for students to understand the important roles of information technologies in the information center, to develop an understanding of the technology lexicon and to confidently adapt to changing technologies. Core course. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 6120 Access to Information Cr. 3
This general reference course introduces students to the content, structure, and organization of print and non-print reference resources. The course addresses the philosophy and procedures of equitable and inclusive information provision to diverse populations. The course provides practical experience in reference interviewing and searching techniques in finding answers to real world questions along with promoting information literacy instruction. Core course. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 6210 Organization of Information Cr. 3
This course introduces the fundamental principles and concepts critical to a user's ability to access information efficiently and effectively. Libraries and information centers ensure that materials are described, classified and organized so that users can find, identify, select, obtain and navigate the documents that satisfy their information needs. These fundamental principles and concepts are examined and applied in practice and with a critical eye to social justice issues to develop students' understanding of the basic processes involved in providing access to information. Core course. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 6415 Project Management Cr. 3
Identification of current information systems and problems, determination and definition of information needs and requirements, evaluation of alternative solutions. Offered Winter.

INF 6420 Web Development Cr. 3
Use of Internet protocols (ftp, telnet, smtp, http, gopher), location of Internet resources for library reference and research uses, construction of World Wide Web resources using HTML and successor technologies. Offered Every Term.

INF 6460 Database Design and SQL Cr. 3
Fundamentals of database design and basics of database implementation; focus on library and information science practice. Related and current database management technologies used in hands-on experiences. Offered Yearly.

INF 6490 Statistics and Data Analysis Cr. 3
Statistical methods of data analysis are necessary for understanding important aspects of our world and are essential for a variety of research and professional activities. This course offers an applied introduction to statistics and data analysis. It covers the process of research question formulation to data organization, analysis and communication of results; the elements of descriptive and exploratory statistics, including probability concepts and data visualization; and inferential statistics, including techniques of correlation and regression, as well as confidence intervals and hypothesis testing. The course uses practical examples to guide the student through the various concepts and issues with data analyses and provides tutorials on how to use R for analysis and basic data visualization. Activities include readings, videos, quizzes, data analysis labs, and a final data analysis project. Offered Fall.
Restriction(s): Enrollment limited to students in the School of Information Sciences.

INF 6520 Beyond Books: Youth Literature in Action Cr. 3
Explores the quality and quantity of literature published for children, particularly those in elementary and middle school grades in school and public library contexts. The selection, evaluation, promotion and use of literature and other media are studied along with the examination of the relationships of literature to developmental characteristics and individual differences of the child. Offered Yearly.
Prerequisites: INF 6010 with a minimum grade of C (may be taken concurrently) and INF 6080 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

INF 6530 Young Adult Literature Cr. 3
Standards for evaluating young adult literature. Selection of literature for individual students in relation to interest and reading ability. Use of classroom collections. Techniques for helping students read poetry, drama and fiction. Offered Yearly.
Prerequisites: INF 6010 with a minimum grade of C (may be taken concurrently) and INF 6080 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

INF 6780 Introduction to Records and Information Management Cr. 3
Management of information, including records creation, records inventory and appraisal, retention/disposition scheduling, filing systems, maintenance of inactive records, micrographics, vital records protection, and electronic impact on records management. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 6780

INF 6850 Issues in Information Sciences Cr. 1-3
Critical analysis research in the information sciences, socio-technological trends, implications for the profession. Topics to be announced in Schedule of Classes. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

INF 7040 Management and Leadership Cr. 3
This course introduces management skills and leadership development necessary for the successful functioning of libraries and other information institutions. Students will learn strategies that foster diverse leadership styles and practices to meet the needs of communities being served. Libraries and information institutions are complex organizations influenced by several factors including their size, user communities, mission, organization structure, and location. New graduates often receive assignments that require managerial and leadership skills. Professionals advancing within their careers may further become involved in the management process and assume responsibilities at various administrative levels. This course is designed to prepare students with the foundational skills for various levels of involvement in the management of libraries and information institutions. Core course. Offered Every Term.
Prerequisites: INF 6080 with a minimum grade of C (may be taken concurrently) and INF 6010 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7050 Public Libraries Cr. 3
This course is intended to expand the concepts which are broadly introduced in INF 6010 and INF 7040, and to build on other courses which are required of MLIS candidates in a manner specific to public librarians. It provides library and information science students with knowledge of the history, organization, and function of public libraries, and the skills necessary to deliver the wide range of services unique to this challenging area of librarianship. Offered Yearly.
Prerequisites: INF 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7060 Academic Libraries Cr. 3
Academic libraries play a crucial role in education, training, research, and scholarly communication. Their collections and services are developed to promote the goals and objectives of the parent institution. Academic libraries are viewed as an important instructional support unit and participant in the teaching- research process of colleges and universities with diverse student body. They also play an important role in the storage and preservation of recorded human knowledge. In recent years, their role in the development and their utilization of electronic information technology has led to significant changes in service to their diverse sets of users. Since academic libraries are serving complex organizations, most are complex organizations themselves. Their staff perform a multitude of tasks and services requiring specialized knowledge and competencies. Offered Fall.
Prerequisites: INF 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7070 Special Libraries and Information Centers Cr. 3
History, organization, and functions of various types of special libraries and skills necessary to deliver a wide range of services. Offered Winter.
Prerequisites: INF 6120 with a minimum grade of C and INF 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7250 Programming and Services for Children and Young Adults Cr. 3
Principles and procedures for planning, managing and delivery of public library services to children and young adults. Offered Winter.
Prerequisites: INF 6080 with a minimum grade of C and INF 6010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7310 School Library Media Programs Cr. 3
Role of library media programs in the school; methods of planning, organizing, and operating such programs; impact of technology upon instruction and library service. Core course. Offered Every Other Year.
Prerequisites: INF 6010 with a minimum grade of C and INF 6080 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7320 The Media Specialist as Teacher and Instructional Consultant Cr. 3
Instructional functions of the library media specialist in terms of integrating information processing skills in the curriculum through the instructional design process by working in partnership with teachers and applying the principles of teaching and learning theories. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7340 Collection Development and Selection of Materials Cr. 3
Since a principal function of a library is to provide materials to meet the needs of its clientele and to support the organization's mission, the objective of this course is to provide philosophical and practical guidance in selecting and acquiring materials for library collections. The course will also treat the larger issues of collection management including evaluation, deselection, preservation, and diversity and equity issues. Offered Every Term.
Prerequisites: INF 6010 with a minimum grade of C and INF 6080 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the School of Information Sciences.

INF 7370 Culture Matters: Decolonizing Information Cr. 3
Study of impact of cultural diversity on library services; development of relevant collections; effective interaction with a diverse community. Offered Winter.
Prerequisites: INF 6120 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7435 Integrated Library Systems Cr. 3
Practical experience with common Integrated Library Systems; understanding the role of ILS in function of the information organization. Extensive use of computing facilities. Offered Spring/Summer.
Prerequisites: INF 6210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7440 Advanced Web Development Cr. 3
Basic skills in using scripting languages to program and manipulate data structures for text information in library applications such as databases and websites. Offered Winter.
Prerequisites: INF 6050 with a minimum grade of C and INF 6420 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7455 Human-Computer Interaction Cr. 3
Interactions between human beings and computer technologies through usability evaluations and user experience design. Offered Winter.
Prerequisites: INF 6080 with a minimum grade of C or INF 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7470 Information Architecture Cr. 3
Dissemination of information that affects context, content and user. Associations with website development; use in technical writing, presentation preparation, report generation. Offered Winter.
Prerequisites: INF 6080 with a minimum grade of C or INF 6000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7491 Applied Data Analytics Cr. 3
Key areas of information analytics used by data librarians: quantitative statistics, computer simulation, and data mining tools/techniques. Offered Yearly.
Prerequisites: INF 6050 with a minimum grade of C and INF 6490 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7492 Information Visualization Cr. 3
Analysis of large data sets and drawing insights through use of information technology tools, statistical techniques, charts and graphs. Offered Yearly.
Prerequisites: INF 6080 with a minimum grade of C or INF 6000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7500 Information Behavior Cr. 3
Totality of human behavior in relation to sources and channels of information. Information needs and barriers; information seeking, use and dissemination; information poverty and information overload; topics studied in variety of contexts. Offered Fall.
Prerequisites: INF 6080 with a minimum grade of C or INF 6000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7610 Health Sciences Information Services and Resources Cr. 3
First in series of three courses, designed to provide students with skills necessary to become health sciences librarians. Offered Every Other Year.
Prerequisites: (INF 6120 with a minimum grade of C and INF 6210 with a minimum grade of C) or INF 6000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7620 Health Informatics Cr. 3
Overview of health informatics and e-science, and critical role of health information technologies to enhance quality healthcare. Offered Winter.
Prerequisites: INF 6080 with a minimum grade of C or INF 6000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7710 Archival Administration Cr. 3
Basic training in archival methods. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 7840

INF 7712 Intellectual Property for Information Professionals and Archivists Cr. 1
Intellectual Property issues are challenging for those in information management. The complexity of ownership, reproduction rights, access rights, preservation copies and digital surrogates as well as existing copyright and case law decisions are dissected in this course. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

INF 7715 Archival Reference Cr. 1
This course addresses the challenges in relating to researchers, assisting them in understanding what exists and what does not, as well as designing a reference process with the researcher in mind. There will also be some exposure to conducting a reference interview and how to help a user define what they need. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

INF 7730 Administration of Audio Visual Collections Cr. 3
Basic course in the fundamentals of administering a visual collection: evaluation, organization, and control of visual collections in archives, librarians, historical agencies, and museums. Offered Winter.
Prerequisites: INF 7710 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 7890

INF 7740 Archives and Libraries in the Digital World Cr. 3
Overview of electronic tools and the role of digital process in libraries and archives. Offered Spring/Summer.
Prerequisites: INF 6010 with a minimum grade of C, INF 7710 with a minimum grade of C, or HIS 7840 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 7745

INF 7750 Introduction to Archival and Library Conservation Cr. 3
Fundamentals of archival and library conservation problems and methods essential for effective preservation management of paper and associated materials. Offered Spring/Summer.
Prerequisites: INF 6010 with a minimum grade of C, INF 7710 with a minimum grade of C, or HIS 7840 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 7810

INF 7770 Oral History: A Methodology for Research Cr. 3
Techniques of gathering data from individuals for use in research, classroom teaching, historical, cultural or other contexts. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 7860

INF 7775 Primary Historic Research for Information Professionals and Archivists Cr. 1
In Library and Information Science education hands-on primary source work broadens librarians' and archivists' research skills. Excellent primary historic research abilities will deepen the knowledge of the resources available to the student and their future patrons. This course addresses the challenges in conducting primary research of original historic materials. Students will develop organizational skills in research pre-planning, on-site planning as well as note-taking. The intent is to allow students to efficiently use their time to create a solid definable trail in order to document this type of research. This will enhance students' ability to publish, present, and assist researchers in their future information management career. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

INF 7780 Description and Access for Archives Cr. 3
Investigation of description of archival materials emphasizing the electronic technologies and standard practices. Offered Yearly.
Prerequisites: INF 7710 with a minimum grade of C (may be taken concurrently) or HIS 7840 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 7820

INF 7785 Website Preservation Cr. 2
The Internet has become our main mode of communication. The need to preserve websites is a challenge culturally and technologically. This is a growing field with a limited amount of professionals having developed these unique skills. This course addresses the challenges in needs assessment, as well as technological limitations. Students will spend significant time with these complex tools and understand how to create successful workflows. Offered Intermittently.
Prerequisites: INF 6050 with a minimum grade of C, INF 6080 with a minimum grade of C, or INF 7780 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

INF 7790 History of Books, Printing, and Publishing Cr. 3
Development of writing, the alphabet, early materials, manuscripts, paper making, invention and spread of printing, famous presses, modern methods of print and electronic production. The book as artistic output of the culture and part of the world in which it was produced. Offered Yearly.
Prerequisites: INF 6010 with a minimum grade of C and INF 6080 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7830 Community Engagement Cr. 3
Community engagement in the context of Library and Information Science refers to the ways that information professionals in libraries, archives, and museums (for the purposes of this course called, public information institutions) learn about, collaborate with, and provide service and outreach to community members. Public information institutions and libraries in particular have historically enjoyed a high degree of public trust and respect. Today, librarians and information professionals in these settings are building on that trust and working to support, invigorate, and sustain the communities they serve by collaborating with members of those communities. Offered Yearly.
Prerequisites: INF 6010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

INF 7835 Community Archives Cr. 3
This class focuses on the history, politics, challenges, and possibilities of community archives. Through lectures, readings, discussion, projects, and critical engagement with community archives projects students will develop an understanding of community-based archives. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

INF 7880 Instructional Methods for Librarians Cr. 3
Introduction to library instruction, bibliographic instruction, information literacy, or user education for those expected to provide library instruction to clients. Offered Yearly.
Prerequisites: INF 6120 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Liberal Arts & Sciences or School of Information Sciences.

INF 7885 Cultural Heritage Institutions: Management and Leadership Cr. 3
The operation of public and private historical agencies, archives and museums. Determination of agency priorities, problems of staffing and finance, governmental regulations, community relations, and professional ethics. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 7880

INF 7900 Digital Libraries Cr. 3
Critical issues, theoretical and practical principles of digital libraries. Offered Yearly.
Prerequisites: INF 6010 with a minimum grade of C, INF 6080 with a minimum grade of C, INF 6120 with a minimum grade of C, and INF 6210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7910 Metadata in Theory and Practice Cr. 3
Theoretical and practical principles of metadata used to provide access to digital objects online. Offered Yearly.
Prerequisites: INF 6010 with a minimum grade of C, INF 6080 with a minimum grade of C, INF 6120 with a minimum grade of C, and INF 6210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7920 Digital Curation and Preservation Cr. 3
Theoretical principles and practical aspects of digital curation and preservation within libraries, museums, archives and other institutions administering data and digital content. Offered Yearly.
Prerequisites: INF 6210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7930 User Experience (UX) Design Cr. 3
An introduction to user experience (UX) design, this course applies concepts of human-computer interaction through a series of assignments and a class project, which deal with methods of designing and developing a system/product with effective UX. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

INF 7950 Practicum: Library Services Cr. 3
Practical experience with digital content under direction of professional librarian and supervision of faculty member. Theory and competencies relevant to the environment. Seminars to be arranged. Offered Yearly.
Prerequisites: INF 6010 with a minimum grade of C, INF 6080 with a minimum grade of C, INF 6120 with a minimum grade of C, INF 6210 with a minimum grade of C, INF 7040 with a minimum grade of C, and 9 credits from INF 6000-9999
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7960 Practicum: Information Management Cr. 3
Practical experience with technology-based information management under direction of information professional and supervision of a faculty member. Theory and competencies relevant to the project activities. Seminars to be arranged. Students are eligible to enroll in their last semester. Offered Every Term.
Prerequisites: INF 6080 with a minimum grade of C or INF 6000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7970 Practicum: Archives Cr. 3
On-site experience in archival center under direction of professional librarian or archivist and supervision of faculty member. Theory and competencies relevant to the environment. Offered Every Term.
Prerequisites: INF 7710 with a minimum grade of C, INF 7780 with a minimum grade of C, and 2 of (INF 6780, INF 7730, INF 7740, INF 7750, INF 7770, or INF 7885)
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: HIS 7685

INF 7975 Practicum: Digital Content Cr. 3
Practical experience with digital content under direction of professional librarian and supervision of faculty member. Theory and competencies relevant to the environment. Offered Every Term.
Prerequisite: INF 7900 with a minimum grade of C and INF 7910 with a minimum grade of C and INF 7920 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.
Repeatable for 6 Credits

INF 7980 Practicum: School Media Cr. 2-3
On-site experience in school library media/information center under direction of professional librarian and supervision of faculty member; theory and competencies. Seminars to be arranged. Offered Every Term.
Prerequisites: INF 7320 with a minimum grade of C, INF 6120 with a minimum grade of C, INF 6210 with a minimum grade of C, INF 7310 with a minimum grade of C, and 9 credits from INF 6000-9999
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 7990 Research and Directed Study Cr. 1-8
Directed study and individual research under faculty guidance. Offered Every Term.
Prerequisites: INF 6010 with a minimum grade of C and INF 6080 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Liberal Arts & Sciences or School of Information Sciences.
Repeatable for 8 Credits

INF 7996 Research for the Information Professions Cr. 3
A knowledge of research methods is necessary for information professionals to conduct research, assist other researchers, integrate ethical principles, and critically read research literature. This course is also designed to demonstrate the importance of research and to strengthen the critical and analytical skills of students. It examines the role of social justice, inclusion, equity and diversity in research in the information professions, and it examines the role of research in the development of the profession and in contemporary management. The course includes consideration of various research methods used in the information professions with illustrations based on specific problems related to information organizations. Students identify a research problem, design a research project to investigate the problem and write a research proposal describing how the research would be conducted. Core course. Offered Every Term.
Prerequisites: (INF 6120 with a minimum grade of C and INF 6210 with a minimum grade of C) or INF 6000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 8000 Seminar in Information Policy Cr. 3
How information policies improve or set constraints on the goals and objectives of libraries and other information organizations. Effect of policies on interpersonal and financial quality of communities. Economic, technical, and ethical policy questions. Offered Yearly.
Prerequisites: INF 6080 with a minimum grade of C or INF 6000 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 8140 Advanced Reference Service Strategies Cr. 3
Information needs and seeking behaviors, reference interview techniques, and information literacy. Offered Fall.
Prerequisites: INF 6120 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 8160 Advanced Online Searching Cr. 3
Advanced topics in online searching using broad range of databases, including Internet resources. Topics include: sophisticated search strategies, competitive intelligence, retrieval and organization of citations. Offered Winter.
Prerequisites: INF 6120 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Information Sciences.

INF 8850 Advanced Issues in Information Sciences Cr. 3
Current topics affecting the information sciences. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ITA - Italian

ITA 1010 Beginning Italian I Cr. 4
Introduction to Italian language and its culture through exposure to authentic materials and interactive activities; developing communicative reading, writing, listening, and speaking skills and cultural proficiency. No experience with Italian is needed. Offered Every Term.
Fees: $5

ITA 1020 Beginning Italian II Cr. 4
Continuation of ITA 1010. Strengthening communicative skills (reading, writing, speaking, and listening) and expanding cultural understanding and proficiency through exposure to authentic materials and interactive activities. Offered Every Term.
Prerequisites: ITA 1010 with a minimum grade of D-
Fees: $5

ITA 2010 Intermediate Italian Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Refining communicative skills (reading, writing, speaking, and listening) and cultural proficiency through extensive exposure to authentic sources, material, and interactive activities. Completion of this course fulfills the General education requirement for foreign language and culture. Offered Every Term.
Prerequisites: ITA 1020 with a minimum grade of D-
Fees: $5

ITA 2020 Italian through Film Cr. 3
Increasing communicative abilities and cultural proficiency through study and analysis of Italian films, readings including contemporary news and fiction, and more interactive activities. Offered Yearly.
Prerequisites: ITA 2010 with a minimum grade of D-
Fees: $30

ITA 2700 Anguish and Commitment: European Existentialist Literature Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Pirandello, Sartre, Camus and Unamuno. Offered Every Other Year.
Equivalent: FRE 2700, GER 2700, SPA 2700

ITA 2710 Italy and Italians I Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Overview of development of Italian culture and civilization from their origins to 1500; emphasis on those aspects that prepared the political, social, cultural and intellectual groundwork of Humanism and the Renaissance. Taught in English. Offered Yearly.

ITA 2720 Italy and Italians II Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Overview of Italian culture and civilization from 1500 to 1947: the Renaissance, Italian contributions to science, Unification of Italy, the Fascist era, the new republic. Taught in English. Offered Yearly.

ITA 2991 Italian Fairy Tales Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Introduction to the interdisciplinary context of major Italian tales and other European fairy tales traditions, emphasizing their transformation from oral and literary form into film, animation, opera, ballet, art, and music. All lectures and readings in English. Offered Fall.

ITA 3030 Made in Italy: Language, Culture, and the Business of Italian Excellence Cr. 3
This interdisciplinary, student-centered course explores the global power and cultural meaning of the 'Made in Italy' brand. We will examine key sectors of Italian excellence—including fashion, food and wine, design, artisanal craftsmanship, and automotive innovation—through cultural analysis, site-based research, and experiential learning. Taught in Italian, or in English while engaging resources in Italian if meeting with GLS 3030, this course strengthens intercultural communication and analysis skills while integrating business, cultural studies, and sustainability themes. Offered Yearly.
Prerequisite: ITA 2010 with a minimum grade of C
Fees: $30
Repeatable for 6 Credits

ITA 3100 Caffe Italia Cr. 3
Enhancing speaking, reading, and listening skills through debates, discussions and presentations on current events and topics. Offered Every Term.
Prerequisites: ITA 2020 with a minimum grade of D-

ITA 3200 Italian Rebels Cr. 3
A journey through forty years of turbulent Italian contemporary history. Through readings, songs of protest, epic film, and more, this course will strengthen and enhance the cultural and linguistic knowledge of contemporary Italy and Italians, focusing on formal and informal writing and research skills. Offered Every Other Year.
Prerequisites: ITA 2020 with a minimum grade of D-

ITA 3300 Science, History, and Culture of Italian Cuisine Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Explores the science, history, and culture of Italian food and the Mediterranean Diet, and how Italian food culture has evolved throughout the centuries. Taught in English. Offered Yearly.
Fees: $15
Equivalent: NFS 3300

ITA 3500 Dante in Translation: The Divine Comedy Cr. 3
An introduction to Dante and his cultural milieu through a critical reading of selected cantos of the Divine Comedy, and selected passages of Dante's minor works. Offered Yearly.

ITA 4610 The Birth of Italian Language and Literature Cr. 3
A journey in Italian literature and culture, from Marco Polo and the birth of the Italian language to the controversial writings of Galileo Galilei. Offered Yearly.
Prerequisites: ITA 2020 with a minimum grade of D-

ITA 5000 Minor Language Practicum Cr. 3
Controlled application of active language skills for students electing a Ph.D. minor in Italian. No degree credit toward the Ph.D. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ITA 5150 Italian Cinema Cr. 3
Concentrated study of specific trends or the development of individual directors. Topics to be announced in Schedule of Classes . Offered Every Other Year.
Fees: $10
Repeatable for 9 Credits

ITA 5570 Topics in Italian Studies Cr. 3
In-depth study of author or group of authors, genre, historic period, or particular literary or cultural movement. Topics to be announced in Schedule of Classes. Offered Every Other Year.
Prerequisites: ITA 4610 with a minimum grade of D- and ITA 4620 with a minimum grade of D-
Repeatable for 9 Credits

ITA 5990 Directed Study Cr. 1-4
Offered Every Term.
Repeatable for 8 Credits

ITA 5993 Writing Intensive Course in Italian Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with designated corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Fall, Winter.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and (ITA 3000-3999 (may be taken concurrently) or ITA 6000-6999 (may be taken concurrently))
Restriction(s): Enrollment is limited to Undergraduate level students.

ITA 5999 Internship in Italian Studies Cr. 3
Internship in a public or private organization related to Italian studies. Offered for undergraduate credit only. Offered Every Term.
Prerequisite: ITA 3040 with a minimum grade of C- or ITA 3100 with a minimum grade of C- or ITA 3200 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Italian or Italian Honors.

ITA 6400 Languages of Italy Cr. 3
A study of the Italian language and its dialects from early years to present. Representative texts from various periods will explore Italy's diverse linguistic landscape. Offered Every Other Year.

ITA 6610 Dante's Comedy I: Inferno Cr. 3
A close reading of Dante's Inferno with attention to sources, background, and interpretation. Offered Every Other Year.
Prerequisite: ITA 3200 with a minimum grade of D-
Repeatable for 6 Credits

ITA 6620 Dante's Comedy II: Purgatory and Paradise Cr. 3
A close reading of Dante's Purgatory and Paradise with attention to sources, background, and interpretation. Offered Every Other Year.
Repeatable for 6 Credits

ITA 6680 Love, Politics and the Art of Elegance Cr. 3
A study of major contributions of the Italian Renaissance that shaped modern thought with a special focus on the art of elegance, effortless mastery, love, and politics. Offered Every Other Year.
Prerequisites: ITA 4610
Repeatable for 12 Credits

ITA 6690 Italian Love Sickness Cr. 3
A close study of major works that shaped ideas of love, the phenomenon of love sickness, and the scientific remedies for it. Offered Every Other Year.
Prerequisites: ITA 4610

ITA 6700 Performing Italy Cr. 3
A study of Italian theater, music, and opera, with a particular focus on the eighteenth century. Offered Every Other Year.
Prerequisites: ITA 4620
Repeatable for 9 Credits

ITA 7010 Introduction to Literary Theory Cr. 3
Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: FRE 7010, GER 7010, SPA 7010

ITA 7100 Introduction to Translation Studies Cr. 3
Introduction to Translation Studies presents the essential theories as tools to deal with the significant practical problems and issues that may confront the practitioner in specialized translation. The class will focus on the following points: 1) acquisition of the basics of translation theory in order to facilitate the comprehension of translation's multidisciplinary processes and be aware of the variety of theoretical approaches, 2) the study and evaluation of primary methods of research to enhance future research and practices, 3) the acquisition of necessary metalanguage, which allows the textual analysis of the translation process, the solution driven mind of a translator, the approach to tackle recurring translation problems, and the evaluation of translated texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ARB 7100, CLA 7100, FRE 7100, GER 7110

ITA 7996 Research Project Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ITA 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

ITA 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

JPN - Japanese Studies

JPN 1010 Elementary Japanese I Cr. 4
Introduction to written and spoken Japanese. Offered Every Term.
Fees: $5

JPN 1020 Elementary Japanese II Cr. 4
Continuation of JPN 1010. Offered Every Term.
Prerequisites: JPN 1010 with a minimum grade of D-
Fees: $5

JPN 2010 Intermediate Japanese I Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Continuation of JPN 1020. Focus on language and Japanese culture. Offered Every Term.
Prerequisites: JPN 1020 with a minimum grade of D-
Fees: $5

JPN 2020 Intermediate Japanese II Cr. 4
Continuation of JPN 2010. Language and culture learned through situational activities with tasks to develop language proficiency. Enhancement of Kanji (ideograph writing system) learning to help students develop higher reading proficiency. Offered Winter.
Prerequisites: JPN 2010 with a minimum grade of D-

JPN 2110 Listening Japanese with Media and Animation Cr. 3
Development of listening skills using Japanese media, animation, and movies. Offered Intermittently.
Prerequisite: JPN 2010 with a minimum grade of D-

JPN 2720 Japanese Culture through Myth, Fairy Tales, and Media Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Introduces Japanese philosophy, beliefs, values, and cultural heritage through a broad survey of Japanese fairy tales and media forms (cinema, TV drama, and Anime). Through the analysis of these different texts, students will consider questions related to Japanese identity, culture, communication styles, and politics, reflecting in particular on questions of space, place, and the environment. Ethnographic approaches will be also introduced. Offered Spring/Summer.

JPN 2800 Culture Studies in Japan (Homestay and Study Abroad Tour) Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Survey of Japanese culture taught in English. Introduction of family and group organization, customs, pop culture (fashion/music/films), aspects of daily lives (thought/religion/arts/society), and a brief modern history. Also, survival language practice. Offered Spring/Summer.
Prerequisites: JPN 1010 with a minimum grade of D-
Equivalent: ASN 2800

JPN 3010 Advanced Japanese I Cr. 3
Introduction to high intermediate grammar. Three thematic units: body and health; life and careers; communication and media. Emphasis on communication for business. Offered Yearly.
Prerequisites: JPN 2020 with a minimum grade of D-

JPN 3020 Advanced Japanese II Cr. 3
Introduction to language pertinent to media communication, using written, visual, and/or audio materials. Offered Yearly.
Prerequisites: JPN 3010 with a minimum grade of D-

JPN 3030 Japanese Reading and Writing Cr. 3
Various writing styles. Emphasis on expanding the vocabulary and Kanji characters. Offered Yearly.
Prerequisites: JPN 3010 with a minimum grade of D-

JPN 3540 Intensive Japanese Cr. 4-6
Introduction to the linguistic patterns, sound system, and writing system of the Japanese language. Open only to JCMU Study Abroad Students. Offered Fall, Winter.
Repeatable for 12 Credits

JPN 3990 Directed Study Cr. 1-6
Directed study tailored to student and faculty interests and specializations. Offered Every Term.
Repeatable for 6 Credits

JPN 4010 Business Japanese I Cr. 3
Expansion of vocabulary and grammar knowledge especially used for business settings. Acquisition of business language and etiquette, role-playing of conversation patterns, reading business memos and documents. Classes are all task-oriented for business. (Basic.) Offered Yearly.
Prerequisites: JPN 3020 with a minimum grade of D-

JPN 4550 Japanese Culture and Society I Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Examination of significant social institutions and cultural aspects of modern Japanese society, including their historical development. Open only to JCMU Study Abroad Students. Offered Fall.

JPN 4560 Japanese Culture and Society II Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Significant social institutions and cultural aspects of modern Japanese society, including their historical development. Open only to JCMU Study Abroad Students. Offered Winter.

JPN 5220 Languages of Asia Cr. 3
Introduction to major language families in Asia; grammar, sounds, language contacts. Offered Winter.
Equivalent: CHI 5220, LIN 5100

JPN 5999 Internship in Japanese Studies Cr. 3
Internships in Japanese studies allow students to apply the knowledge they have acquired through the Japanese program and to gain practical experience in their scholarly and professional areas of interest. An internship can also allow students to explore possible areas in which they would like to pursue a career. Offered Every Term.
Prerequisite: JPN 3010 with a minimum grade of D-

KHS - Kinesiology, Health and Sport Studies

KHS 1000 Contemporary Issues in Sport, Exercise, and Health Sciences Cr. 3
Satisfies General Education Requirement: Social Inquiry
Survey of selected topics in Kinesiology, including exercise science, health, physical education, athletic training and sports studies; a focus on current issues and related industry careers. Offered Fall, Winter.

KHS 1010 Wellness at Wayne Cr. 1
Satisfies General Education Requirement: Wayne Experience
Integrates information of eight dimensions of wellness with campus resources and encourages healthful living for WSU students. Class will include regular meetings at various campus locations and will involve physical activity sessions. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Freshman.

KHS 6540 Workshop in Kinesiology, Health and Sport Studies Cr. 1-3
Exploration of topics of current interest for the profession. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Education.
Repeatable for 12 Credits

KHS 7990 Special Problems in KHS Cr. 1-3
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

KHS 7999 Master's Essay and Project Direction Cr. 3
Development and review of essay or project. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

KHS 8540 Theories of Health Behavior Cr. 3
Overview of select social and behavioral theories used to understand health-related behaviors and develop interventions. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

KHS 8700 Research in the Psychosocial Aspects of Physical Activity Cr. 3
Development of in-depth understanding of psychosocial aspects of research in physical activity (exercise, sport, leisure activity). Offered Winter.
Restriction(s): Enrollment limited to students with a class of Doctorate; enrollment is limited to students with a major in Kinesiology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree; enrollment is limited to students in the Department of Kinesiology, Hlth & Sport Std.

KHS 8750 Internship in Kinesiology, Health and Sport Studies Cr. 1-8
Professional experience in public or private institutions relevant to student's field of specialization. Initial plan of involvement and final evaluation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $16
Equivalent: SAM 8750
Repeatable for 8 Credits

KHS 8999 Master's Thesis Direction Cr. 1-8
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

KHS 9600 Doctoral Seminar in Kinesiology, Health and Sport Studies Cr. 3
Introduction to active programs of research in the field of kinesiology; research presentations and discussion by faculty, guest lecturers and students. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree; enrollment is limited to students in the Department of Kinesiology, Hlth & Sport Std.

KHS 9601 Professional Seminar Cr. 1
Critical examination, presentation, and discussion of current interest in kinesiology and health. The emphasis is on interdisciplinary communication and presentation skills. Offered Every Term.
Restriction(s): Enrollment limited to students in a Doctor of Philosophy degree.
Repeatable for 6 Credits

KIN - Kinesiology

KIN 2560 Individual Problems in Kinesiology Cr. 1-3
Solving a specific problem under the guidance of the divisional staff. Offered Fall, Winter.
Repeatable for 4 Credits

KIN 3000 Professional Perspectives in Kinesiology and Exercise Science Cr. 3
Synopsis of the academic, professional, and career perspectives of the Exercise and Sport Science major as well as the concepts and applications of the science of exercise, kinesiology, wellness, leadership, assessment, and internships. Offered Fall, Winter.

KIN 3400 Lifespan Growth and Development Cr. 3
Study of change in motor behavior from infancy to older adulthood. Competency in: ability to formulate a developmental perspective, knowledge of changing behavior across life-span, knowledge of factors affecting motor development, ability to apply knowledge in instructional and recreational settings. Offered Every Term.

KIN 3540 Cultural Foundations of Kinesiology Cr. 3
Introduction to cultural competence and cultural issues in physical activity, exercise, sport, and fitness for kinesiology and health care professionals. Offered Every Term.

KIN 3550 Motor Learning and Control Cr. 3
Study of motor skill acquisition and motor control with applications to physical activity. Focus on cognitive processes and neural mechanisms which contribute to motor learning and control. Satisfies General Education program Writing Intensive requirement for kinesiology majors. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C

KIN 3580 Biomechanics Cr. 3
Application of knowledge of human physical structure and function in the analysis and appreciation of human movement; theory and practice of human movement analytic techniques. Offered Every Term.
Prerequisites: BIO 2870 with a minimum grade of C and KIN 3000 with a minimum grade of C

KIN 5100 Anatomical and Physiological Bases of Physical Activity Cr. 3
Basic anatomical and physiological principles that have direct application to physical activity programming in the K-12 school setting and in community-based physical activity settings. The course will include practical application experiences to illustrate the theoretical knowledge base. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.

KIN 5210 Movement Education Cr. 3
Advanced study of elementary movement education through and in-depth analysis of Graham's movement skill themes. Study of movement concepts, skill themes, curriculum design, and the implementation of activities in a practical application. Students will also investigate research supporting the inclusion of movement education in quality physical education and physical activity programs. Offered Fall.
Prerequisites: KIN 5200 with a minimum grade of D-
Restriction(s): Enrollment limited to students with a class of Unranked Grad, Junior or Senior; enrollment is limited to Graduate or Undergraduate level students.

KIN 5350 Exercise Science Internship Cr. 4
Supervised experience in health and exercise programs with various populations at approved sites. Offered Every Term.
Prerequisites: KIN 6320 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $16
Repeatable for 8 Credits

KIN 5360 Senior Research Project Cr. 1-5
Students conduct scientific research in exercise science; review of literature, data collection, assisting with data transformation, help with formal presentation of written or oral materials of findings from the study. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.
Repeatable for 5 Credits

KIN 5520 Sport Psychology Cr. 3
History, personality, psychology of injury; theories of motivation, arousal, and anxiety; competition and cooperation, feedback, reinforcement and intrinsic motivation. Team dynamics, group cohesion, communication and leadership processes, psychological qualities and skills (such as goal setting, imagery, concentration). Unhealthy sport behaviors, burnout, over-training. Psychology of youth sport; character development. Offered Fall, Winter.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and PSY 1010-5999 with a minimum grade of C

KIN 5523 Physical Activity and Exercise Psychology Cr. 3
Introduction of physical activity and exercise psychology from a multi-theory perspective. Determinants, well-being and interventions in physical activity, physical education and exercise settings will be explored through a broad spectrum. Offered Fall, Winter.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and PSY 1010-5999 with a minimum grade of C

KIN 5550 Health and Physical Education for the Elementary School Teacher Cr. 3
Broad content knowledge of developmentally appropriate physical education and health education for children in grades K-6. Offered Every Term.

KIN 5770 Physical Activity Leadership Internship Cr. 7
Individually arranged, supervised, educational and professional experience at an approved on-campus or off-campus based internship site. Opportunities to organize and conduct physical activity leadership responsibilities under close supervision. Through this type of exposure, the student will receive practical, on-the-job experience in one or more types of physical activity leadership. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Unranked Grad, Junior or Senior; enrollment is limited to Graduate or Undergraduate level students.

KIN 6100 Methods of Group Training Cr. 3
Provides a comprehensive overview of the group exercise industry and instructional strategies for safe group exercise training for various populations and differing environments. Offered Fall, Winter.
Prerequisites: KIN 6300 with a minimum grade of C

KIN 6110 Motor Learning and Development Cr. 3
Principles and practices that affect the learning and development of motor skills from birth to early adulthood. Study of theories of motor development, motor learning, and motor control; motor skill classification and games classification; developmental and motor learning stages; methodological considerations including how to measure and assess motor learning in field-based situations; and professional applications of the motor learning and development in physical education and physical activity programming. Offered Winter.
Restriction(s): Enrollment limited to students in the College of Education.

KIN 6120 Strength and Conditioning Cr. 3
Provides a comprehensive overview of strength and conditioning with an emphasis on the exercise sciences, nutrition, program design, organization and administration, measurement, and evaluation. Offered Every Term.
Prerequisites: KIN 6300 with a minimum grade of C and KIN 3580 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.

KIN 6150 ECG Interpretation Cr. 3
This course provides students with an understanding of ECG and how to interpret static and dynamic ECG strips. It gives the opportunity for students to gain a basic knowledge of ECG and how to recognize normal and abnormal ECGs. Offered Winter.
Prerequisites: KIN 6300 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Unranked Grad, Junior or Senior; enrollment is limited to Graduate or Undergraduate level students.

KIN 6160 Pharmacology for the Physical Activity Professional Cr. 3
Provides students with an understanding of the concepts of pharmacology, how drugs work, and different pharmacologic actions and adverse effects that drugs produce. Offered Winter.
Prerequisites: KIN 6300 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.

KIN 6210 Physical Activity and Cognition Cr. 3
An overview of physical activity as it relates to cognitive functioning across the lifespan. Exploration of measures of physical activity, neuropsychological test batteries assessing various domains of cognitive functioning. Review studies examining the effect of physical activity on cognition and its underlying mechanisms. Offered Winter.
Prerequisites: KIN 5523 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Unranked Grad, Junior or Senior; enrollment is limited to Graduate or Undergraduate level students.

KIN 6300 Exercise Physiology I Cr. 3
Basic physiological concepts as they relate to exercise and human performance. Practical applications incorporated into the laboratory component. Offered Every Term.
Prerequisites: KIN 3000 with a minimum grade of C, KIN 5100 with a minimum grade of C, or BIO 2870 with a minimum grade of C

KIN 6310 Exercise Physiology II Cr. 3
Metabolic, neuromuscular, cardiovascular, and respiratory adjustments to acute and chronic exercise in health and disease, including body composition and weight control, nutritional considerations, and the effects of different environments on exercise performance. Offered Every Term.
Prerequisites: KIN 6300 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Education.
Equivalent: PSL 6010, PT 6310

KIN 6320 Fitness Assessment and Exercise Prescription Cr. 3
Provides physiological principles of physical fitness, including the assessment of physical fitness and exercise prescription guidelines. Offered Every Term.
Prerequisites: (BIO 2870 with a minimum grade of C or KIN 5100 with a minimum grade of C) and KIN 6300 with a minimum grade of C

KIN 7580 Biomechanical Analysis of Motor Activity Cr. 3
Principles and practice in the analysis of human movement. Selected methods of analysis are used in demonstrations and lab experiences. Students complete a biomechanical analysis project on an appropriate human motor skill. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

KIN 8530 Motor Learning Cr. 3
Examination of research in motor learning and performance. Relation of the nervous system and other physiological mechanisms to motor behavior and other conditions which affect the acquisition of motor skill: perception, motivation, psychology of motor behavior. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

LAS - Latino/Latina and Latin American Studies

LAS 1410 Latino/a Studies Seminar Cr. 1
First year seminar on Latino/a cultural studies topics. Offered Every Term.
Repeatable for 6 Credits

LAS 1420 Introduction to Interdisciplinary Latino/a Studies Research Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Interdisciplinary introduction to the issues, concepts, and debates concerning the study of Latin American and Latino/as in the U.S. Offered Winter.

LAS 1900 History of Colonial Latin America Cr. 3
Satisfies General Education Requirement: Social Inquiry
The Spanish and Portuguese conquests in the Americas; the multi-racial and class social structures they established as colonies, and the movements for independence, 1492-1822. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: HIS 1900

LAS 1910 Latin America from Independence to the Present Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry, Social Inquiry
Latin America from early nineteenth century to the 1980s. Major themes include: 1) colonial pasts and political independence; 2) state formation, and the construction of identities at local and national levels; 3) elite and popular relations, including cases of rebellion, revolution, and state repression; 4) forms of capitalist development and transformations in class relations, ideologies of economic development, and linkages to the United States. Offered Yearly.
Equivalent: HIS 1910

LAS 2100 Chicano/a Literature and Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry, Global Learning Inquiry
Examination of Chicano/a literature. Themes and figures in a social and historical context. Offered Every Other Year.
Equivalent: SPA 2400

LAS 2110 Puerto Rican Literature and Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Examination of Puerto Rican literature. Themes and figures in a social and historical context. Offered Every Other Year.
Equivalent: SPA 2500

LAS 2250 AfroLatino/a History and Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Interdisciplinary introduction to the history and culture of AfroLatinos/as in the U.S. from the perspective of the African Diaspora in the Americas. Offered Winter.
Equivalent: AFS 2250

LAS 2410 History of Mexico Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Historical development of Mexico and the Mexican people from the Spanish conquest to the present. Interaction of political, social, economic and cultural influences. Offered Yearly.
Equivalent: HIS 2440

LAS 2420 History of Puerto Rico and Cuba Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Historical development of Puerto Rico and Cuba from the pre-Columbian period to the present. Interaction of political, social, economic and cultural influences. Offered Intermittently.
Equivalent: HIS 2420

LAS 2430 History of Latino/as in the United States Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Historical development of people of Hispanic descent in the United States from the early nineteenth century to the present. Cultural conflict, and interaction of political, social, and economic forces. Offered Yearly.
Equivalent: HIS 2430

LAS 3000 Special Topics in Latino/a and Latin American Studies Cr. 3
Selected, specialized and/or topical studies in Latino/a and Latin American studies. Topics to be announced in Schedule of Classes. Offered Fall, Winter.

LAS 3431 Revolutionary Movements in Latin America Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
This course examines revolutionary movements in twentieth-century Latin America with special emphasis on Central America, the Caribbean, and the Southern Cone. The course also explores the relationship between these movements, U.S. involvement in the region, and the Latin American diaspora. Offered Fall.
Equivalent: HIS 3431

LAS 3432 Latin American History Through Film Cr. 3
This course explores the histories and cultures of Latin America as represented through the medium of film, as well as how film has portrayed the people, politics, and cultures of Latin America in return. The class considers how and why various historical topics have been depicted in movies, how the historical events were interpreted through the filmmaker's imagination, and to what extent the film version reflected the reality of the historical episode. When used in conjunction with textbooks, primary sources, and articles, chapters, and/or monographs, films are a useful tool to analyze themes such as the constructed nature of history, and the interpretation and contextualization of primary sources. Offered Fall.
Equivalent: HIS 3432

LAS 3433 Gender and Sexuality in Latin American History Cr. 3
This course covers the Conquest/Encounter through the late 20th century and will explore Caribbean and Latin American history through the lenses of gender and sexuality. This course focuses on women and explores homosexuality and transgenderism in the Latin American and Caribbean context. Readings, lectures, and film discussions will focus on the intersectional experiences of people of different ethnicities and socioeconomic backgrounds. Offered Winter.
Equivalent: GSW 3433, HIS 3433

LAS 3434 Labor in Latin America Cr. 3
The aim of this course is to introduce students to the history of labor and the working-class throughout Latin America from pre-Hispanic times to the present. The class begins by looking at indigenous labor in the pre-Colombian context. This section will include readings on communal labor with emphasis on peasant classes. The second section moves to the Conquest of Latin America. Students will learn how colonialism influenced and drastically changed how people participated in the workforce. There will be readings on slave and indigenous labor. The third section deals with the independence and nation-building periods of the 19th and 20th centuries. Here students will examine how the working-class and peasants negotiated aspects of national identity in several case studies. This will involve exploring labor activism and other labor movements in Chile, Argentina, Peru, Brazil, and Mexico. Finally, the class will end with the neoliberal period and its impact on workers. Offered Every Other Year.
Equivalent: ELR 3434, HIS 3434

LAS 3540 Cultures and Societies of Latin America Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Latin American social structures and cultural variation, history, and relationship to the United States. Themes include class, race, ethnicity, gender, religion, globalization, and immigration to the United States. Offered Intermittently.
Equivalent: ANT 3540

LAS 3610 Seminar in Latino/a Urban Problems Cr. 3
Satisfies General Education Requirement: Social Inquiry
Historical and current issues in economics, politics, and culture involving the multi-racial and multi-ethnic Latino/a population of the United States. Offered Intermittently.

LAS 3710 Learning About Your Community Through Research Cr. 4
Blend of participatory, in-service, and classroom work to enhance undergraduate research skills by linking social science theories and concepts to hands-on community-based learning opportunities. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: SOC 3710

LAS 3800 Spanish for Heritage Learners Cr. 3
Review of grammar and composition for Spanish heritage learners. Conducted entirely in Spanish. Offered Intermittently.
Prerequisites: SPA 2025 with a minimum grade of C
Equivalent: SPA 3800

LAS 3990 Directed Study Cr. 1-3
Special topics are addressed by students and faculty. Offered Fall, Winter.
Repeatable for 9 Credits

LAS 5231 The Conquest in Latin America Cr. 3
Varying perspectives on European conquests in Latin America. Offered Intermittently.
Equivalent: HIS 5231

LAS 5560 Spanish American Cultures and their Traditions Cr. 3
Spanish America before and after the discovery of the New World. Art, music, customs, contemporary institutions, through films, records, newspapers, gallery visit to Detroit Institute of Art, and the text. Offered Every Other Year.
Prerequisites: SPA 3300 with a minimum grade of C
Equivalent: SPA 5560

LAT - Latin

LAT 1010 Elementary Latin I Cr. 4
Introduction to the grammar, syntax and vocabulary of the language, and introduction to the culture of the ancient Romans. Offered Fall.
Fees: $5

LAT 1020 Elementary Latin II Cr. 4
Continuation of LAT 1010, with increasing emphasis on reading ability. Offered Winter.
Prerequisites: LAT 1010 with a minimum grade of D-
Fees: $5

LAT 2010 Intermediate Latin Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Review of Latin grammar, and readings from selected Roman prose authors such as Cicero and Caesar. Offered Fall.
Prerequisites: LAT 1020 with a minimum grade of D-
Fees: $5

LAT 2020 Intermediate Latin II Cr. 4
Introduction to genre; poetic language, meters, sociological and historical context; Catullus, Horace, Ovid, Vergil. Offered Winter.
Prerequisites: LAT 2010 with a minimum grade of D-
Fees: $5

LAT 3210 Latin Poetry Cr. 4
Intermediate-level course for reading representative samples of poetry by prominent Latin authors. Offered Yearly.
Prerequisites: LAT 2020 with a minimum grade of D-
Repeatable for 12 Credits

LAT 3220 Latin Prose Cr. 4
Intermediate-level course for reading representative samples of prose by Latin authors. Offered Yearly.
Prerequisites: LAT 2020 with a minimum grade of D-
Repeatable for 12 Credits

LAT 5000 Latin for Graduate Students Cr. 1-4
Basic grammar and vocabulary of Latin; leads to reading of continuous passages of poetry and prose in Latin. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

LAT 5300 Readings in Roman History and Culture Cr. 1-3
Readings in Latin primary sources that are relevant to the associated CLA course (which is taught in English). Offered Every Term.
Prerequisites: CLA 5000-6XXX with a minimum grade of D- (may be taken concurrently) and LAT 3000-6XXX with a minimum grade of D-
Repeatable for 6 Credits

LAT 5810 Roman Historians Cr. 4
Selected readings from Tacitus, Livy, Caesar or Sallust illustrating the Roman rhetorical and ethical analysis of republican and imperial history. Offered Intermittently.
Prerequisites: LAT 3000-3999 with a minimum grade of D-

LAT 5990 Directed Study Cr. 1-4
Directed independent research in depth on a topic or author not treated in the regular Latin offerings, culminating in a course paper. Offered Every Term.
Repeatable for 8 Credits

LAT 6840 Roman Drama Cr. 4
Study of Roman comedy and tragedy through study of comedies of Plautus or Terence, or tragedies of Seneca. Studies in the early history of Roman drama may include readings in the literary remains of Accius, Pacuvius, and Naevius. Offered Intermittently.
Prerequisites: LAT 3000-3999 with a minimum grade of D-

LAT 6890 Roman Satire Cr. 4
Readings in the works of satirists such as of Horace, Persius and Juvenal. Offered Intermittently.
Prerequisites: LAT 2020 with a minimum grade of D-

LAT 7810 Studies in Latin Poetry Cr. 4
Study of a major poet or genre of poetry. Topics to be announced in Schedule of Classes . Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

LAT 7820 Studies in Latin Prose Cr. 4
Study of a major prose author or prose genre. Topics to be announced in Schedule of Classes . Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

LAT 7999 Master's Essay Direction Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

LAT 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

LDT - Learning Design and Technology

LDT 2015 Introduction to Learning Design and Technology Cr. 3
Exploration of the field including its history, foundational knowledge, and the skills and attitudes required to be a professional. Students will create their professional development journey by applying design theories, principles and best practices. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 3115 Instructional Design Cr. 3
Explores broad conceptions of instructional design including all activities involved in generating intentional learning and performance improvement experiences. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 3125 Evaluation Techniques and Tools Cr. 3
Evaluation techniques and tools for learning design and technology based on formative and summative evaluation approaches. Students will learn to select appropriate evaluation techniques and design effective evaluation tools to generate feedback and facilitate improvement. Offered Yearly.
Prerequisites: LDT 3115 with a minimum grade of C

LDT 3135 Practical Project Management Cr. 3
Foundational skills, knowledge, and practice of agile project management for instructional designers using process frameworks. Students will learn the application of methods, tools, and techniques aligned with the Project Management Institute (PMI) standards. Offered Yearly.
Prerequisites: LDT 3115 with a minimum grade of C

LDT 3145 Interactive Course Design Cr. 3
Design, implementation, and evaluation of digital learning products based on theory and evidence-based practices. Students will use modern development tools to create engaging and interactive digital learning products. Offered Yearly.
Prerequisites: LDT 3115 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 4135 Engaging Presentation and Facilitation Strategies Cr. 3
Knowledge and delivery skills for conducting professional presentations in multiple settings and the facilitation of small and large group sessions. The focus is on the communication process, audience analysis, preparation, and selection of content and support materials. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 4145 Video and Games for Learning Cr. 3
Design, implementation, and evaluation of serious games based on theory and evidence-based practices. Students will use emerging multimedia production tools for engaging videos and serious game-based learning products. Offered Yearly.
Prerequisites: LDT 3115 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 4155 Simulations for Learning Cr. 3
Design and development of models and interfaces for simulations, including devices, linear/discrete, XR, and branching scenarios. Offered Yearly.
Prerequisites: LDT 3115 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 4165 UX Design for Learning Cr. 3
Application of user experience (UX) design principles and processes to create a meaningful learning experience. Students will use modern UX tools to design and create an interactive, evidence-based learning experience. Offered Yearly.
Prerequisites: LDT 3115 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 4195 Mobile Learning Technologies Cr. 3
Design, implementation, and evaluation of mobile learning products based on theory and evidence-based practices. Students will use emerging multimedia production tools to create engaging and effective mobile learning products. Offered Yearly.
Prerequisites: LDT 3115 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 4235 Directed Study in Learning Design and Technology Cr. 1-4
Supervised individual learning experience design or research project which is outside the scope of formal courses. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Education.
Repeatable for 8 Credits

LDT 4900 Advanced Instructional Design Cr. 3
Application of learning design theories, principles and techniques to create a meaningful design product that meets learner needs. Students will engage in a 15-week design challenge, working in design teams employing empathic design with an authentic client who requires a specific design deliverable. Offered Yearly.
Prerequisites: LDT 3115 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

LDT 4915 Capstone in Learning Design and Technology Cr. 3
A capstone learning experience situated in the learning design ecosystem. Apply accumulated learning experiences to execute a viable instructional solution and develop designer identity. Offered Fall, Winter.
Prerequisites: LDT 4900 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to Undergraduate level students.

LDT 4920 Internship in Learning Design and Technology Cr. 4
Supervised training under faculty or professional mentor. Students will gain experience in the demonstration of analysis, instructional design, evaluation, project management, and performance improvement. Offered Fall, Winter.
Prerequisites: LDT 4915 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major, minor, or concentration in Learning Design and Technology; enrollment is limited to Undergraduate level students.

LDT 6135 Technology Applications in School Administration Cr. 2-3
Use of technology tools by school administrators; factors related to leadership and research in technology integration. Also offered online. Offered Fall.
Repeatable for 3 Credits

LDT 7111 Design Studio I Cr. 4
Exploration of design thinking, learning design, and empathic design to generate meaningful learning experiences that address the needs of specific learner audiences. Students will create detailed design plans and prototypes that demonstrate appropriate application of relevant learning theories and best practices. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7112 Design Studio II Cr. 4
Application of learning design theories, principles and techniques to create a meaningful design product that meets learner needs. Students will engage in a 15-week design challenge, working in design teams employing empathic design with an authentic client who requires a specific design deliverable. Offered Fall, Winter.
Prerequisite: LDT 7111 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7130 Facilitating Digital Learning Cr. 4
Design, development, facilitation, and evaluation of various learning activities for diverse learners. Students will learn to facilitate learning activities in a range of digital learning settings such as mobile, blended, online, virtual, formal, informal, and ubiquitous. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7140 Interactive Course Design Cr. 4
Design, development, implementation, and evaluation of digital learning products based on research and theory. Students will use modern development tools to create engaging, interactive, digital learning products. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7145 Needs Assessment and Analysis Cr. 4
Examination and application of needs assessment and analysis concepts, approaches, methods, and procedures across various levels (societal impact, organizational outcomes, human performance, and knowledge/learning). Illustrates evidence and processes required for performance improvement intervention selection in a variety of settings, particularly the workplace and educational settings. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7150 Evaluation of Learning and Performance Cr. 4
Evaluation of learning and performance interventions that link to stakeholders, decision-making, and performance needs. Students will learn the identification of measurable indicators and alignment of methodology to derive actionable performance improvement recommendations. Offered Winter.
Prerequisites: LDT 7145 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7180 Message Design for Learning Cr. 4
Analysis and application of principles of perception, message design, and foundation research for publication of print and electronic materials. Includes use of color, shape, typography, and page and screen design principles. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7210 Emerging Technologies for Digital Learning Cr. 4
Exploration, demonstration, and integration of emerging technologies in digital learning including online, blended, mobile, formal and informal learning contexts. Students will learn about innovative learning technologies and how to integrate them in varied digital learning contexts. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7220 Mobile Learning Technologies Cr. 4
Design, development, implementation, and evaluation of mobile learning products based on research and theory. Students will use emerging multimedia production tools to create engaging, interactive, and instructionally-sound mobile learning products. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7230 Video, Simulation, and Games for Learning Cr. 4
Design, development, implementation, and evaluation of serious games based on research and theory. Students will use emerging multimedia production tools to create evidence-based and engaging videos, simulations, and serious game-based learning products. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7240 Learning in Organizations Cr. 4
Provides an introduction to an organizational scope for learning and performance. Students will apply theory and concepts in human resource management, talent development, and human performance technology. Offered Yearly.
Prerequisites: LDT 7150 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7310 UX Design for Learning Cr. 4
Application of user experience (UX) design principles and processes to create a meaningful learning experience. Students will use modern UX tools to design and create an engaging, interactive, instructionally-sound learning experience. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 7400 Capstone Project Cr. 2
A capstone learning experience situated in the learning design ecosystem. Apply accumulated graduate learning experiences to execute a viable instructional solution and e-Portfolio. Offered Fall, Winter.
Prerequisites: LDT 7112 with a minimum grade of B and LDT 7150 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

LDT 8100 Critical Issues in LDT Scholarship Cr. 4
Critically analyze and synthesize key issues and concepts in the scholarship of Learning Design and Technology (LDT) demonstrated by written, oral, and visual communication. Students will develop an understanding of the research scholar's role in LDT and self-assess personal development as an emerging scholar. Offered Every Other Year.
Prerequisites: LDT 7111 with a minimum grade of B, LDT 7112 with a minimum grade of B, LDT 7145 with a minimum grade of B, and LDT 7150 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

LDT 8110 Theory and Research in LDT Scholarship Cr. 4
Demonstrate critical analysis, synthesis, and application of theories relevant to Learning Design and Technology (LDT) research through written, oral, and visual communication. Students will refine their understanding of the research scholar's role in LDT and self-assess personal development as theory-driven researchers. Offered Every Other Year.
Prerequisites: LDT 8100 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

LDT 8120 Practicum in Learning Design and Technology Cr. 1-9
Supervised training with a professional mentor. Students will gain experience in the demonstration of research methods, analysis, instructional design, evaluation, project management, and performance improvement. Offered Fall, Winter.
Prerequisites: LDT 7112 with a minimum grade of B or LDT 7150 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

LDT 8130 Directed Study in Learning Design and Technology Cr. 1-6
Supervised individual research project which is outside the scope of formal courses. Offered Fall, Winter.
Prerequisites: LDT 7112 with a minimum grade of B or LDT 7150 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

LDT 8135 Technology Applications in Central Administration Cr. 3
Use of technology tools and data by central administrators; factors related to central office leadership and research in technology integration. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Education.

LDT 8320 Performance Consulting and Analysis Cr. 4
Practical application of principles of performance consulting to solve problems in large and small organizations. Topics include: role of performance consultant, identifying business needs, assessing performance, contracting techniques, managing the performance improvement process. Also offered online. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

LDT 9105 Conducting Research in Learning Design and Technology Cr. 4
Design, development, and execution of a small-scale research study in Learning Design and Technology (LDT). Students will complete and present a LDT study to demonstrate scholarship skills. Offered Every Other Year.
Prerequisites: EER 7000-9999 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

LDT 9110 Advanced Research Seminar and Practicum Cr. 4
Course designed for advanced doctoral students in Learning Design and Technology; however it is also appropriate for students in other disciplines. Students should have completed almost all of their coursework in their major, and preferably also their work in EER. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

LED - Language Education

LED 6500 Teaching World Languages in Elementary and Middle Schools: Methods III Cr. 3
Approaches and techniques; review of theory and practice relevant to young learners. Students teach mini-lessons and prepare materials based on national standards and age-appropriate methodologies. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.

LED 6505 Culture as the Basis for Language Teaching Cr. 3
LED 6505 examines language and culture in a multidisciplinary theoretical framework, to provide students with objective relativistic and holistic attitudes about human diversity enabling them to relate to pupils in urban areas. Offered Yearly.

LED 6510 Second Language Acquisition and the Teaching of Grammar Cr. 3
Seminar and intensive review of major models of applied sociolinguistics and psycholinguistics; second language acquisition research and teaching of grammar in K-12 education. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.

LED 6520 Teaching English as a Second Language/Foreign Language: Methods I Cr. 3
Methods and techniques; fundamental theory and practice; English as an international/intranational language. Students micro-teach lessons and prepare teaching materials which emphasize the listening and speaking language skills. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.
Repeatable for 6 Credits

LED 6530 Teaching English as a Second Language/Foreign Language: Methods II Cr. 2-3
Methods and techniques; English as an international/intranational language. Students micro-teach lessons and prepare teaching materials which emphasize the reading and writing language skills. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.

LED 6555 Integration of Language and Content in Language Teaching Cr. 1-3
Examination and evaluation of instructional strategies used to teach content and develop a second language in specific content/language area instruction. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.
Repeatable for 3 Credits

LED 6565 Assessment in Language Teaching Cr. 3
This course explores the role of assessment in the education of multilingual learners in PK - 12 classrooms. The impact of current trends in assessment in the United States will be analyzed as well as how assessments are used for the identification and placement of multilingual learners Students will evaluate language proficiency assessments and examine how various forms of classroom-based assessments inform instruction. Offered Yearly.
Restriction(s): Enrollment limited to students in the College of Education.

LED 6580 Culture as the Basis for Language Teaching Cr. 2-4
Culture examined in a multidisciplinary theoretical framework, to provide students with objective relativistic and holistic attitude about human diversity, enabling them to relate to pupils in urban areas. Offered Every Other Year.
Repeatable for 4 Credits

LEX - Law

LEX 5000 Law in Social Context Cr. 3
Covers several substantive areas, with a particular focus on property in both its traditional common-law form (like owning a house) and in its newer statutory contexts (like intellectual property -- for example, owning a patent). What does it mean to own something? What makes someone a legal owner of something? What kinds of things can be owned, what things cannot, and why? Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 5010 Law and Harm Cr. 3
Presents the basic concepts of law and the fundamentals of legal analysis, giving in-depth attention to the fields of tort and criminal law and using them to examine how law conceives of, regulates, and adjudicates questions of harm. When can you sue a person or a group for harming you? On the street or in a business, what makes something a crime, and why do we prosecute and punish crimes the way we do? Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 5020 Legal Procedure Cr. 3
Examines the lifecycle of a case in court. Discusses how a lawsuit begins with the filing of a complaint and how it ends in a judicial order, and it covers everything else that happens along the way—with special attention paid to things like negotiation and settlement. Introduces legal concepts like “due process of law,” and explores the procedural similarities and differences between civil cases, criminal cases, and administrative proceedings. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 5030 Law and Transactions Cr. 3
This course introduces students to the legal theories, concepts, and rules related to the formation, interpretation, performance, breach, and termination of contractual relationships between and among individuals and entities, primarily private parties. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 5100 Law and Regulation Cr. 3
This course introduces students to the modern regulatory state and the methods of legal analysis used within different legal and political institutions in the United States. The course will explore the roles and structure of administrative agencies and procedures, and examine how different approaches to regulation require the ability to interpret statutes, assess arguments and evidence with an understanding of multiple disciplines, and engage in comparative institutional analysis. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 5110 Access to Justice Cr. 3
The U.S. civil legal systems are complex. To navigate these systems generally requires a lawyer. But lawyers are expensive. Legal aid attorneys, who provide free legal services for low-income persons, are overworked and there simply are not enough. This course engages students in understanding the significant access to justice issues in the U.S. and developing ways to address these issues. Utilizing historical overviews, the course will explore legal and political systems and how they intersect with access to justice. Students will explore how race, gender, sex, age, wealth, and other status determine access to justice. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 5120 Law, Race and Racism Cr. 3
This course examines how racial categories have shaped the United States legal system from its earliest foundations to the present. Beginning with 17th-century theories on race, it explores how these ideas informed legal structures of inequality, including slavery, restrictive citizenship policies, and doctrines such as Manifest Destiny that displaced Indigenous peoples. The course analyzes the legal status of non-white populations before the Civil War and after the Reconstruction Amendments, including the impact of Dred Scott, Jim Crow laws, and state-tolerated racial violence. It also considers the legal consequences of the U.S. conquest of Mexico and anti-Asian legislation. Throughout, students connect these histories to ongoing racial inequalities and examine Civil Rights-era race identity discourse and its influence on contemporary law. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 5130 Law and Disability Cr. 3
The course will provide a broad overview of how law has deeply shaped the American experience of disability. This course will examine how American law defines "disability" and in so doing creates and sustains ableist privilege on the one hand, and profound injustices experienced by individuals with disabilities on the other. This course will also examine the ways disability injustices intersect with and are exacerbated by other forms of injustice, such as racism, sexism, heterosexism and classism. The course will also consider the legal reform efforts of disability activists. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 5140 Law and Medicine Cr. 3
This course will introduce students to complex legal questions raised by medical practices, access to healthcare and advances in medical research. Such topics include: patient rights, standards of care, medical malpractice and negligence, informed consent, medical care for vulnerable populations, end-of-life decisions, reproduction, access to elective medical treatment and medical experimentation. Students will examine how statutory and case law both constrains and supports medical practices and advances. The course will also consider access to healthcare from the point of view of race, class, gender, sexual orientation, age and disability, thereby raising important legal questions concerning fairness and justice. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.

LEX 6100 Civil Procedure A Cr. 3
Structure of the judicial system in the United States and the process of civil litigation from the commencement of an action through appeal. Subjects considered include jurisdiction, the relationship between state and federal courts, pleading, discovery and other pre-trial devices, trial and appellate review. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6101 Civil Procedure B Cr. 3
Structure of the judicial system in the United States and the process of civil litigation from the commencement of an action through appeal. Continuation of LEX 6100. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6200 Contracts A Cr. 3
General principles of the law of contracts; definitions of contract; illegality, mistake, frustration, impossibility; statute of frauds, interpretation, the parol evidence rule; performance and breach; rescission; repudiation and discharge. Remedies, including damages, specific performance, injunction and restitution. All topics considered from viewpoints of both common law and statute. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6201 Contracts B Cr. 3
General principles of the law of contracts; definitions of contract; illegality, mistake, frustration, the parol evidence rule; performance and breach; rescission; repudiation and discharge. Remedies, including damages, specific performance, injunction and restitution. All topics considered from viewpoints of both common law and statute. Continuation of LEX 6200. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6300 Criminal Law Cr. 3
General doctrines of criminal liability as they relate to the moral and social problems of crime; definitions of principal crimes and defenses to criminal prosecution, both common law and statutory; limitations on the use of criminal sanctions. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6400 Legal Research and Writing A Cr. 2
Analysis of legal problems and the use of legal materials, through discussion, written assignments, and personal conferences. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6401 Legal Research and Writing B Cr. 2
Advanced analysis of legal problems and the use of legal materials, through discussion, written assignments, and personal conferences. Preparation of an advanced trial brief and oral argument on a selected civil or criminal case before a court composed of faculty or members of the local bench and bar. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 6500 Property Cr. 4
Basic course in real property, which will include selected materials from some of the following areas: historical introduction to real property; personal property transfers by gift, finding, adverse possession; modern law of possessory estates, including non-freehold estates, and landlord and tenant relationships; concurrent estates; restraints upon the use of land; conveyancing and effects of the Recording Acts. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6600 Torts Cr. 4
Legal principles underlying wrongs not based on contract, arising from intentional or negligent conduct and including strict liability; the nature of particular wrongs, including injuries to the person, to reputation, to real or personal property, and to interference with business or family relations. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6700 Constitutional Law I Cr. 3
Problems arising under the Constitution of the United States, with particular attention to the nature of judicial review in constitutional cases and to the role of the judiciary in umpiring the federal system. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6800 Professional Responsibility and the Legal Profession Cr. 2
Conflicts of interest; the attorney's standard of care, fiduciary duty, the organization of bar associations, the attorney's duty to the court and the community; the attorney's responsibilities in trial, and in unilateral actions and negotiations. The duty of disclosure of adverse data, the development of group legal services, and of legal services to the poor, and the responsibility of the bar in these areas. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 6850 Bar Exam Strategies and Fundamentals Cr. 2
This course will focus on the bar examination strategies and foundational skills required to pass the bar examination. It will introduce students to the components of the bar exam, provide instruction on strategies to pass, and teach students how to effectively answer bar exam questions. This course will complement other elements of Wayne Law's institutional bar preparation program to provide students with a full-scale, integrated, comprehensive bar examination preparation experience and approach. By offering bar exam strategies in a course for credit, students will not only get a head-start preparing for the bar exam, but students who may be at-risk for failing the bar exam will head into bar preparation with an understanding of the foundational skills needed to pass the exam. Offered Every Term.
Restriction(s): Enrollment is limited to Law level students.
Fees: $95

LEX 6900 The Regulatory State Cr. 3
Introduction to statutes and agency decisions and the central role they play in modern government. Nature of statutes and agency regulations, how they are generated, and how they are interpreted and applied. Justifications for modern regulation, the modern administrative state, the incentives that influence the behavior of the various actors, and the legal rules that help structure the relationships among legislatures, agencies and courts. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7001 Accounting for Lawyers Cr. 2
Basic concepts of bookkeeping and generally-accepted accounting principles; background to help read and interpret financial statements; auditor's role and accounting issues that arise in business planning, in litigation, and in managing financial investments. May not be taken for credit by those who completed more than two undergraduate accounting courses or a graduate course in financial accounting. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7006 Administrative Law Cr. 3-4
Functions and behavior of administrative agencies; constitutional and statutory constraints on agency operation. Government role in formulating and enforcing policy, administering of public benefit programs, and awarding of licenses. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7014 Taxation of Corporations: Acquisitions and Restructuring Cr. 4
Satisfies the professional skills requirement. Explores the tax rules for corporate stock or asset acquisitions and restructurings (including reorgs, spins and loss carryovers), and S corporations or consolidated returns through the lens of a simulated firm tax group working on a series of client projects (using an actor as client). Each student will work on at least two team projects during the semester, preparing written and oral presentations for, and briefing the client on, issues related to the team project topic. Team projects include: prepping a client for and negotiating an acquisition, drafting a private letter ruling request, preparing an internal memorandum outlining the pros and cons of restructuring choices, researching and writing a tax opinion letter, and outlining advantages of various entity choices for future transactions. Offered Yearly.
Prerequisite: LEX 7821 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7015 Advanced Torts Cr. 2
This course will focus on torts not involving physical injury, such as misrepresentation, defamation, invasion of privacy, interference with business relations, and misuse of legal procedure. These causes of action, which provide remedies for economic, reputational, or emotional harm, are not ordinarily covered in the four-hour Tors course required in the first year. They have become burgeoning areas of potential liability due to the emergence of electronic communications. An effort will be made to integrate substantive doctrine and practice implications with legal, economic, political and social theory. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7016 Alternative Dispute Resolution Cr. 2
Forms of non-trial dispute resolution: arbitration, mediation, and negotiation--their various permutations and substantive applications. Factors affecting choice between dispute resolution processes, differences in design and structure, relative costs, quality of participant performance, accountability for results, privacy of proceedings, role of legal norms and lawyers, due process considerations, availability of judicial review; tactics and strategies employed in arbitration, mediation and negotiation. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7021 American Indian Law Cr. 3
This course explores the foundational principles and doctrines governing the legal and political relationship between the United States and Indian tribes. Major topics in the course include the history of federal Indian law and policy, congressional plenary power, principles of interpretation of laws and treaties regarding Indians, the nature of tribal sovereignty, and jurisdiction in Indian country. In examining these topics, we will discuss laws and policies concerning tribal justice and legal systems, gambling and taxation in Indian country, and the Indian Child Welfare Act. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7023 Animal Law Cr. 3
Animal law encompasses human-animal interactions and evaluation of competing interests within the context of traditional areas of law (e.g., veterinary malpractice, expansion of anti-cruelty statutes to include farm animals, damage for death of / injury to companion animals, disputes over custody of companion animals in divorce or separation, landlord-tenant housing disputes, the inclusion of animals in wills and trusts, and constitutional issues such as standing). It also encompasses the current legal status of animals as living property and explores whether this status is antiquated and needs re-evaluation to reflect societal beliefs and values. Course will consider these traditional areas of law, groundbreaking laws enacted by other countries, as well as theories for the expansion of consideration and rights. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7026 Antitrust Cr. 2-4
Government control of trade practices and industrial market structures which inhibit the competitive process; monopoly, oligopoly, mergers, cartel practices, distribution arrangements, resale price control, franchising patent licensing, foreign commerce and price discrimination under the Sherman, Clayton, Federal Trade Commission, and Robinson-Patman Acts. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7039 Automotive Law Cr. 2
The Automotive Law course will offer an overview of the automobile industry and related law, and cover the basic theories and legal implications of the automotive franchise system, automotive marketing and advertising, automated, autonomous and connected vehicles, automotive products liability, consumer issues including privacy, cybersecurity and automotive safety, and the over-arching role of artificial intelligence. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7051 Bankruptcy and Creditors' Rights Cr. 3
Problems arising when debtors are in financial difficulty, including the principal state remedies of unsecured creditors such as attachment, garnishment, and enforcement of judgments; Chapter 7 bankruptcy liquidations; Chapter 13 wage-earner plans; and Chapter 11 reorganizations. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7058 Bioethics and the Law Cr. 3
Role of law in shaping, analyzing and resolving conflicts that arise in the interplay between medicine, biotechnology, ethics, social history, and cultural evolution. Topics include reproductive rights and genetic technologies, maternal fetal decision making, medical decision making, definitions of death, death and dying decisions, regulation of research on humans, interdisciplinary decision making, and access to health care. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7060 Business Planning Cr. 4
Problems involving common business transactions, including choice of entity to conduct business; organization, financing, and operation of a corporation; restructuring of business enterprises. Corporate, tax, securities law, and financial matters; role of business lawyer in counseling and planning business transactions. Relationship between the corporation and its shareholders. Offered Yearly.
Prerequisite: LEX 7156 with a minimum grade of D and LEX 7761 with a minimum grade of D and LEX 7816 with a minimum grade of D and LEX 7821 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7070 Child Abuse and Neglect Cr. 2
Introduces students to state and federal laws governing the child protection and child welfare systems. Topics addressed will include: defining abuse and neglect; mandatory reporting; child protection investigations and limitations thereon; emergency removal and less burdensome alternatives; adjudicatory hearings and proof of abuse and neglect; dispositional hearings and powers; permanency planning and long-term placements; termination of parental rights; right to counsel; and the duties of lawyers for children in abuse and neglect cases. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7075 Child, Family, and State Cr. 3
Aspects of children in legal system. Legal relationship between children, their parents, and government (federal, state, local, and tribal); rights of these parties and relationships between them. Education, medical care, children's rights, concept of legal parenthood, parental rights (and termination thereof), adoption, juvenile justice process. Concentration on constitutional and policy analysis as opposed to examination of rules and regulations in the different areas. Students graded on class participation, several short written assignments, and take-home final examination. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7092 Class Actions and Multidistrict Litigations Cr. 3
This course covers the purpose, policies, evolution, and real-world benefits and challenges of class actions and multidistrict litigations. Students will not only learn the rules surrounding class actions, but they will also discuss real cases that have been prosecuted and engage in class certification briefing and oral argument. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7121 Conflict of Laws Cr. 3
Principles, rules and methods thought to underlie the resolution of multi-state problems. Jurisdiction and enforcement of judgments of other states. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7122 Congressional Oversight and Civil Investigations Cr. 2
This course is an introduction to the conduct of congressional and civil investigations. Students will learn the basic elements and considerations in a civil investigation conducted by a private law firm or by a legislative body. In addition to the regular course work, students will be required to develop an investigative plan for a given set of facts and present that plan to the class for discussion. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 7123 Constitutional History in the United States to 1860 Cr. 4
The emergence of distinctively Anglo-American legal cultures in the Atlantic basin and then in North America, from early exploration and settlement until the early stages of Civil War. Special attention is paid to law's ongoing relationship to state making, the shifting terrain of citizenship, the emergence of capitalism, and the construction within society of racial, gendered, and class distinctions. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7126 Constitutional Law II Cr. 4
Individual rights under the Constitution of the United States. Freedom of speech, religious freedom and equal protection. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Equivalent: LEX 7829

LEX 7127 Constitutional Litigation Cr. 3
This course will track the jurisdictional and constitutional basis and the history of claims by individuals against government officials for constitutional violations. It will explore the limits and constraints on the actions of officials and the policies of governments. How must the plaintiffs plead and prove such cases and how can defendants defend their actions and policies. Since 1961, victims of official misconduct – ordinary private persons – have had the ability and opportunity to enforce the United States Constitution in federal courts. This has for decades provided American lawyers, courts and litigants with important power, the power to directly shape American democracy in unique ways. The study of this system of constitutional enforcement is essential to an understanding of American constitutional jurisprudence. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7128 Consumer Law Cr. 2-3
An introduction to law specially directed at the rights and obligations of consumers. The consumer marketplace is regulated by a series of discrete statutes and regulations, such as the Federal Trade Commission Act (and accompanying regulations), Truth-in-Lending Act, Fair Credit Reporting Act, Equal Credit Opportunity Act, Fair Debt Collection Practices Act, and lemon laws. This course provides an overview of these special rules and their interpretation and enforcement. As such the course provides an introduction to the role of administrative agencies and the interpretation of statutes and regulations. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7131 Consumption Based Tax Cr. 2
The Consumption Based Tax course will examine the foundational principles of a consumption based tax like a sales or value added tax, and will address global consumption tax systems, focusing on value added tax (VAT). The course highlights innovations incorporated in national VATs, including real property, financial, agriculture and the public and non-profit sectors. Students will examine the extent to which a VAT can apply at a national, subnational, and multinational level, and the problems that might be encountered. Offered Intermittently.
Prerequisite: LEX 7816
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7136 Copyright Law Cr. 3
Law of copyright and related doctrines protecting literary, musical and artistic works. Nature of rights and kinds of works protected, doctrine of fair use, pre-emption problems, and problems posed by new technologies. Emphasis on 1976 Copyright Act and its relation to issues such as home videotaping, photocopying and non-profit performance of protected works. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7141 Corporate Finance Cr. 3
Economic and legal problems arising in connection with financing decisions of publicly-held corporations, including valuation of the enterprise and its securities, determination of securities structure and dividend policy, capital structure (including problems relating to debt), and acquisition strategies. Federal securities regulations and selected topics. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7156 Corporations Cr. 2-4
Relationships between owners and directors of a corporate enterprise; different types of stock ownership and the corresponding rights in profits and control; consolidation and merger; distinctive features of the closed corporation. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7161 Criminal Procedure: Investigation Cr. 3
Constitutional requirements for arrests, searches, seizures, electronic surveillance, and interrogations. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7166 Criminal Procedure: Adjudication Cr. 3
Operation of the criminal justice system from the defendant's first appearance in the court through the trial, and to post-conviction remedies, including a study of bail, the preliminary hearing, the grand jury, voir dire, discovery, double jeopardy, joinder, and habeas corpus. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7170 Current Topics in International Law Cr. 1
This course examines the institutional and procedural dimensions of international dispute resolution, including issues of jurisdiction and access, preliminary objections, provisional measures, representation of parties, third-party intervention, and the various phases of proceedings. By the end of the course, students will be familiar with the main features of the most significant mechanisms for resolving international disputes. They will have gained an understanding of the key concepts and methods of international dispute resolution in a comparative perspective, and developed an awareness of both the potential and the limitations of these mechanisms as instruments for promoting peace, security, justice, and economic development. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 7172 Developing the Commercial Real Estate Project Cr. 3
Real estate development: laws and requirements affecting the development of commercial properties, including the law of contracts; real estate interests, such as mortgages, easements and encumbrances, zoning laws, environmental laws, building codes and requirements and other regulatory laws. Topics include: purchase and sale contracts, title and survey matters, due diligence investigations, closing processes, construction, financing, and leasing. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7185 Disability Law Cr. 3
This is a survey of American law as it relates to people with disabilities, with particular emphasis on the Americans with Disabilities Act ("ADA"), Section 504 of the Rehabilitation Act ("Section 504"), and the Individuals with Disabilities Education Act ("IDEA"). The focus of the course is on access to employment, government programs and services, places of public accommodation, housing, healthcare, education, and insurance. Other topics addressed include civil commitment; guardianship, conservatorship, and less restrictive alternatives; and income support programs. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 7190 Domestic Violence and Law Cr. 2
Grounded in the historical and social context of domestic violence, as well as the dynamics of abusive relationships; this course will examine the response of the legal system to complex issues raised by domestic violence. The course will focus on criminal and family law issues and their intersections. Also explored will be current issues in the law as well as cultural contexts of interpersonal and gender-based violence. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7201 Education Law Cr. 3
Survey of education law with emphasis on public education. Historical development of education law in the U.S. as well as topics of current interest: tenure, academic freedom, school discipline, school financing, home-based schooling, state regulation of private schools, church-state relationships, and desegregation in public education. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7205 Employee Benefits Law Cr. 3
This course is a survey course intended to provide students with a strong grounding in the major laws affecting employment-based benefit plans, including the Employee Retirement Income Security Act (ERISA) and the Internal Revenue Code. The course will address both retirement plans (including traditional defined benefit plans and common types of defined contribution plans such as 401 (k) plans and welfare benefit plans (including health and life insurance and disability plans). Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7216 Employment Discrimination Cr. 2-3
Federal constitutional and statutory guarantees of freedom from invidious discrimination in employment. Thirteenth and Fourteenth Amendments, Title VII of the Civil Rights Act of 1964, the Reconstruction Civil Rights Acts, 42 U.S.C. 1881, et seq., the Equal Pay Act of 1963, and the Age Discrimination in Employment Act of 1967. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7221 Employment Law Cr. 2-3
Legal rights and responsibilities of employees (excluding rights provided by anti-discrimination laws and the NLRA); statutory and common-law limitations on the employer's right to discharge; protection of employee privacy and reputation; laws governing wages and hours, occupational safety, unemployment compensation, workers' compensation, and employee benefits. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7226 Entertainment Law Cr. 2-3
Legal and business issues in the entertainment industries, including those related to sound recordings, music publishing, literary publishing, films, television, the Internet and other new media. Readings and discussions: representing talent, drafting and negotiating contracts, remedies for breaches, and rights of publicity. How the entertainment industries and their economics work. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7231 Environmental Law Cr. 2-3
Environmental law in common-law, statutes, constitutional issues, administrative and international law. Coherent legal analysis of environmental problems and active legal remedies, rather than specialized instruction in pollution controls and the like. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7236 Equitable Remedies Cr. 2-3
Survey of the equitable remedies available for the vindication of substantive rights, which includes injunctive and restitutionary relief as well as the general treatment of equitable relief in contract, tort and criminal actions. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7241 Estate, Gift and Inheritance Taxation Cr. 2
This course designed to introduce you to the gratuitous transfer provisions of the U.S. federal taxation system. Topics that will be covered include: the rationale for and policy behind taxing gratuitous transfers, the mechanics of the estate and gift taxes and the relation between the two, among other things. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7266 Evidence Cr. 2-4
General principles relating to the proof of questions of fact in civil and criminal trials, including competency, relevancy, and materiality of evidence; judicial notice, presumptions; burden of proof; competency of witnesses, rules relating to examination and cross-examination of witnesses; weight and sufficiency of evidence. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7301 Family Law Cr. 2-3
Entry into marriage; legal treatment of couples in marital and non-marital relationships; divorce, including custody, alimony and property distribution, and the role of the attorney; procreation; illegitimacy; rights and responsibilities of children and parents with respect to each other and to the state; child abuse and neglect; and adoption. When offered for two credits, considerably less time is devoted to children's issues. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7306 Federal Courts and the Federal System Cr. 2-3
Interrelationship of state and federal law in our legal system from the point of view of the federal courts and the Congress. Emphasis on the politics, history, and philosophy of federalism, rather than on procedures. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7311 Taxation of Partnerships Cr. 2-3
This course covers the federal income taxation of partnerships and partners, with significant focus on the governing statutory provisions and regulations and the mechanics of partnership tax accounting. Topics will typically include the transfer of property to a partnership; determination of partners' distributive shares of items of income, gain, loss and deduction; partnership recourse and non-recourse debt; partnership cash or property distributions; and transfers of interests in partnerships. The course will also cover more general policy issues, including such topics as the concepts motivating the aggregate or entity approach, concepts of tax avoidance and the ethical issues arising in connection with the use of partnerships in tax shelter transactions, and the advantages and disadvantages of partnerships compared to alternative forms of business taxation such as C corporations and pass-through S corporations. Offered Yearly.
Prerequisite: LEX 7816 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7319 Firearms Law and the Second Amendment Cr. 2
This course focuses on legal issues affecting weapons. We will explore the origins, dynamics, and evolution of the Second Amendment, and discuss Heller, McDonald, and the difficult questions that have arisen in their wake. This course also considers other topics, including First Amendment issues, state constitutions, and various state and federal laws that limit who can own weapons, where they can be carried, and how they must be treated. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7321 Food and Drug Law Cr. 2
This course is designed to provide students with a basic working knowledge of domestic laws regulating food, drugs, cosmetics/biologics/blood, and medical devices. It has an administrative law overtone, providing and understanding of the legislative and regulatory processes through an in-depth look at the relationship between the Food and Drug Administration (FDA), industry, consumer interest groups, and Congress. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 7326 Foreign Direct Investment Cr. 3
History of, and policy justifications for, protection of foreign direct investment (FDI); the substantive international law regarding the protection of FDI; the process for resolving disputes between foreign investors and host states through international arbitration; and critiques of the existing legal framework for the protection of FDI. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7331 Franchise Law Cr. 2
Provides a survey of franchise and product distribution law, taking into account federal and state legislation and case law. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7353 Health Care Organizations and Finance Cr. 3
Legal responses to problems of health care costs, access and financing from both public and private perspectives. Registration of insurance and managed care, developments in federal ERISA preemption, changing business structures, and antitrust enforcement. Medicare and Medicaid financing, rules prohibiting self-referrals, and standards policing fraud and abuse. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7354 Health Care Quality, Licensing and Liability Cr. 3
Legal responses to problems of health care quality and medical errors. State licensing of health care professionals and institutions, self-regulation, and tort liability for physicians, hospitals and managed care organizations. Basic introduction to health care institutions, the particulars of malpractice litigation, and proposals for tort reform. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7371 Immigration and Nationality Law Cr. 2-3
Immigration, its history and development; entry into the United States, and alien status and adjustment to status; deportation and relief from deportation; exclusion and relief from exclusion; nationality and citizenship. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7384 International Commercial Arbitration Cr. 3
Course follows the life cycle of an international commercial arbitration, including: drafting and enforcing arbitration agreements; appointment and challenge of arbitrators; conduct of the proceedings; drafting of awards; review and enforcement of awards by courts at the seat of arbitration and beyond. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7401 International Aspects of US Taxation Cr. 2-3
United States taxation of non-resident aliens and foreign entities, foreign tax credit, determination of source of income, impact of tax treaties, earned income exclusion, tax effect of mode of operation and country of incorporation, and statutory and non-statutory tax devices available for international operations. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7404 International Business Transactions Cr. 3
This course introduces a wide range of problems and issues that private business entities may encounter in doing business across national borders. Topics include international sales, import and export regulations, cross-border IP protection and technology transfer, foreign direct investment, business ethics, and dispute settlement. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7406 International Finance: Transactions, Regulation, and Policy Cr. 3
Legal problems associated with flow of capital across national borders. Topics include international financial transactions, regulation of international capital markets, regulation of international banking and financial services, emerging market debt crisis, role of International Monetary Fund, reform of international financial system. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7408 International Law Cr. 3
Basic legal concepts applied by international tribunals and courts of the United States to the relations between independent nations. The nature and sources of international law; the use of treaties; international organizations; and practices respecting recognition, territory, nationality and jurisdiction. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7409 International Litigation Cr. 3
Issues arising in civil cases in American courts in which international parties, evidence, and issues are present. Subjects include personal jurisdiction, service of process abroad, conducting discovery abroad, suing foreign sovereigns and governmental officials, forum non conveniens and international arbitration. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7411 International Protection of Human Rights Cr. 2-3
The main international and regional legal instruments and procedures for the protection of human rights. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7413 International Prosecution of State Actors Cr. 3
Legal and political aspects of new processes by which one-time state officials (such as former Yugoslav President Slobodan Milosevic, former Chilean dictator Augusto Pinochet, and former East German leader Egon Krenz) and their followers have been subjected to prosecution in international and foreign legal systems. Basic elements of transnational criminal law; controversial questions of principle and policy such as United States opposition to the new International Criminal Court; concerns about retroactive punishment; respect for amnesties that have contributed to ending civil conflicts. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7418 International Trade Law Cr. 3
Regulation of international trade relations. Focus on Law of the World Trade Organization (WTO) and its interaction with domestic regulation of international commerce. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7419 Interviewing and Counseling Cr. 2-3
This course introduces students to interviewing and counseling theory, and helps students develop skills needed to effectively and efficiently interview and counsel clients in both litigation and transactional matters. Topics addressed and skills developed include active listening, phrasing and sequencing questions, eliciting timelines, probing for details, clarifying objectives, identifying options and discussing their consequences, and helping clients make final decisions. The course makes extensive use of role-playing exercises. Each student conducts a full-length simulated interview at mid-semester, and a full-length simulated counseling session towards the end of the semester. When offered for three credits, the course will include a forty-hour fieldwork component in which each student will interview and counsel actual clients who are seeking free legal help from one of the Law School's clinics or from a faculty-approved public interest externship field placement. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7422 Islamic Law Cr. 3
This course will survey the universe of Islamic law from the vantage point of a beginner to the field. The readings and class discussions will broadly cover the following: (1) classical Islamic jurisprudential theory, (2) substantive aspects of family and criminal law, (3) the intersection of Islamic law and the American legal system, and (4) the place of American-Muslims in the framework of American constitutionalism. Because law - of any variety - does not operate in a vacuum, discussions will proceed with reflection on prevailing sociopolitical realities such as global terrorism, jihadist movements, Islamophobia, misogyny, and racism. The student will also be asked to draw from the offerings of philosophy, critical race theory, postcolonial studies, security studies, and feminism. The aim is for course participants to develop a more textured understanding of Islamic law and to be better positioned to understand the debates surrounding its relevance and practice. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 7423 Introduction to Civil Rights Laws and Lawyering Cr. 3
This course is designed to introduce students to the history, major statutes, and current/potential future developments/directions in United States civil rights laws and lawyering. This course will introduce students to the wide range of legal areas in which civil rights lawyers work, drawing from civil rights laws written during multiple time periods, including the Reconstruction-era amendments and statutes, the major cases and statutes of the 1950s/60s/70s, newer civil rights statutes, cases, and other materials about civil rights lawyering. Students will also read both historical and future-oriented materials to understand how broader political conflicts and civil rights activism have shaped and continue to shape civil rights law, policy, enforcement and innovation. Offered Yearly.
Restriction(s): Enrollment is limited to Law level students.
Fees: $95

LEX 7424 Introduction to the Legal System of the United States Cr. 2-3
General introduction to the institutions and processes involved in lawmaking and legal interpretation in the United States, with a focus on lawmaking at the federal level. Topics include: federal legislative process, precedent and the common-law method, federal administrative rule-making, separation of powers, and judicial review. Sources of law produced by these processes and the development of research strategies with respect to these sources. Course is also designed to provide foreign LL.M students (all of whom write a Master's Essay to complete the LL.M. program) with an overview of the principal forms of legal scholarship in the American academy. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7426 Jurisprudence Cr. 2-3
Analysis of important legal notions such as law, sanction, rule, and sovereignty; relations between law and morals as seen particularly in the development of natural law and legal positivism and in the development of the notion of legal responsibility. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7435 Juvenile Delinquency Cr. 2
Introduction to the juvenile justice system. Topics include: juvenile court jurisdiction over delinquents and status offenders; pretrial criminal procedure in the juvenile justice context; screening and diversion; pretrial detention; waiver of juvenile court jurisdiction; procedural rights at trial; dispositional decisions. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7501 Labor Law Cr. 2-4
Legislative, administrative and judicial regulation of labor relations. The scope of national labor legislation; the protection of the rights of self-organization and the designation of bargaining agents; the negotiation and administration of the collective agreement; the legality of strikes, picketing and boycotts; employer interference with concerted activities; and the relations between unions and their members. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7511 Land Use Cr. 2-3
Allocation of land use in the urban environment by both private agreement and governmental order. Problems involved in the development and effectuation of community planning; goals by means of conservation, clearance, and renewal; zoning, variances and exceptions; housing code enforcement, subdivision control, eminent domain; relocation. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7514 Law, Authority, and Resistance Cr. 3
This course addresses, in both theoretical and practical terms, the relationship between legal and political obligation: When, if ever, do individuals have a moral obligation to obey the law because it is the law? What count as valid justifications of civil disobedience, conscientious refusal, or insurrection? When can governmental authority justifiably depart from "the rule of law"? When can individuals be held criminally accountable for egregious acts committed under unjust prior regimes? The course combines classics of the history of political thought with contemporary theoretical writings and contemporary discussions of topical questions (e.g., jury nullification, emergency measures, transitional justice). Particular attention will be paid to the special obligations of lawyers who are asked to validate immoral practices (e.g., "enhanced interrogation methods" in the Global War on Terrorism). Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95
Equivalent: PS 5514, PS 7514

LEX 7516 Law of Elections and Political Organizations Cr. 3
This course will explore ways in which the law governing the political process in the United States affects and reflects political power relationships. It will examine the way the law and other forces have shaped the structure of American political participation and will consider alternative directions American democracy might take. Topics will include the 2024 presidential election, the individual right to vote, the Voting Rights Act, redistricting, minority vote dilution, political and racial gerrymandering (including majority-minority districts), campaign finance reform, and direct democracy through the initiative process. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7518 Law of Armed Conflict Cr. 3
History and current state of the law governing recourse to force (jus ad bellum) and the law governing the application of force (jus in bello). Contemporary jus ad bellum topics include: prohibition of the use of force in international relations, self-defense, unilateral intervention in internal conflicts and humanitarian crises, as well as collective action relating to security and humanitarian crises. Contemporary jus in bello topics include: legal obligations relating to targeting, selection of weapons, status and treatment of prisoners, and protection of civilians during hostilities and occupation. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7519 Law of Policing Cr. 2
This course is an introduction to the law of policing. In this course, students will study the development of laws and policies related to policing in the United States. In addition to the regular course work, students will be asked to conduct focused research on a particular facet of modern policing. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 7520 Advanced Legal Writing: Legal Drafting Cr. 3
Legal Drafting provides students with an opportunity to develop transactional drafting skills. It focuses on writing techniques involved in drafting transactional documents most often assigned to summer interns and first and second year associates. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7541 Legislation Cr. 3
The legislative process and its use as an instrument of change; legislative drafting revision, interpretation and implementation. The appropriations process; role of and control of lobbying; operation of the legislative process and its effect on policy formulation; conduct of Congressional investigations, and effects of separation of powers doctrines. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7576 Local Policy Development and Advocacy Cr. 3
The primary goal of this skills course is to teach policy development skills, further develop research skills, and advance the ability of students to understand how to effectively communicate the purpose and substance of their policy and research. Specifically, students will learn substantive law and policy skills, have the opportunity to identify community needs, engage in research and analysis, interact with community institutions and organizations, and draft a policy. In doing so, students will build community engagement skills and local government knowledge. Through their coursework students will develop skills that can be used in a broad range of practice settings, including problem-solving and project management, effective oral and written communication, and the value of teamwork. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7581 Local Government Law Cr. 2
Law as an instrument for governing urban areas. Distribution of decision-making power between private and public persons, between state and local governments and among various local governments. Local finance, decentralization, annexation and municipal incorporation. Exploration of possible reform by means of metropolitan government or federal assistance. The lawyer's role in formulating governmental policy in major urban complexes. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7590 Maastricht Exchange Program Cr. 1-4
Students take courses offered in the Maastricht Exchange Program. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Repeatable for 4 Credits

LEX 7595 Law Exchange Program Cr. 1-6
Intended for students participating in approved study abroad programs of study. Offered Every Term.
Fees: $95

LEX 7603 Mergers and Acquisitions Cr. 2-3
Mechanics of an acquisition, including: (1) state corporate codes relevant to acquisitions, dissenting shareholder remedies, listing requirements, and federal security law affecting the mechanics (proxy, tender offers, public offerings); (2) successor liability, transfers of assets; (3) acquisition documents (confidentiality agreements, letters of intent, basic agreements, closing); (4) legal duties of board of directors and dominant shareholders (decision to sell or acquire, conflicts of interest, attempts to block takeovers, shareholder value); (5) disclosure requirements of federal and state securities law; (6) accounting and tax issues (definition of tax-free reorganization, accounting for mergers and acquisitions). Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7604 Mock Trial Workshop Cr. 2
Introduces students to basic evidence concepts (e.g. relevance, competency, impeachment, hearsay, authentication) and helps student develop basic trial advocacy skills (e.g. how to develop persuasive case theories and themes, how to deliver opening statements and closing arguments, how to examine and cross-examine witnesses, how to lay a proper evidentiary foundation for testimony, how to introduce and use demonstrative evidence, how to refresh a witness's recollection, how to impeach a witness by using the witness's prior statements, how to make and respond to objections). The course is graded on an Honors-Pass-Low Pass-No Credit basis. Students who have taken Trial Advocacy (LEX 7836) are not eligible to take this course, and vice versa. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95
Equivalent: LEX 7836

LEX 7606 Movement Lawyering Cr. 2
This course is for students interested in learning how to create social change through collective action. The dual aims of the course are to enrich our understanding of the mechanics of social change and to critically examine the relationship between law, lawyers, and social movements. Together, we will develop a nuanced understanding of law as a complex tool that has the potential to both co-opt social movements and support liberation. We will take a historical and theoretical case-study approach, with emphasis on the Civil Rights and Black Power movements in the United States. We will also draw lessons from contemporary movement-building efforts. During the semester, guest speakers on the front lines of racial and economic justice movements here in Michigan will join us to share their insights and ground our discussion. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7616 Negotiation Cr. 2,3
The 2 credit course is a comprehensive examination of various legal principles that affect negotiations, such as rights assessments, custom and practice, rule of contract construction, concepts of condonation, proper and improper conditions, as well as the effective use of evidence in the negotiation process. The course also explores strategic methods and techniques in which attorneys are frequently involved that affect the outcome of negotiations. Students will participate in mock negotiations. The 3 credit course will cover the material described above and will additionally address (1) the reintroduction of several topics (e.g., contract drafting, collaborative lawyering, use of mediation in negotiation), (2) the expansion of other topics (e.g., multicultural negotiation, the law of settlement), (3) enhanced processing of simulations, and (4) one or more contract drafting exercises. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7631 No-Fault Insurance Law Cr. 2
Comprehensive review of Michigan's No-Fault Automobile Insurance Law, which governs all motor vehicle accidents in the State. Topics include: questions of coverage, medical and work loss benefits, coordination of benefits, exclusions, priorities, subrogation, and claims procedures. Negligence claims under the No-Fault Law also reviewed. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7651 Patent Enforcement Cr. 3
Unique aspects of patent litigation. Policy issues; practice considerations in enforcing patents. Issues in approaching a patent infringement suit (who can file; when and where to file). Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7655 Introduction to Contemporary Patent Law Cr. 2
Students will develop an understanding of the current state of patent law in the United States. Students will develop critical analysis skills in order to evaluate the standards by which inventions can be patented in the U.S. Patent and Trademark Office (PTO). Offered Intermittently.
Restriction(s): Enrollment limited to students in the Law School.
Fees: $95

LEX 7656 Patent Law Cr. 3
Substantive patent and related trade secret law. Emphasis on nature of patent right; scope of coverage of patent system; issues of validity, infringements, inequitable conduct, patent-antitrust. Special issues relating to software, living organisms, and chemistry. Technical background not required. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7657 Patent Prosecution Cr. 3
The Patent Prosecution course not only teaches students the art of writing patent applications, but also addresses the many aspects of practicing before the PTO. The first part of the course focuses on rules and techniques for investigating what is legally considered the background of the invention ("prior art"). The course introduces students to basic claim drafting concepts, techniques for writing a written description (or specification) of an invention, along with learning how to respond effectively to PTO Office actions according to PTO regulations found in the Manual of Patent Examining Procedure (MPEP). In order to draft patent claims and respond effectively to PTO Office Actions, it is important to understand the MPEP rules as well as the relevant case law. This course will also explore the inter partes post-grant proceedings and derivation proceedings available under the new America Invents Act. In addition, ethics and licensing will be briefly covered. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7658 Peacemaking in State Court Justice Systems Cr. 3
Conflict involving youth, family, communities and institutions inexorably finds its way into state court justice systems. Once there, litigants find that institutional pathways available to them not only attach legal consequences to their actions, but more importantly, have longstanding effects on their lives, as well as the lives of others. This class introduces students to the emergence of one such path in state court justice systems: peacemaking. The introduction begins with the exploration of the roots of peacemaking from indigenous nations within our national border. Students then engage in exploring the practical application of peacemaking in state justice systems in family, probate, civil and criminal proceedings. Students conduct a mock trial in a subject area of their choosing through a traditional adversarial model, and then through a peacemaking approach. Finally, students explore emerging branches from peacemaking in state justice systems inside and outside the U.S. Offered Yearly.
Prerequisite: LEX 7266 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7659 Political Theory of Public Law Cr. 3
Legal restraints on exercise of public power as conceived in works of early modern theorists (e.g., Machiavelli, Locke, Montesquieu, and Madison), and as applied in constitutional arrangements that have emerged in a range of historical settings. Topics include: role of law in totalitarian political systems; emergency rule; comparative approaches to judicial review. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Equivalent: PS 7580

LEX 7660 Practicum in Dispute Resolution Cr. 3
This course was designed to teach students the skills required as third party neutrals (mediators) in the facilitative mediation process. The curriculum includes discussion and lectures on other alternative dispute resolution (ADR) processes, but the main focus of the class will be facilitative mediation. Role play opportunities, observation, and practice experience will be provided as part of the class in order to provide students opportunity to work on practical skills in addition to learning mediation theory. Elements of the subject matter taught include the nature of conflict, how mediation fits within the ADR structure, understanding values and relationships embedded within the dispute resolution process, ethical standards of practice, mediation techniques, role and task of the mediator, and stages of the mediation process. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $225
Equivalent: DR 7310

LEX 7666 Pretrial Advocacy Cr. 3
Adversary strategy and practice skills in the pretrial stages of litigation. Preparation of pleadings, interrogatories, requests for admission and document production requests. Students negotiate settlement of disputes, draft and argue motions, and take and defend depositions. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7669 Privacy Law Cr. 2
Covers the law of information privacy. Addresses the law and policy applying to the collection, use and disclosure of personal information. Relevant law includes state laws founded in tort and property, federal laws addressing specific privacy issues and constitutional limitations on government. Topics may include use of personal information by the media, government surveillance aimed at combating terrorism, the privacy of health care information, the collection and use of personal information by businesses, privacy in schools and at the workplace and international privacy issues. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7676 Public Finance Law Cr. 2
Legal principles involved in public finance transactions: municipal borrowing and debt; state law considerations: sources of authority for borrowing and repayment; effect of ultra vires borrowing, of procedural defects, municipal debt limitations, and other factors relating to power to incur municipal debt; traditional financing techniques; federal tax and securities law considerations; default and municipal bankruptcy; municipal bond market. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7680 Public Health Law Cr. 3
Legal foundations of American public health system; struggle between individual liberties and governmental interest in providing for collective health and well-being of citizens. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7686 Race and the Law Cr. 3
Impact of law on race relations and vice versa. Topics include: history and legal history, civil rights and equal protection, criminal law, affirmative action, employment, hate speech, education, interracial marriage and adoption, housing discrimination, emergence of Critical Race Theory in contemporary jurisprudence. Contemporary issues and solutions illuminated by historical problems and developments. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7689 Race, the Law and Social Change in Southeast Michigan Cr. 2-3
Detroit is the most segregated metropolitan area in the country. Course examines role and limits of law in addressing issues of race, discrimination and equality in southeastern Michigan. From a legal and anthropological perspective, students study the efforts attorneys have made over the past century to create a region more consistent with American values of inclusiveness. Individual and class action lawsuits and other forms of policy advocacy, all addressing legal problems in southeast Michigan, examining litigation tactics and the role of expert testimony. History and social problems of the region examined from the perspective of the courtroom. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7701 Real Estate Financing Cr. 2-3
Methods of financing the acquisition and improvement of residential and commercial real estate through the use of private sources of funds. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7725 Religious Liberty in the United States Cr. 3
Relationship between church and state in the United States. First Amendment Free Exercise and Establishment Clauses; related state and federal statutes; matters of history, legal doctrine, and public policy. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7751 Advanced Sales and Leases under the UCC Cr. 2-3
Advanced study in sales areas beyond first-year contracts course. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7756 Secured Transactions Cr. 3
Basic study of Article 9 of the Uniform Commercial Code with particular attention to the law governing the creation and perfection of security interests in personal property and the relative priorities of interested parties; also attention to some of the following: goods-oriented remedies in Article 2, financing leases in Article 2a, bulk sales, effects of the Bankruptcy Code on secured transactions, and documents of title Article 7. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7761 Securities Regulation Cr. 2-3
Analysis of current problems in federal and state regulation of transactions in securities. Offered Yearly.
Prerequisite: LEX 7156 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7766 Sports and the Law Cr. 2-3
Survey of legal issues presented by sports in America. Application of basic principles of antitrust and labor law, constitutional law, administrative law, contract law and tort law to sports. Regulation of professional sports labor markets, regulation of agent representation, sports franchises, leagues and the powers of commissioner's offices, and the regulation of intercollegiate sports. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7771 State and Local Taxation Cr. 2,3
Introduces the constitutional and statutory framework of state and local taxation, with a concentration on the current topical issues involved in the taxation of multinational taxpayers and taxation of remote sellers. Corporate and income, sales and use, gross receipts and other excise taxes will be covered, as well as local income and property taxes. Coverage of investment incentives, legislative matters and policy will also be included. Offered Intermittently.
Prerequisite: LEX 7816 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7800 State Constitutionalism Cr. 3
This course will address some of the distinguishing features of state constitutions not shared with the parallel federal document. Among these features are elected judiciaries, part-time legislatures of plenary power, non-unitary executive branches, frequently employed amendment and revision procedures, and state powers over political subdivisions. Significant attention will be devoted to state judiciaries as the interpreters of state constitutions, including state courts' inherent powers, advisory powers, and relationships with federal and sister-state courts. State constitutions also protect civil liberties differently from the U.S. Constitution, both in kind and degree; these differences will be reviewed through readings in constitutional litigation. The course is not a survey of fifty different constitutions. Instead, it is designed to illuminate the common areas of inquiry in a theoretical field remarkably distinct from the study of the federal Constitution. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7806 Tax-Exempt Organizations Cr. 2
Examines tax problems arising from activities of non-profit associations of a type usually subject to taxation. Offered Every Other Year.
Prerequisite: LEX 7816 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7816 Taxation Cr. 1-4
Interrelation between income tax policy and basic governmental and social institutions. Introduction to law of federal income taxation; the taxation of individuals. Basic application of these taxes; problems involved in transactions and situations which confront the lawyer in general practice; analysis and use of materials which permit their solution. Underlying problems of policy which have led to the tax law of today and which may be expected to require change in the tax law of tomorrow. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7821 Taxation of Corporations Cr. 4
A detailed exploration of the federal income tax problems of corporations and their investors; an analysis of the statutory rules governing transactions between corporations and their shareholders, including tax-free incorporations, property and stock distributions, constructive dividend problems, stock redemptions; corporate reorganizations with a focus on corporate recapitalizations, dispositions of the assets of a corporation or of investor's interests in a corporation; liquidation problems; and the impact of judicial doctrines on corporate tax planning. Offered Every Other Year.
Prerequisite: LEX 7816 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7826 Teaching Law in High School Cr. 3
Students teach 20-25 sessions to a class of high school students, using a widely recognized high school text, Street Law. Students attend a weekly seminar which deals with teaching methods. Students will participate in and present model lessons in the seminar, prepare lesson plans and have field supervision of their teaching in the high school. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7827 Topics in Advanced Legal Research Cr. 2
Covers complex research topics essential to successful legal practice and scholarship and builds upon the basic research skills and techniques learned in the required Legal Research and Writing course (LEX 6400). Its problem-solving approach gives students practical research experience that will enhance their ability to use legal, archival and social science information persuasively and cost-effectively. The scope is primarily limited to researching United States federal and state law. Offered Spring/Summer.
Prerequisite: LEX 6400
Fees: $95

LEX 7829 Law of the First Amendment: Freedom of Speech Cr. 2
In-depth coverage of the First Amendment guarantee of freedom of speech, press, association and petition. Emphasis on the ""law of the First Amendment"" as it has developed through the decisions of the Supreme Court; how the ""law of the First Amendment"" operates in the context of actual litigation. First Amendment issues likely to arise in the United States today and tomorrow. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Equivalent: LEX 7126

LEX 7831 Trademarks and Unfair Competition Cr. 2-3
Federal trademark statute, 15 U.S.C. section 1051 et. seq., state statutory and common law unfair competition, and the federal law of unfair competition and false advertising under 15 U.S.C. section 1125 (a). Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7836 Trial Advocacy Cr. 3
Basic trial techniques taught through student performances of role-play exercises followed by critique. Mastering major trial skills in isolation: direct and cross examination, introduction of exhibits, impeachment, expert witnesses, opening and closing statements. Application of skills in simulated full criminal or civil jury trial. Offered Yearly.
Prerequisite: LEX 7266 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Equivalent: LEX 7604

LEX 7841 Trusts and Decedents' Estates Cr. 4
Intestate succession, wills and trusts, requisite elements of wills and express trusts, and procedural requirements for their creation; administration of decedents' estates and trusts; special rules relating to charitable and spendthrift trusts; trust forms as equitable remedial devices under resulting and constructive trust rules. No credit after LEX 7945. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7888 United States Foreign Relations Law Cr. 4
Constitutional and statutory doctrines that regulate the conduct of U.S. foreign relations. Topics include: distribution of foreign affairs powers between the three branches of government, status of international law in U.S. courts, scope of the treaty power, validity of executive agreements, preemption of state foreign affairs activities, and the political question and other doctrines regulating judicial review in foreign affairs cases; political influences on and policy effects of legal doctrines in this field. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Equivalent: PS 6870

LEX 7931 Water Law Cr. 2-3
Categories of water bodies and public and private rights therein under the riparian and the prior appropriation systems. Consumptive and non-consumptive uses, management, and protection of the resource. Intergovernmental relations with respect to water resource allocation and management. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7941 White Collar Crime Cr. 3
Substantive and investigative issues related to federal prosecution of business crimes. Balance between government powers to investigate white collar crime and the rights of corporate and individual investigatory targets in connection with criminal prosecutions of federal economic crimes. Problems related to parallel civil enforcement actions involving the same underlying conduct. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7945 Wills and Other Probate Transfers Cr. 3
This course provides an introduction to intestate succession, wills, and the probate system. Topics include intestacy, restraints on testamentary freedom, testamentary capacity, execution and revocation of wills, will contests, construction of wills, non-probate transfers, and the basic structure of probate administration. The course does not cover trusts. No credit after LEX 7841. Offered Yearly.
Prerequisite: LEX 6500 with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 7951 Workers' Compensation Law I Cr. 2
Overview of Michigan statute; discussion of ""arising out of"" and ""in the course of employment,"" including the going to and from work doctrine. Analysis of the occupational disease provisions of the statute as compared to single event personal injury provisions. Study of specific loss. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7970 Youth, Delinquency, and Juvenile Justice Cr. 3
This course will cover the history and present-day application of the law in juvenile court with a particular emphasis on how juvenile law and procedure are practiced in the State of Michigan. This course will cover criminal statutes, rules of criminal procedure, jurisdiction, juvenile detention, alternative sentencing options, and the real-world impact of involvement in the juvenile justice system. The course will also cover mental health and substance abuse issues, interviewing techniques, self-awareness, holistic legal representation, the school-to-prison pipeline, the overlap between child welfare involvement and the juvenile justice system, and the relationship between trauma and criminal justice involvement. Students will be required to develop a basic understanding of how mental health issues, trauma history, and a variety of other social issues directly impact clients and families who are involved with the juvenile justice system. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 7990 Directed Study Cr. 1-2
A directed study may involve writing a paper, participating in a regularly-scheduled course for reduced credit, or other work of an academic nature. Subject matter and procedure are to be arranged prior to registration. Directed studies may not be elected on a pass-no credit basis. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 7995 Law Practicum Research Cr. 1-2
Students enrolled in the Law Practicum Research participate in an employment experience directly related to their academic studies and concurrently consult with a supervising member of the full-time Law School faculty. An enrolled student must submit written work to the supervising faculty member that relates the employment experience to the student's academic studies and that includes consideration of the roles and responsibilities of practicing attorneys and strategic and ethical issues in the applicable field of law. Offered Every Term.
Fees: $95

LEX 7999 Special Topics Cr. 2-4
Areas of current interest in the law. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 8001 Antitrust and Trade Regulation: Current Issues Seminar Cr. 3
Addresses current topics in antitrust and trade regulation, providing a mix of substantive knowledge and professional skills instruction. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8002 Access to Justice Seminar Cr. 3
History, policies, practices and laws that demonstrate how our legal system addresses access to justice for people with economic needs or other restrictions that prevent them from using the system effectively. Seminar examines issues in both the criminal and civil areas. How lawyers are uniquely suited to improve access to justice. Career options to enhance access to justice, such as: following a public interest career, performing pro bono legal service for the poor, and exercising leadership in government and elsewhere to bring changes that enhance access to justice for all. Lectures, readings, research, site visits, and guest speakers. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8003 Reimagining Development in Detroit: Institutions, Law and Society Cr. 3
Seminar course. Examination of contemporary problems of community development from a perspective of institutional economics; how tools and theories of institutional economics are applied to problems relevant to the City of Detroit. Students write research papers applying these tools to issues such as race and regionalism, role of faith-based organizations in community development, abandoned land and community gardens, structure of local governance, charter schools and the fate of public schools, opportunity-based housing, and state of health-care safety net providers. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8006 Advanced Legal Research: Appellate Advocacy Seminar Cr. 3
Research and analysis of complex legal problems involving legislative history and administrative regulations. Class discussion on advanced research, development of strategy, and organization and writing as an advocate. Students write an appellate brief. May not be taken on pass/no credit basis. Cannot be taken if already completed LEX 7536. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 8015 Asian Pacific American History and the Law : Perspectives on APA Civil Rights and Civil Wrongs Cr. 3
This seminar explores the Asian Pacific American civil rights movement with an overview of how federal and state laws have affected the Asian Pacific American (APA) experience and presence in the United States, covering a variety of civil rights cases and civil wrongs against APAs. The seminar will cover the APA historical timeline, exclusion laws, alien land laws, World War II internment of Japanese Americans, affirmative action as it applies to APAs, civil rights and racial hate crime violence, APAs in the marriage equality movement, bilingual issues in education and in the workplace, post-9/11 issues, immigration law reform, the Hawaiian sovereignty movement, and the effort to change birthright citizenship and immigration laws, among other topics. Offered Fall.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8039 Contract Drafting Seminar Cr. 3
Knowledge and skills necessary for sound drafting of agreements. Substantive issues of contract law and important drafting issues. Students draft several contracts for review and critique; final grade based on drafting and editing as well as participation in seminar meetings. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8044 Advanced Topics in Criminal Law and Procedure Cr. 3
Focuses on the law governing, practice of, and debate about plea bargaining. Among the questions to be considered: Does plea bargaining serve society well? Is it on firm constitutional footing? What are the constitutional prerequisites for a valid guilty plea? Does plea bargaining work differently in state court and in federal court? In white collar cases and street crime cases? In high-level cases and low-level cases? What legal or extra-legal factors determine the outcome of a plea bargain? And finally, how does pervasive plea bargaining affect the role of the prosecutor, the defense lawyer, and the trial judge? This seminar can be used to complete the upper-level writing requirement. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8051 Detroit Equity Action Lab: A Collaborative Study of Structural Racism Seminar Cr. 3
This Seminar introduces students to notions of structural racism as it impacts the city of Detroit. Students will work collaboratively with members of the Detroit Equity Action Lab (DEAL) addressing racial equity in a wide range of sectors, such as civil rights, transportation, community development, health, education and housing. Students will develop awareness of the role and limits of law in addressing structural racism. In addition to examining the work of individual organizations, students will consider broader issues impacting racial equity and will explore interventions that might change public policy and public awareness as it relates to structural racism. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8067 Effective Oral Communication for Lawyers Cr. 2
This course is aimed at helping students become more comfortable with, and more skillful at, oral communication (speaking) in all the forms that skill is employed by a lawyer. Topics to be covered will include the physiology of speech and sources of speech pathology (including respiration, phonation, resonance and articulation); aspects of non-verbal communication; techniques designed to deal with nervousness or "stage fright"; developing an understanding of oneself, one's material and one's "audience"; establishing rapport; organizing one's materials; use of humor and anecdotes; making communication interesting; active listening; and impromptu speaking. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8071 Environmental Law: Advanced Topics Cr. 3
This seminar considers current and advanced topics relating to environmental law. The specific focus will vary according to the semester and instructor. Some versions of this seminar may be used to complete the upper-level writing requirement. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8075 Ethics of the Lawyering Experience Seminar Cr. 3
Psychological and ethical dimensions of law and legal practice, explored through engagement with works of fiction and selected legal scholarship. Student writes weekly reaction paper. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8091 Fair Housing Seminar Cr. 3
This seminar explores issues related to fair housing law in the United States. The course is discussion-based, with students expected to take an active participatory role in each class session. The following topics are among those we will discuss: housing discrimination and the federal Fair Housing Act; state and local fair housing issues, including the racialized history of housing development in Detroit; the intersection between fair housing and the emergence of the sharing economy (Airbnb, etc.); constitutional housing issues, including the criminalization of homelessness; and various relevant aspects of landlord-tenant law. Fair housing issues will be examined from a variety of perspectives, including those of tenants, landlords, government regulators, and neighborhood/homeowner associations. Offered Yearly.
Prerequisite: LEX 6500
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8141 International Environmental Law Seminar Cr. 3
Students explore use of bilateral and multilateral treaties and other international mechanisms for dealing with international environmental problems; emphasis on United States - Canada international environmental law. In-class presentations, paper required. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8161 Legal Issues in U.S. - China Economic Relations Cr. 3
This seminar explores contemporary legal issues in U.S.-China economic relations. It introduces China law and policy in their historical, political and economic contexts, and examines how the Chinese and US systems interact in impacting American businesses and consumers. Specific topics include trade, investment, finance, technology, human rights, national security and dispute settlement. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8171 Health Law: Advanced Topics Cr. 3
Examines current legal issues related to health, such as applications of the law within and outside the health care system; contemporary debates on role of government and private sector in health; innovative proposals to use law, ethics and policy to improve health; and the role of law during public health emergencies. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8185 International Trade Seminar Cr. 3
This seminar studies public international trade law, focusing on contemporary challenges to the world trading system, including Trump's tariffs and subsequent developments. Students are expected to write a substantial research paper that will satisfy the upper-level writing requirement. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 8190 International Women's Human Rights Seminar Cr. 3
Evolution of women's rights as human rights. Students will examine women's human rights in the context of legal instruments such as the UN Convention to Eliminate Discrimination Against Women (CEDAW) and other international treaties, and in the jurisprudence of women's human rights in international tribunals. This course will also explore the role of global and regional human rights organizations in securing women's legal rights and analyze the current legal discourse on women's human rights and explore key issues in the light of specific world regions, cultures and religious traditions. Offered Fall.
Fees: $95

LEX 8197 Islamophobia and the Law Cr. 3
This seminar will closely examine the law's role in endorsing and advancing Islamophobia – the rising form of animus broadly understood as hate or fear of Islam. This seminar will examine a range of doctrinal and policy issues tied to the broader phenomenon of Islamophobia, on a domestic, global, and comparative level. Completion of this seminar satisfies the law school writing requirement. Offered Intermittently.
Prerequisite: LEX 6300 and LEX 6700
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8241 Advanced Topics in Work Law Cr. 3
Examines current and developing issues in labor and employment law. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8248 Law and Literature Seminar Cr. 3
Connection between law and literature. Topics include: role of narrative in legal arguments and legal decision-making; role of narrative and law, respectively, in constructing identity; literary criticisms of the law and legal profession. Focus on stories of adoption, including: shifting definitions of parenthood; nature vs. nurture debate; issues of class, race, gender, and national identity. Novels, short stories, films, memoirs, and legal cases; authors include Charles Dickens, George Eliot, P.D. James, and Louise Erdrich. In-class presentations; paper required. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8256 Law in Cyberspace: Seminar Cr. 3
Topics may include online speech (including regulation of harmful and sexually explicit speech); filtering and intermediary liability; virtual property; online contracts; trademarks and domain names; copyright; the problems that flow from asserting national laws in a medium with no national borders. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8263 Legal Change Seminar Cr. 3
What is the relationship between law and social change? How effective are changes in legal doctrine in changing social practices? Under what conditions can we effectively use the law to promote social change? This course investigates these questions by studying the relationships among social movements, courts, legislatures, and other international and domestic institutions. Students will examine materials from actual legal reform movements, including equality in education and women's rights, and evaluate strategies for legal reform and their impact on statutory and decisional law as well as social practices. Offered Every Other Year.
Fees: $95

LEX 8264 Justice and the Law Cr. 3
This seminar studies the question, "What is legal justice?" from recent influential traditions in American legal thought. We will begin with foundational materials regarding classical legal thought, legal formalism, legal realism, legal process theory, and legal liberalism. The course will also amplify marginalized voices, with an examination of critical legal studies, critical race theory, feminist legal theories, and LGBTQ+ legal theories. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8284 Products Liablty Smr Cr. 3
This seminar covers the doctrine, theory, and policy of American products liability law and product safety regulation. Students will learn principal theories of products liability (e.g., negligence, breach of warranty, strict liability, and misrepresentation), key concepts in products liability litigation (e.g., defect, warnings, consumer misuse, risk/utility), and the basics of federal product-safety regulation (e.g., safety agencies and design/performance requirements, reporting duties, recalls). Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8300 Race and the Law: Advanced Topics Cr. 3
This seminar will examine the role of the law in creating as well as maintaining race, racial hierarchies, and racial inequality. Contrary to the traditional view of racial subordination as solely a deviation from the liberal legal ideal, this course recasts the role of law as historically central to and complicit in upholding racial hierarchy as well as other hierarchies of gender, class and sexual orientation. The course will investigate these issues over the span of centuries, from the founding of the Americas to the present day. This course will explore oft-discussed issues at the intersection of race and law such as slavery, colonization, immigration, citizenship, nation building, national security, and affirmative action as well as less examined issues, such as sexual exploitation and unarmed police shootings. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8342 Sexual Violence and the Law Cr. 3
This seminar introduces students to a range of legal areas in which sexual violence victims need legal assistance, with an emphasis on the civil legal issues that experiencing sexual violence creates for victims in areas like education, employment, family, housing, and immigration. The course is discussion-based, with students expected to take an active participatory role in each class session. The following topics are among those we will discuss: intersectionality and sexual violence; criminal rape law and its inadequacies; the Violence Against Women Act; civil protection orders; how to use privacy laws, tort laws, civil rights laws (Titles VII and IX, the Fair Housing Act, etc.) to address sexual violence victims' needs; legal remedies for specific populations of victims (immigration, military, prisons); cyber-harassment; and demand-side sex work/trafficking criminalization. The course provides a general grounding in the legal areas touched by experiencing sexual violence. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8345 Sex, Sexuality and the Law in the Contemporary United States Cr. 3
The ways the law constructs people as sexual beings and regulates that being and her/his sexuality. Seminar course has four main objectives: 1) to deepen understanding of contemporary U.S. laws that address sex and sexuality; 2) to understand the ways in which individuals and groups are impacted by those laws; 3) to learn and apply aspects of critical legal theories in legal analysis; and 4) to strengthen written and oral legal analysis and communication. Workshop format; class contribution makes up a significant portion of the grade. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8351 Sports and Inequality Cr. 3
This seminar will examine the legal and social implications of various forms of discrimination in both the professional and amateur sports contexts. Coverage will include a discussion of legal efforts to address discrimination in sports based on race, gender, disability, and sexual orientation. Topics include racial inequalities on the playing fields and in the front offices of amateur and professional sports, the impact of NCAA eligibility criteria, the effects and future of Title IX, gender segregation and exclusion in professional sports and sexual violence, sexual orientation discrimination in sports, and sports opportunities for people with disabilities. The final paper for this class may be used to satisfy the upper-level writing requirement. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8386 Seminar in Legal History Cr. 3
Research seminar in legal history. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95
Equivalent: HIS 8050
Repeatable for 6 Credits

LEX 8401 Urban Housing and Community Development: Seminar Cr. 3
Legal, social, and economic aspects of urban housing and community development, including local, state and national programs and policies. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8505 Criminal Justice Externship Practicum Cr. 2
Students perform 150 hours of unpaid work in a criminal prosecutor or defender's office. Students are assigned tasks similar to those performed by entry-level prosecutors and defenders. Students develop advocacy skills, legal drafting skills, law practice management skills, the ability to recognize and resolve strategic and ethical dilemmas, and the ability to learn from experience. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8506 Criminal Justice Externship: Colloquium Cr. 2
Roles and responsibilities of criminal prosecutors and defenders, the judicial process in criminal cases, and strategic and ethical issues in criminal prosecution and defense. Substantial class time is devoted to professional skills instruction and to facilitated discussion and analysis of students' fieldwork observations and experiences. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8507 Judicial Externship: Practicum Cr. 2
Students perform 150 hours of unpaid work in judicial chambers. Students are assigned tasks similar to those performed by judicial clerks. Students develop research, writing, and analysis skills, legal drafting skills, oral communication skills, law practice management skills, and the ability to learn from experience. Offered Every Term.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8508 Judicial Externship: Colloquium Cr. 2
Students learn about the roles and responsibilities of judges and judicial clerks, judicial decision-making, and effective advocacy. Substantial class time is devoted to professional skills instruction and to facilitated discussion and analysis of students' fieldwork observations and experiences. Offered Every Term.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8511 Lawyering in the Nation's Capital: Practicum Cr. 9-11
Students perform 480-600 hours of unpaid work at approved placements in Washington D.C. and earn 9, 10, or 11 credits. Students are assigned tasks like those performed by attorneys in their offices. The Practicum is an opportunity for students to develop professional skills, including legal analysis and reasoning, problem solving, communication, teamwork, negotiation, and fact-finding. Students will also learn about important workplace issues such as time management, the professional culture of the office, professionalism, and giving and receiving feedback. Offered Winter.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Corequisite: LEX 8512
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8512 Lawyering in the Nation's Capital: Colloquium Cr. 3
In this externship course, students will explore the role of the Washington, D.C., lawyer and learn about the various entities, organizations, agencies, and individuals involved in making national public policy. Through a series of guest lectures and readings on the congressional process, advocacy, and agency rulemaking, the seminar will teach the legislative process, the role of oversight and of interest groups, and the inter-relationship among the three branches. Offered Winter.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Corequisite: LEX 8511
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8515 Corporate Counsel Externship: Practicum Cr. 2
Students perform 150 hours of unpaid work in corporate counsel offices of non-profit and for-profit entities for two credits. Students are assigned tasks similar to those performed by attorneys in corporate counsel or general counsel offices. The Practicum is an opportunity for students to develop professional skills, including legal analysis and reasoning, contract drafting, problem solving, communication, teamwork, negotiation, and fact-finding. Students will also learn about important workplace issues such as time management, corporate culture, professionalism, and giving and receiving feedback. Grading will be on an Honors, Pass, Low Pass, No Credit basis. Offered Every Term.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8516 Corporate Counsel Externship: Colloquium Cr. 2
Students will learn about substantive issues encountered in an in-house legal department and the ethical responsibilities of in-house counsel. Substantial class time is devoted to professional skills instruction on topics such as working with outside counsel, conflicts management, contract drafting, and conducting internal investigations. Students will also participate in facilitated discussion and analysis of their fieldwork observations and experiences. Chief legal officers, general counsel, and senior managing attorneys will guest lecture in some classes. Offered Every Term.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8517 Holistic Defense Externship: Practicum Cr. 2
Students perform 150 hours of unpaid work at a faculty approved placement site that focuses on holistic defense. Students are assigned tasks similar to those performed by entry-level attorneys at their placement sites. Projects will focus on the wide-ranging impact that contact with the justice system can have on an individual, and will involve collaborative work with various types of professionals, including social workers and attorneys with different legal expertise. The practicum is an opportunity for students to develop professional skills, including legal analysis and reasoning, problem solving, communication, teamwork, negotiation, and fact-finding. Students will also learn about important workplace issues such as time management, office culture, professionalism, and giving and receiving feedback. Offered Yearly.
Prerequisite: LEX 6800 (may be taken concurrently) and LEX 8518 (may be taken concurrently)
Corequisite: SW 6991
Restriction(s): Enrollment is limited to Law level students.
Fees: $95

LEX 8518 Holistic Defense Externship: Colloquium Cr. 2
In this course, students will learn the knowledge and skillset necessary to become effective practitioners of holistic defense. Holistic defense is a multifaceted approach to legal representation that recognizes the social and legal challenges that drive many individuals into the criminal justice system, and the collateral or enmeshed consequences that may result from an individual's contact with the system. These potential consequences include effects on a person's immigration status, housing and employment opportunities, access to public benefits, voting rights, and the custody of children. Students will study the core elements of holistic representation, the interrelation between various legal systems, and the substantive law that can result in such consequences. Students will examine how to work collaboratively with other professionals. Substantial class time will be devoted to professional skills instruction, as well as discussion and analysis of students' fieldwork. Offered Yearly.
Prerequisite: LEX 6800 (may be taken concurrently) and LEX 8517 (may be taken concurrently)
Corequisite: SW 6991
Restriction(s): Enrollment is limited to Law level students.
Fees: $95

LEX 8595 Advanced Externship Cr. 2
A two-credit, letter-graded course for students who will complete a second externship at a different field placement in the same substantive area or at a different division of the same location of their prior placement. Students will complete 150 hours of work at an approved field placement, submit reflective memoranda as assigned, and meet with the Director of Clinical Education, or other designated Faculty Supervisor, at least three times during the semester. Approval will only be granted in the rare circumstances where a student's learning objectives differ significantly from those for the first externship and these learning objectives cannot be met by existing clinical or experiential learning course opportunities. Application process required. Offered Every Term.
Prerequisites: LEX 8506, LEX 8508, LEX 8516, or LEX 8599
Restriction(s): Enrollment is limited to Law level students.
Fees: $95

LEX 8598 Public Service Externship: Practicum Cr. 2
Students perform 150 hours of unpaid work in public service settings. Students are assigned tasks similar to those performed by entry-level public service lawyers. Students develop interviewing and counseling skills, legal drafting skills, oral communication skills, law practice management skills, and the ability to learn from experience. Offered Every Term.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8599 Public Service Externship: Colloquium Cr. 2
Students learn about the roles and responsibilities of public service lawyers, strategic, practical, and ethical dimensions of public interest practice, and effective advocacy. Offered Every Term.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8601 Appeal and Post-Conviction Advocacy Clinic Cr. 4
Clinical legal writing experience. Students will work with indigent clients who are challenging their felony convictions or sentences in state or federal court, in cooperation with the Michigan State Appellate Defender Office (SADO). Students will meet with the instructor in individual sessions and class sessions to discuss writing, investigation, client communication, research and the appellate and correctional processes. Students have client contact and may participate in an actual circuit court argument. Regardless of the court filing in each case, every student must prepare an appellate document (motion and brief, application for leave to appeal, or a memorandum of law) on behalf of his or her client. Offered Yearly.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8604 Asylum and Immigration Law Clinic Cr. 6
Lawyering skills and values needed to effectively represent clients, and the legal skills and knowledge needed to represent clients seeking asylum or other immigration benefits, including an Immigration Court hearing. Asylum case simulation. Professional responsibility issues. In clinical component, students represent clients on a variety of immigration matters. Offered Yearly.
Prerequisite: LEX 7371 with a minimum grade of D and LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8606 Asylum and Immigration Law Clinic (Advanced) Cr. 2
Students continue to gain increased experience in different settings and issues, and may also organize and participate in community outreach projects. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8608 Community Advocacy Clinic Cr. 3
The Community Advocacy Clinic will provide students with the opportunity to collaborate with a community group, coalition or public interest legal organization to prepare and pursue non-litigation strategies to address pressing legal needs in an identified community. Through this clinic, students will develop community advocacy and engagement skills, while exploring the various ways in which law and public policy can be used to address community needs. Offered Yearly.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8615 Patent Procurement Clinic Cr. 4
Students represent clients in patent procurement matters before the U.S. Patent and Trademark Office, Detroit satellite office. Student work includes interviewing and counseling clients, fact investigation, performing legal research, conducting prior art searches, and drafting and prosecuting patent applications. Skills and values necessary to effectively represent clients in patent procurement matters; exploration of substantive areas of patent law that arise in these matters. Professional responsibility issues commonly faced by patent attorneys, such as conflicts, competence, and confidentiality. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8616 Patent Procurement Clinic (Advanced) Cr. 2
Students in this clinic represent clients in patent procurement matters before the United States Patent and Trademark Office's Detroit, Michigan, Satellite Office. There is no classroom component in the Advanced Patent Procurement Clinic. Students will be expected to spend between five to ten hours per week continuing work on ongoing cases that have significant deadlines during the semester, gaining increased experience in different settings and addressing more complex issues. Advanced Clinic students will also work with PPC faculty to provide direction and guidance to those enrolled in the PPC Clinic for the first time, in areas in which Advanced Clinic students have already acquired some expertise. Time spent in the Advanced Clinic will include a one-hour weekly meeting with the Clinic's faculty to discuss the status of client matters. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8621 Free Legal Aid Cr. 4
The Free Legal Aid Clinic, Inc. (FLAC) is a student-run, non-profit organization with a board of directors composed entirely of current Wayne Law students. FLAC partners with legal services organizations to provide free legal services to low-income people in Wayne County. FLAC students practice under the supervision of legal aid attorneys and law school faculty pursuant to the Michigan Student Practice Rule. Students, who work an average of 12-14 hours per week, are responsible for all aspects of the cases assigned to them, including interviewing clients, drafting pleadings and other court filings, arguing motions, conducting trials and evidentiary hearings, negotiating with opposing counsel, researching legal issues, and drafting legal documents. Students participate in a twice-weekly seminar class for this letter-graded course. Credits earned meet the experiential learning and clinical education requirements. Offered Every Term.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8631 Business and Community Law Clinic Cr. 6
Course component: basic provisions of nonprofit corporate law, tax law, and legal ethics that affect community economic development groups. Clinical component: students assist a community group at or near the stage of incorporating itself and/or applying for tax-exempt status, in services such as drafting and filing articles of incorporation, bylaws, and IRS forms. Students complete term paper on topic of interest to community economic development organizations. Offered Yearly.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D and LEX 7156 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8633 Business and Community Law Clinic (Advanced) Cr. 2
Participation requires demonstrated commitment to business law, community economic development, or nonprofit law. No classroom component; enrollment limited to two students per semester; students spend between five and ten hours a week continuing their work on ongoing cases and meeting significant deadlines during the semester. Advanced Clinic students also work with BCL faculty to provide direction and guidance to those in the BCL Clinic for the first time, in areas in which Advanced Clinic students have already acquired some expertise; as well as coordinate community outreach and informational programs. Includes one hour per week meeting with BCL faculty to discuss the status of client matters. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8641 Disability Law Clinic Cr. 6
Cooperative venture with Wayne County Legal Services. Hands-on experience while helping individuals with disabilities and their families obtain services and support to avoid out-of-home placement at public expense. Students perform 15-20 hours fieldwork per week. Student responsible for 3 to 5 cases: investigating facts, researching law, counseling client, representing client in administrative or judicial proceedings, drafting and arguing appeals, engaging in settlement negotiations. Intake, case acceptance, individual client representation, community education and law reform efforts. Includes two-hour weekly seminar; graded on honors pass-low pass-no credit basis. Credits count toward 14-credit maximum in applied and skills courses. No credit after LEX 8621. Offered Yearly.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8642 Disability Law Clinic (Advanced) Cr. 2
Students continue their work on cases or projects begun in the Disability Law Clinic that could not be completed in a single term, work on new cases or projects that involve more complex issues or give students opportunities to develop additional skills, or serve as teaching assistants for the Clinic. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8643 Fundamentals of Business and Community Law Clinic Cr. 4
The classroom component of this clinic teaches students the skills and values needed to effectively represent entrepreneurs and nonprofit organizations on transactional matters, including client interviewing, counseling and contract drafting and negotiation skills. It will also address areas of law urban entrepreneurs commonly encounter through choice of business entity, commercial real estate leasing, copyright, and trademark, and more. In the clinical component, students represent urban entrepreneurs and nonprofit clients on a variety of transactional matters ranging from entity formation to federal and state tax exemption applications, to counseling on the protection and licensing of intellectual property. Students interview the clients, determine their needs, develop an action plan to address those needs, and provide the appropriate legal services. Offered Intermittently.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D and LEX 7156 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8645 Immigration Appellate Advocacy Clinic Cr. 3
Students in this clinic will represent indigent or low-income clients before the Board of Immigration Appeals (BIA). Students will develop advanced legal research and writing skills while learning the complexities of immigration and administrative law in the context of practice before the BIA. In addition, students will learn valuable practice skills, including case planning, legal strategy development, and challenges of the client relationship in an appellate context. Students are expected to draft and file an appellate immigration brief with the BIA. Offered Intermittently.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8661 Legal Advocacy for People With Cancer (Clinic) Cr. 4-6
Students work with healthcare professionals at the Karmanos Cancer Center to identify and resolve legal issues that present barriers to patient care and wellbeing. Students advise and assist people with cancer in matters pertaining to health insurance, housing, employee rights and benefits, estate and healthcare planning, and public benefits. They develop skills used in a broad range of practice settings: interviewing and counseling, case-management, problem-solving, persuasive fact analysis, legal drafting, negotiation, effective oral communication, and interdisciplinary collaboration. Offered for Law School grading: Honors pass, pass, low pass, no credit. Offered Yearly.
Prerequisite: LEX 6800 (may be taken concurrently) with a minimum grade of D
Restriction(s): Enrollment is limited to Graduate or Law level students.
Fees: $95

LEX 8662 Legal Advocacy for People with Cancer Clinic (Advanced) Cr. 2
Continuation of work begun in LEX 8661 which could not be completed in a single term; work on new cases or projects that involve more complex issues or give students opportunities to develop additional skills or serve as teaching assistants for the LAPC Clinic. Students are expected to perform at least 100 hours of clinical work, including regular, frequent meetings with the course instructors. Course does not have a classroom component, but students who serve as teaching assistants are expected to participate in some LAPC classes. Students are requited to document their clinical work through detailed, contemporaneous time logs. Offered Fall, Spring/Summer.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95

LEX 8665 Nonprofit Leadership for Lawyers Cr. 2
In this legal professional skills course, students will develop skills that lawyers need to advise and lead a non-profit organization. Through simulations students will gain knowledge about legal drafting of foundational internal documents and legal advocacy related to non-profit organizations. Students will learn what is needed to maintain compliance with laws applicable to non-profit entities while supporting robust organizations that identify and meet community needs. Students will attend a two-hour class each week which will focus on the law of non-profits, communication, and day-to-day operations of non-profits. Offered Yearly.
Restriction(s): Enrollment is limited to Law level students; enrollment limited to students in the Law School.

LEX 8701 Law Review Cr. 1-2
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Repeatable for 4 Credits

LEX 8711 Moot Court Cr. 1-2
Members conduct, under general faculty supervision, the program in the preparation of briefs and the hearings on oral arguments. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Repeatable for 4 Credits

LEX 8714 International Legal Research Cr. 2
Fundamentals of research in public international law. In connection with Jessup International Law Moot Court Competition, students review structure of international legal institutions, nature of the materials they produce, and the unique way these materials are indexed and cataloged. Focus on how these materials can best be used in legal advocacy; emphasis on effective writing and oral argument. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Repeatable for 8 Credits

LEX 8721 Mock Trial Cr. 1-2
Members participate in skills training; intraschool, regional, and national trial advocacy competitions. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Repeatable for 4 Credits

LEX 8725 Journal of Business Law Cr. 1
The Wayne State Journal of Business Law provides the opportunity for law students the opportunity to edit legal scholarship, to prepare a student note or commentary on a relevant legal topic under the supervision of a Wayne Law professor. Offered Fall, Winter.
Fees: $95
Repeatable for 4 Credits

LEX 8731 The Journal of Law in Society Cr. 1
Members contribute to publication of this law journal and the annual symposium. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Fees: $95
Repeatable for 4 Credits

LEX 8741 Transactional Law Competition Cr. 1
Practical skills course focused on improving transactional lawyering skills, including drafting agreements, revising agreements, advising clients, and negotiating with transactional attorneys, while exploring important legal/business issues relevant to mergers and acquisitions. During the fall semester, students will participate in an in-house transactional law competition, and during the winter semester, students will participate in the National Transactional LawMeet Competition. Offered Yearly.
Fees: $95
Repeatable for 4 Credits

LEX 8815 Fundamentals of US Legal Research Cr. 1
Introduction to U.S. legal research skills for students from foreign jurisdictions, with a focus on the use of electronic resources for legal research. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in United States Law; enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 8875 Survey of United States Law Cr. 3,4
Concise survey of several substantive fields of United States Law (principally in the area of private law) with focus on several core legal topics integral to understanding the U.S. legal system as a whole, and to working with U.S.-trained lawyers. Material drawn from a variety of areas, such as: law of contracts, property, torts, criminal law, and constitutional law. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in United States Law; enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 8890 US Legal Skills for Foreign Law Students Cr. 2
This course will provide foreign-trained lawyers with a working knowledge of the memo-drafting, transactional, and other skills utilized by U.S. Lawyers. Students will draft a legal memorandum, a client letter, and a contract. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in United States Law; enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.

LEX 8999 Master's Essay Direction Cr. 1-2
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate or Law level students; enrollment limited to students in the Law School.
Repeatable for 2 Credits

LFA - Life Fitness Activities

LFA 1000 Fitness Basics Cr. 1
Students will learn basic concepts of development and maintenance of physical activity and will be exposed to the different fitness opportunities offered locally while engaging in health-promoting and wellness activities. Fitness Basics is designed to allow students to participate in physical activity of their choice at a time and location that best fits their schedule, and is electronically recorded and synced to your instructor using a fitness tracking device (i.e. FitBit, Apple Watch, Garmen, Polar, Movband, and other approved devices). Offered Every Term.
Repeatable for 4 Credits

LFA 1020 Individualized Skills Development Laboratory Cr. 1-2
Open only to varsity athletes; varsity athletes may elect only once per year for one credit per sport during the term of competition. Offered Fall, Winter.
Repeatable for 4 Credits

LFA 1035 Fitness Trends Cr. 2
A fitness sampler class offering an introduction to top fitness and physical activity trends. Fitness activities will change annually based on health and fitness trends in the industry. Offered Fall, Winter.
Repeatable for 4 Credits

LFA 1040 Healthy Lifestyle Basics Cr. 2
A study of healthy eating, physical activity, and other lifestyle strategies to promote healthy living and weight management. Students will examine individual health and wellness, identify healthy behaviors, and develop skills to support a healthy lifestyle. Offered Every Term.
Repeatable for 4 Credits

LFA 1220 Cardio-Fit Kickboxing Cr. 2
Time-efficient workout that stimulates the cardiorespiratory and musculoskeletal systems. Structured routines for all fitness levels (basic, intermediate, advanced); utilizes only basic kickboxing techniques. Offered Fall, Winter.
Repeatable for 4 Credits

LFA 1230 Basic Toning and Cardio Cr. 2
Total-body resistance exercise program using hand weights, ankle weights, rubber tubing, adjustable step, and other flexible sources of resistance. High-repetition exercises concentrating on proper technique, body alignment, muscular development, sound biomechanical principles. Offered Every Term.
Repeatable for 6 Credits

LFA 1250 Zumba Cr. 2
Zumba is a fusion of Latin and International music and dance themes; the routines feature easy-to-follow aerobic/fitness interval training with rhythms that tone and sculpt the body. Offered Intermittently.
Repeatable for 4 Credits

LFA 1315 Boxing Conditioning Cr. 2
A time-efficient workout which stimulates the cardio respiratory and musculoskeletal systems. It offers structured routines for all fitness levels (basic, intermediate, advanced). Utilizes basic boxing techniques. Boxing skills not necessary. Great for improving cardiovascular endurance. Offered Winter.
Repeatable for 4 Credits

LFA 1320 Total Body Conditioning Cr. 2
Group physical training class that mixes traditional calisthenics and body weight exercises with cardiovascular interval training and strength conditioning. Designed to promote fat loss, camaraderie and team effort. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

LFA 1340 Zero to a 5K Cr. 2
A personalized walking/jogging/running program designed to improve the level of cardio-respiratory condition of the participant, with the ultimate goal of completing a 5K (3.1 miles). Considerations include: nutrition, endurance, strength, proper form and various injury prevention guidelines. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 4 Credits

LFA 1420 Dance Fitness Cr. 2
Basic movement techniques to a variety of dance styles for increased cardiovascular fitness. Offered Intermittently.
Repeatable for 4 Credits

LFA 1460 Yoga Fusion Cr. 2
Total body exercise program blending yoga, strength, core work, and dance to increase strength, flexibility, stamina and concentration. Offered Intermittently.
Repeatable for 4 Credits

LFA 1470 Mindfulness, Fitness and Stress Management Cr. 2
A variety of physical training methods which integrate a mind-body approach to achieve positive changes in physiological measures of physical fitness. Develop healthy coping habits to prevent or reduce stress. Techniques include but are not limited to exercise, yoga, breathing and meditation, and journaling. Offered Every Term.
Repeatable for 4 Credits

LFA 1480 Yoga Cr. 2
Yoga physical exercises to shape and strengthen the human body. Psychosomatic influences used to develop resistance against stress and to train the body and mind to relax. Utilization of auto-suggestion to influence lifestyle. Offered Every Term.
Repeatable for 4 Credits

LFA 1510 Women's Fitness Cr. 2
Students will be taught a variety of different methods of cardio and strength training in a different setting each week. Principles and benefits of cross training will be addressed through participation in a wide variety of activities in the gym, outside, and in the weight room. Offered Intermittently.
Repeatable for 4 Credits

LFA 1520 Kickball/Dodgeball Cr. 2
Analysis, development and practice of fundamental skills, team play, strategies and rules of kickball and dodgeball. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 4 Credits

LFA 1530 Basketball: Fundamental Skills Cr. 2
Analysis and practice of fundamental skills, team play, and rules of basketball. Offered Every Term.
Repeatable for 4 Credits

LFA 1560 Team Sports Sampler Cr. 2
The analysis, development, and practice of fundamental skills, team play and rules of basketball, volleyball, dodgeball, kickball and other team sports. Offered Winter.
Repeatable for 4 Credits

LFA 1640 Strength Training Basics Cr. 2
Application and practice of the basics of strength training for healthy living. Students will describe the benefits of strength training and its impact on the body related to injury prevention and recovery, and optimal functioning in everyday life. Students will demonstrate correct exercise techniques and perform prescribed strength training plans. Offered Every Term.
Repeatable for 4 Credits

LFA 1642 Advanced Strength Training Cr. 2
This course is intended to help students develop in-depth knowledge of strength training principles, including specific types of conditioning, diverse training programs, strength training injury prevention and recovery, and functional fitness. The class is intended for students who already have basic knowledge and skill in strength training. Offered Every Term.
Repeatable for 4 Credits

LFA 1660 Healthy at Home Cr. 2
Students will learn the foundations of healthy eating, enhanced physical, mental and emotional functioning, and the benefits of a healthy weight for disease prevention. Students will also gain competency in various lifetime fitness activities to improve strength, cardiovascular functioning, balance and stability, and flexibility. The course is intended to provide practical education for healthy living at home, requiring minimal equipment or specialized facilities, or advanced knowledge or skill in dietetics, exercise, or fitness. Offered Every Term.
Repeatable for 4 Credits

LFA 1700 Brazilian Jiu Jitsu Cr. 2
Analysis and practice of fundamental skills, movements, and philosophy of Brazilian Jiu Jitsu as a modern martial art, self-defense, and competitive sport. Offered Every Term.
Repeatable for 4 Credits

LFA 1780 Tai Chi Chuan: Beginning Cr. 2
An ancient Chinese exercise, Tai Chi is a series of postures and transitional movements, used to improve balance, strength, circulation, and relaxation. Offered Fall, Winter.
Repeatable for 4 Credits

LFA 2330 First Aid and CPR Cr. 3
Theory and practice of First Aid and CPR. Students can qualify for national certificates in First Aid and CPR. Offered Every Term.
Fees: $30

LGL - Language Learning

LGL 5850 Foreign Language Instruction Cr. 3
Theoretical basis of second language teaching models; historical overview of methodologies; current trends in teaching of reading, writing, listening, speaking, and culture. Implications of methodology on materials, classroom techniques, and assessment. Offered Every Other Year.

LGL 7850 Foreign Language Instruction Cr. 3
Theoretical basis of second language teaching models; historical overview of methodologies; current trends in teaching of reading, writing, listening, speaking, and culture. Implications of methodology on materials, classroom techniques, and assessment. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

LGL 7999 Master's Essay Direction Cr. 1-3
Essay course required for degree. Offered Every Term.
Restriction(s): Enrollment limited to students in the MA in Language Learning program; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

LIN - Linguistics

LIN 1850 Symbolic Logic Cr. 3
The logic of propositions; the general logic of predicates and relations. Offered Every Term.
Equivalent: PHI 3850

LIN 1860 Honors Symbolic Logic Cr. 3
See PHI 3850/LIN 1850. Offered Every Term.
Equivalent: PHI 3860

LIN 2000 Chinese Phonetics Cr. 1
Students will have the hands-on experience of learning Chinese sounds and tones with the intensive instruction and correction of the instructor. After studying the articulatory mechanisms for the Chinese phonetic inventory and system in theory, students will practice them in different combinations and contexts with that native accuracy as the target. Offered Winter.
Equivalent: CHI 2000
Repeatable for 2 Credits

LIN 2720 Basic Concepts in Linguistics Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Analysis of the structure and use of language, focusing on English, from the standpoint of current linguistic practice. Topics include: phonetics and sound structure, word structure, syntax, semantics, language origin and history, dialects, language learning, animal communication, and language in social interaction. Offered Yearly.
Equivalent: ENG 2720

LIN 2730 Languages of the World Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Survey of structure of major language families of the world, western and non-western; interrelationships of language and culture; universals and variations of universals in language and culture. Offered Yearly.
Equivalent: ENG 2730

LIN 3080 Cognitive Psychology: Fundamental Processes Cr. 3
Fundamental theories, concepts, and empirical findings in study of human cognition. Topics include: thinking, problem solving, language comprehension and production, memory and attention. Offered Yearly.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-
Equivalent: PSY 3080

LIN 3310 Language and Culture Cr. 3
An introduction to linguistic anthropology. Using comparative approaches to language and culture across time and space, explore variation and change, cognitive dimensions of language, language evolution, linguistic myths, and the use of language in social practice. Offered Fall.
Prerequisites: ANT 2100 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or ANT 1100 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: ANT 3310

LIN 5050 Advanced Symbolic Logic Cr. 4
Formal, extensive treatment of first-order predicate logic with emphasis on the notions of a formal logical language and truth in a model; the logic of identity; definite descriptions; brief introductions to set theory and the metatheory of propositional and first-order logic; some additional advanced topics to be selected by the instructor. Offered Yearly.
Prerequisites: PHI 3850 or PHI 3860
Equivalent: PHI 5050

LIN 5080 Phonetics Cr. 3
Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiologic approaches. Offered Fall, Winter.
Equivalent: SLP 5080

LIN 5100 Languages of Asia Cr. 3
Introduction to major language families in Asia; grammar, sounds, language contacts. Offered Winter.
Equivalent: CHI 5220, JPN 5220

LIN 5210 Arabic Sociolinguistics Cr. 3
Arabic dialectology; Arabic as a minority language in contact. Theories and techniques developed outside Arabic, and their applicability to Arabic situations. Offered Fall.
Equivalent: ARB 5210, NE 5210

LIN 5220 Introduction to Chinese Linguistics Cr. 3
Writing, sound and grammar systems of Chinese; interaction between Chinese language and Chinese society. Offered Fall.
Equivalent: CHI 5210

LIN 5230 Structure of Arabic Cr. 3
Survey of historical constitution and theoretical structure of Arabic. Offered Yearly.
Equivalent: ARB 5230, NE 5230

LIN 5240 Grammar of Chinese Cr. 3
Chinese grammar from perspectives of negation, question formation, aspects and different parts of speech, and the like. Offered Fall.
Equivalent: CHI 5230

LIN 5290 Phonology Cr. 3
The sound systems of a variety of human languages compared and contrasted in an introduction to the diversity and similarities in human sound systems. Theories of the nature of sound systems and methods of analysis in phonology and morphophonology will be presented. Offered Yearly.
Prerequisites: LIN 5700 with a minimum grade of D-, ENG 5700 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or ENG 2720 with a minimum grade of D-
Equivalent: ENG 5710

LIN 5300 Syntax Cr. 3
The theory of grammatical systems examined through analysis of sentence formation in a variety of human languages, diversity and universals in grammar, and theories of syntax. Offered Yearly.
Prerequisites: LIN 5700 with a minimum grade of D-, ENG 5700 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or ENG 2720 with a minimum grade of D-
Equivalent: ENG 5740

LIN 5320 Language and Societies Cr. 3
For graduate students and advanced undergraduates with a background in linguistic anthropology. Students read classic and contemporary works of linguistic anthropology to expand knowledge of human language and sociality; conduct a major original research project. Offered Winter.
Prerequisites: ANT 3310 with a minimum grade of D- or LIN 3310 with a minimum grade of D-
Equivalent: ANT 5320

LIN 5360 Child Language Acquisition Cr. 3
Despite its complexity and abstractness, young children acquire language without conscious effort or explicit instruction in a span of just a few years. This feat is unique to humans and is unmatched by any other species or even the most sophisticated computers. The course will present a comprehensive introduction to the study of child language acquisition. We will use a cross-linguistic approach to discuss some of the most important issues in language acquisition. We will not only talk about what children accomplish linguistically at various ages, but also discuss various theoretical approaches to explaining how children acquire linguistic knowledge in different domains, focusing on acquiring the sound inventory, words and sentence structure. We will look at some of the methods that have been employed to collect and analyze child language data. Offered Fall.
Fees: $10
Equivalent: ENG 5360, PSY 5360

LIN 5570 Philosophy of Language Cr. 4
Intensive investigation and discussion of philosophical problems concerning meaning, truth, and the nature of language. Offered Every Other Year.
Prerequisites: 1 of (PHI 2400, PHI 5570, PHI 5630, PHI 5640, PHI 2550, PHI 3500, PHI 3550, PHI 3600, PHI 5230, PHI 5500, PHI 5530, or PHI 5550), PHI 1850 with a minimum grade of D-, or PHI 1860 with a minimum grade of D-
Equivalent: PHI 5570

LIN 5700 Introduction to Linguistic Theory Cr. 3
Introduction to the scientific study of language and methodologies of linguistic analysis: phonetics and phonology, morphology, syntax and semantics. Offered Yearly.
Equivalent: ENG 5700

LIN 5715 Morphology Cr. 3
Morphology is a core area of Linguistics. The course will introduce the basic issues in the study of the internal structure of words, as well as the analytical techniques applied to morphological analysis. Students will learn how to analyze words of various (Indo-European and non-Indo-European) languages into morphemes, as well as to recognize morphological patterns and to utilize theoretical concepts in order to describe and analyze such patterns. In particular, the course will develop a theory of morphology in generative grammar, paying special attention to the question of whether particular morphological phenomena are primarily syntactic or primarily phonological in nature. Offered Fall.
Prerequisites: ENG 5700 with a minimum grade of D-, ENG 2720 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or LIN 5700 with a minimum grade of D-
Equivalent: ENG 5715

LIN 5720 Linguistics and Education Cr. 3
Introduction to linguistics with emphasis on applications to education. Offered Yearly.
Equivalent: ENG 5720

LIN 5730 English Grammar Cr. 3
Comprehensive analysis of English sentence structure and parts of speech using the terminology and descriptive approach of traditional grammar. Offered Yearly.
Equivalent: ENG 5730

LIN 5745 Semantics Cr. 3
Semantics is a core area of Linguistics. This course investigates meaning in natural language. It examines two foundational assumptions of natural language semantics: (i) that the meaning of a declarative sentence is its truth conditions and (ii) that the truth conditions of an expression are determined compositionally (that is, they are determined as a function of its parts and how they are put together). Students will then learn to distinguish between the entailments, implicatures, and presuppositions of an expression, where only the first are part of the expression's truth conditions. Offered Winter.
Prerequisites: ENG 5700 with a minimum grade of D-, ENG 2720 with a minimum grade of D-, LIN 2720 with a minimum grade of D-, or LIN 5700 with a minimum grade of D-
Equivalent: ENG 5745

LIN 5770 Sociolinguistics Cr. 3
Identification of sociolinguistic principles used by English speakers and writers in choosing among the different English codes, styles, registers and social dialects in American and other communities. Offered Every Other Year.
Equivalent: ENG 5770

LIN 5900 Culture, Language and Cognition Cr. 3
Systematic investigation of the relationships among, language, cognition and culture, including issues relating to human universals, cross-cultural concept formation, metaphor, classification and the evolution of cognition and language. Offered Every Other Winter.
Prerequisites: ANT 3310 with a minimum grade of D-, ANT 5320 with a minimum grade of D-, LIN 3310 with a minimum grade of D-, LIN 5320 with a minimum grade of D-, LIN 3080 with a minimum grade of D-, or PSY 3080 with a minimum grade of D-
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.
Equivalent: ANT 5900, PSY 5900

LIN 5993 Writing Intensive Course in Linguistics Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a corequisite course; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Intensive training in literature search, linguistic analysis, and the preparation of scholarly written work. Required for all majors. Offered Every Term.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and (LIN 5210 (may be taken concurrently), LIN 5320 (may be taken concurrently), LIN 5750 (may be taken concurrently), LIN 5760 (may be taken concurrently), LIN 5770 (may be taken concurrently), or LIN 6720 (may be taken concurrently))
Restriction(s): Enrollment is limited to Undergraduate level students.

LIN 6700 History of Arabic Cr. 3
History of the evolution of Arabic. Data from phonetics/phonology and morpho-syntax will form the basis of study. Offered Fall.
Equivalent: ARB 6700

LIN 6720 Topics in Language Cr. 3
Topics such as: pragmatics, historical linguistics, history of English, language and gender, language and variation, language and evolution. Topics to be announced in the Schedule of Classes. Offered Yearly.
Equivalent: ENG 6720
Repeatable for 12 Credits

LIN 7320 Seminar in Hispanic Linguistics Cr. 3
Seminar topics will vary according to the principal divisions of Spanish linguistics: phonology, morphology, lexicography, syntax, and dialectology. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: SPA 8420
Repeatable for 9 Credits

LIN 7710 Advanced Studies in Linguistic Structure Cr. 3
Current issues in linguistic theory, including but not limited to topics in phonology, morphology, syntax, semantics. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ENG 7710
Repeatable for 9 Credits

LIN 7720 Advanced Studies in Language Use Cr. 3
Current problems in language use, including issues in language variation, pidgins and creoles, first language acquisition, perception and production, and linguistic stylistics. Topics to be announced in the Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ENG 7720
Repeatable for 9 Credits

LIN 7991 Directed Study in Linguistics Cr. 1-9
A research problem which requires field work or intensive and systematic reading of original technical literature. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

LIN 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

MAE - Mathematics Education

MAE 1000 Detroit by the Numbers Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
Designed for students to experience mathematics as doable, meaningful, and relevant to their lives. Students will study the city of Detroit by analyzing data and reasoning through quantitative tools presented by local agencies, such as health, environment, education, arts, and sports. Offered Every Term.

MAE 5100 Geometry for Middle School Teachers Cr. 3
Development of Euclidean geometry as a mathematical system; related historical topics; introduction to other geometries; selected topics such as transformations and tessellations. No credit toward a major or minor for secondary mathematics teaching. Offered Every Other Year.
Prerequisites: MAT 1110 with a minimum grade of C- and MAT 1120 with a minimum grade of C-
Equivalent: MAT 5180

MAE 5110 Number Theory for Middle School Teachers Cr. 3
Topics from elementary theory of numbers which underlie middle school mathematics; historical connections; role of abstraction and proof in mathematics. No credit toward a major or minor for secondary mathematics teaching. Offered Every Other Year.
Prerequisites: MAT 1800 with a minimum grade of C- or MAT 1120 with a minimum grade of C-
Equivalent: MAT 5190

MAE 5120 Abstract Algebra for Middle School Teachers Cr. 3
Topics from elementary abstract algebra underpinning middle school mathematics curriculum; historical connections; role of abstraction and proof in mathematics. No credit towards major in mathematics or secondary mathematics. Offered Every Other Year.
Prerequisites: MAT 1120 with a minimum grade of C- and MAT 1800 with a minimum grade of C-
Equivalent: MAT 5120

MAE 5130 Problem Solving for Middle School Teachers (5-9) Cr. 3
Development of mathematical problem solving in middle grades mathematics education; study of non-routine problems; problem solving strategies; historical connections; connections to selected mathematics content and to topics in other disciplines. Offered Every Other Year.

MAE 5140 Proportional and Algebraic Reasoning for Middle Grades Teachers (5-9) Cr. 3
Proportional reasoning involves thinking about relationships and making comparisons of quantities or values. This course explores those relationships and the ability to think about and compare multiplicative relationships between quantities through the lens of algebraic and proportional reasoning. Offered Every Other Year.

MAE 5150 Methods and Materials of Instruction: Secondary School Mathematics Cr. 3
Mathematics in secondary school; major concepts of secondary school mathematics; methods and instructional materials; classroom administration; modern trends. Offered Yearly.
Corequisite: TED 6620
Restriction(s): Enrollment limited to students in the College of Education.

MAE 5155 Secondary Mathematics Clinical (7-12) Cr. 2
This course offers school-based mathematics clinical experience in the 7-12 grade band for pre-service teachers. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with clinical instructors and mentor educators. Offered Yearly.
Corequisite: MAE 5150

MAE 6050 Teaching Mathematics Methods in the Middle Grades Cr. 3
Creative use of resources and materials for improving the mathematics competencies of middle school and junior high school students; organizing the mathematics classroom for effective instruction; promising trends; related research. Offered Yearly.
Corequisite: MAE 6055
Restriction(s): Enrollment limited to students in the College of Education.

MAE 6055 Teaching Mathematics in the Middle Grades Clinical (5-9) Cr. 2
This course offers school-based mathematics clinical experience in the 5-9 grade band for pre-service teachers. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with clinical instructors and mentor educators. Offered Yearly.
Corequisite: MAE 6050

MAE 6075 Historical and Social Contexts of Teaching Mathematics (5-12) Cr. 3
This course examines current and historical mathematical educational practices that contribute inequitable access and opportunity and ethical and equitable practices in the mathematics classrooms. Offered Yearly.

MAE 6150 Special Topics Cr. 1-6
Current issues and trends; areas of neglected content; curriculum proposals; related research. Topics to be announced in Schedule of Classes. Offered Intermittently.
Repeatable for 12 Credits

MAE 7150 Advanced Studies in Teaching Discrete Mathematics Cr. 3
Nature of discrete mathematics and its applications, incorporating discrete topics in school mathematics. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

MAE 7200 Advanced Studies in Teaching Statistics and Probability Cr. 3
Techniques for teaching statistics and probability in grades K-12; promising materials and activities; research on the learning and teaching of statistics and probability; related resources; review of basic concepts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

MAE 7250 Advanced Studies in Teaching Algebra Cr. 3
Fundamental concepts of algebra for a modern secondary school mathematics program; current trends and experimental programs; related research; methods and materials of instruction. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

MAE 7300 Advanced Studies in Teaching Geometry Cr. 3
Role of geometry and trigonometry in secondary school mathematics; selection of major concepts; development of postulational thinking; teaching procedures emphasizing modes of thinking in mathematics; modern trends. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

MAT - Mathematics

For details on Mathematics prerequisite requirements, please see the* Mathematics Placement Information *(p. 302) section of this bulletin, or the* Mathematics Placement Exam *(http://testing.wayne.edu/register/math-placement-exam.php) information provided by the Office of Testing, Evaluation and Research Services.

MAT 1000 Mathematics in Today's World Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
An exploration of current applications of mathematics, such as gerrymandering, consumer mathematics, cryptography, identification numbers, art, music, statistical design, optimal decision making, and risk assessment. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.

MAT 1010 Beginning Algebra Cr. 3,5
Satisfies General Education Requirement: Quantitative Experience Comp
Review of arithmetic, integers, fractions, decimals, percents, ratios. Algebra: solving equations and inequalities, algebraic expressions, graphing, problem solving. Offered Every Term.

MAT 1070 College Algebra Cr. 5
Satisfies General Education Requirement: Quantitative Experience Comp
A college algebra course with emphasis on functions. Topics include: properties of the real number system, equations and inequalities, lines, graphs, algebra of functions, modeling, exponents, logarithms, systems of equations and conic sections, and introduction to trigonometry if time allows. Warning: This course may not be equivalent to college algebra courses at other institutions. Therefore, this course in conjunction with a trigonometry course taken elsewhere is not sufficient preparation for MAT 2010 (Calculus I). Prerequisites are subject to specific conditions. Refer to the Mathematics Placement Information page referenced at the top of the Mathematics course listings in the University Bulletin. Some sections are offered by the Rising Scholars Program (RSP). These sections require departmental approval and must be taken with MAT 1075, a two-hour workshop. Email emergingscholars@wayne.edu for more information regarding the RSP sections. Offered Every Term.
Prerequisites: MAT 1010 with a minimum grade of C- (must be taken at WSU), MAT Permit to Reg ACT/SAT with a test score minimum of 2-4, or Math Permit to Reg - (L1-L4) with a test score minimum of 2-4

MAT 1075 Problem Solving for College Algebra Cr. 2
Students work collaboratively on challenging problems related to "College Algebra." Communication skills are taught through group discussions and journal writing. Serving students in the Rising Scholars Program, students are immersed in an environment that promotes a sense of community and the habits of success. This course must be taken with a Rising Scholars Program (RSP) MAT 1070 section. Email emergingscholars@wayne.edu for more information. Offered Fall, Winter.
Corequisite: MAT 1070

MAT 1110 Mathematics for Elementary School Teachers I Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
Problem solving, sets, functions, reasoning, number theory, whole numbers, integers, fractions, decimals. Prerequisites are subject to specific conditions. Refer to the Mathematics Placement Information page referenced at the top of the Mathematics course listings in the University Bulletin. Offered Fall, Winter.
Prerequisites: MAT 1070-6999 with a minimum grade of C- (must be taken at WSU), Math Permit to Reg - (L1-L4) with a test score minimum of 3-4, or MAT Permit to Reg ACT/SAT with a test score minimum of 3-4

MAT 1120 Mathematics for Elementary School Teachers II Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
Statistics, probability, geometry, and measurement. Prerequisites are subject to specific conditions. Refer to the Mathematics Placement Information page referenced at the top of the Mathematics course listings in the University Bulletin. Offered Fall, Winter.
Prerequisites: MAT 1110 with a minimum grade of C- (must be taken at WSU), MAT Permit to Reg ACT/SAT with a test score minimum of 3-4, or Math Permit to Reg - (L1-L4) with a test score minimum of 3-4

MAT 1400 Artificial Intelligence and the Conscious Mind Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
This course provides an introduction to philosophical and scientific thinking about Artificial Intelligence (AI). The public release of Large Language Models (LLMs) such as ChatGPT and relatives has created both high hopes for the future and also deep worries. Generative AI systems such as LLMs now display nearly human-level abilities at tasks that would require genuine intelligence and consciousness if performed by humans. But what are AIs really doing in performing these tasks? Are AIs intelligent, understanding, conscious? Could they be in the near future? Our overall aim in this course is to gain some understanding of the workings of neural networks, machine learning, and AI, to combine that with an understanding of philosophical and cognitive scientific approaches to understanding mentality and consciousness, and thereby to take a few baby steps toward putting together answers to these important questions. Offered Yearly.
Equivalent: PHI 1400

MAT 1800 Elementary Functions Cr. 4
Satisfies General Education Requirement: Quantitative Experience Comp
Basic definition and concept of function. Definitions, properties and graphs of polynomial, rational, exponential, logarithmic, trigonometric, and inverse trigonometric functions. Only two degree credits after MAT 1500. Students in the Emerging Scholars Program must also enroll in the accompanying problem-solving workshop: MAT 1990, for a total of six credits. Prerequisites are subject to specific conditions. Refer to the Mathematics Placement Information page referenced at the top of the Mathematics course listings in the University Bulletin. Offered Every Term.
Prerequisites: MAT 1070 with a minimum grade of C- (must be taken at WSU), MAT Permit to Reg ACT/SAT with a test score minimum of 3-4, or Math Permit to Reg - (L1-L4) with a test score minimum of 3-4

MAT 1990 Precalculus Workshop Cr. 2
Students work cooperatively in groups to solve challenging problems related to precalculus. Learning is through discovery rather than by lecture. Offered Every Term.

MAT 2010 Calculus I Cr. 4
Satisfies General Education Requirement: Quantitative Experience Comp
Calculus as the study of change. Definitions, concepts, and interpretations of the derivative and the definite and indefinite integrals; differentiation, integration, applications. No credit after former MAT 1510. Students in the Emerging Scholars Program must also enroll in the accompanying problem-solving workshop: MAT 2110, for a total of six credits. Prerequisites are subject to specific conditions. Refer to the Mathematics Placement Information page referenced at the top of the Mathematics course listings in the University Bulletin. Offered Every Term.
Prerequisites: MAT 1800 with a minimum grade of C-, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4

MAT 2020 Calculus II Cr. 4
Satisfies General Education Requirement: Quantitative Experience Comp
Review definition of definite integral and fundamental theorem of calculus. Techniques of integration; approximate integration; improper integrals; applications of integration. Sequences and series. Approximating functions by polynomials and Taylor series. Students in the Emerging Scholars Program must also enroll in the accompanying problem-solving workshop: MAT 2120, for a total of six credits. Prerequisites are subject to specific conditions. Refer to the Mathematics Placement Information page referenced at the top of the Mathematics course listings in the University Bulletin. Offered Every Term.
Prerequisites: MAT 2010 with a minimum grade of C-

MAT 2030 Calculus III Cr. 4
Multivariable calculus with applications. Vectors and vector functions in two and three dimensions; functions of several variables; differentiation; integration; vector calculus. Offered Every Term.
Prerequisites: MAT 2020 with a minimum grade of C-

MAT 2110 Calculus Workshop I Cr. 2
Students work cooperatively in groups to solve challenging problems related to calculus. Learning is through discovery rather than by lecture. Offered Every Term.
Prerequisites: MAT 2010 with a minimum grade of C- (may be taken concurrently)

MAT 2120 Calculus Workshop II Cr. 2
Students work cooperatively in groups to solve challenging problems related to calculus. Learning is through discovery rather than by lecture. Offered Winter.
Prerequisites: MAT 2020 with a minimum grade of C-

MAT 2150 Differential Equations and Matrix Algebra Cr. 4
Differential equations and applications; basic operations of matrices from linear algebra. Only one degree credit after MAT 2350. Offered Every Term.
Prerequisites: MAT 2030 with a minimum grade of C-

MAT 2250 Elementary Linear Algebra Cr. 3
Topics include: systems of linear equations, matrices, vector spaces, basis, dimension, inner products, linear transformations and eigenvalues. Applications presented. Offered Every Term.
Prerequisites: MAT 2020 with a minimum grade of C-

MAT 2300 Mathematical Epidemiology Cr. 3
This is a first course in the mathematical modeling of infectious diseases. The course starts with historical, biological, and mathematical background. We introduce basic epidemic models (SIR, SIS, SIRS) first without and then with demographics, and study the properties of these models. We will learn about more complex epidemic models (SEIR, etc.) and how to validate models using real-world data. If time permits, other topics may include: vector-borne disease models, global stability, or control strategies. Offered Yearly.
Prerequisites: MAT 2020 with a minimum grade of C-

MAT 2350 Elementary Differential Equations Cr. 3
Topics include: first order equations, higher order linear equations, Laplace transforms, linear systems. Applications presented throughout the course. No degree credit after MAT 2150. Offered Yearly.
Prerequisites: MAT 2030 with a minimum grade of C- and MAT 2250 with a minimum grade of C-

MAT 2500 Fundamentals of Mathematics and Proof-Writing Cr. 3
This course is a writing-intensive introduction to mathematical proofs, where students will learn to read and write mathematics in definition-theorem-proof format. The mathematical content of the course is elementary set theory (finite and infinite sets, cardinality, Zorn's Lemma and the Axiom of Choice, the Continuum Hypothesis) and elementary analysis (metric spaces and the real numbers). Offered Yearly.
Prerequisites: MAT 2010 with a minimum grade of C-

MAT 2860 Discrete Mathematics Cr. 3
Foundations of mathematics: logic and mathematical reasoning; sets, functions, sequences; the integers and the Euclidean algorithm; induction, recursive definitions and recurrence relations; graphs. Combinatorics. Graph theory. Boolean algebra. No credit after former MAT 1860 or 1870. Offered Yearly.
Prerequisites: MAT 2010 with a minimum grade of C-

MAT 3430 Applied Differential and Integral Calculus Cr. 4
Limits, derivatives, applications of derivatives, definite integrals and their applications, and trigonometric functions. No degree credit in College of Liberal Arts and Sciences. Offered Every Term.
Prerequisites: MAT 1800 with a minimum grade of C-
Equivalent: ET 3430

MAT 3450 Applied Calculus and Differential Equations Cr. 4
Continuation of MAT/ET 3430, including logarithmic and exponential functions, first and second order ordinary differential equations, vectors, polar coordinates, Laplace transforms, Taylor series, and Fourier series. No degree credit in College of Liberal Arts and Sciences. Offered Every Term.
Prerequisites: ET 3430 with a minimum grade of C- or MAT 2010 with a minimum grade of C-
Equivalent: ET 3450

MAT 3800 Contemporary Topics in Mathematics Cr. 3
The content of this course will vary from semester to semester. It will cover topics of current interest that are not part of other mathematics courses. Offered Intermittently.
Prerequisites: MAT 2020 with a minimum grade of C-
Repeatable for 12 Credits

MAT 4990 Directed Study: Honors Program Cr. 1-4
Offered Intermittently.
Repeatable for 8 Credits

MAT 5040 Elementary Abstract Algebra Cr. 4
This is an introduction to some of the main ideas of number theory and abstract algebra. The course also serves to introduce students to the uses and benefits of abstraction, and to the construction of airtight logical arguments. We start with a careful investigation of familiar number systems: the natural numbers, the integers, the rationals, the reals and the complex numbers. We then proceed to generalize these ideas to consider polynomial rings and fields. Offered Fall.
Prerequisites: MAT 2010 with a minimum grade of C- and 1 of (MAT 2500 with a minimum grade of C- or MAT 2860)

MAT 5070 Elementary Analysis Cr. 4
Topics include: the real numbers, cardinality, sequences, limits, continuity, uniform continuity, differentiation, integration. Offered Fall, Winter.
Prerequisites: MAT 2030 with a minimum grade of C- and (MAT 2150 with a minimum grade of C-, MAT 2250 with a minimum grade of C-, or MAT 2350 with a minimum grade of C-)

MAT 5100 Numerical Methods I Cr. 3
Numerical errors; solutions of nonlinear equations; polynomial interpolation; numerical approximation; numerical integration and differentiation; numerical solutions of systems of linear equations; numerical solutions of ordinary differential equations. Offered Fall.
Prerequisites: MAT 2030 with a minimum grade of C-, MAT 2250 with a minimum grade of C-, and (BE 1500 with a minimum grade of C- or (CSC 1100 with a minimum grade of C- and CSC 1101 with a minimum grade of C-))

MAT 5120 Abstract Algebra for Middle School Teachers Cr. 3
Topics from elementary abstract algebra underpinning middle school mathematics curriculum; historical connections; role of abstraction and proof in mathematics. No credit towards major in mathematics or secondary mathematics. Offered Every Other Year.
Prerequisites: MAT 1120 with a minimum grade of C- and MAT 1800 with a minimum grade of C-
Equivalent: MAE 5120

MAT 5180 Geometry for Middle School Teachers Cr. 3
Development of Euclidean geometry as a mathematical system; related historical topics; introduction to other geometries; selected topics such as transformations and tessellations. No credit toward a major or minor for secondary mathematics teaching. Offered Every Other Year.
Prerequisites: MAT 1110 with a minimum grade of C- and MAT 1120 with a minimum grade of C-
Equivalent: MAE 5100

MAT 5190 Number Theory for Middle School Teachers Cr. 3
Topics from elementary theory of numbers which underlie middle school mathematics; historical connections; role of abstraction and proof in mathematics. No credit toward a major or minor for secondary mathematics teaching. Offered Every Other Year.
Prerequisites: MAT 1800 with a minimum grade of C- or MAT 1120 with a minimum grade of C-
Equivalent: MAE 5110

MAT 5210 Advanced Calculus Cr. 4
Functions of many variables; limits, continuity; differentiation, mean value theorems; implicit and inverse function theorems; extremal problems, Lagrange multipliers; fixed-point methods; Taylor series; Fourier series, uniform convergence; improper integrals. Offered Every Other Winter.
Prerequisites: MAT 2150 with a minimum grade of C-, MAT 2350 with a minimum grade of C-, or (MAT 2030 with a minimum grade of C- and MAT 2250 with a minimum grade of C-)

MAT 5220 Partial Differential Equations Cr. 4
Partial differential equations of mathematical physics; review of second-order Linear ODEs with constant coefficients; method of separation of variables; Fourier series; Sturm-Liouville eigenvalue problems; boundary-value problems; method of eigenfunction expansion. Optional topics include Green's functions, solutions by Fourier transform, and method of characteristics. Offered Every Other Fall.
Prerequisites: MAT 2150 with a minimum grade of C-, MAT 2350 with a minimum grade of C-, or (MAT 2030 with a minimum grade of C- and MAT 2250 with a minimum grade of C-)

MAT 5230 Complex Variables and Applications Cr. 4
Cauchy-Riemann equations; elementary functions; mappings by elementary functions; the Cauchy integral formula; Morera's theorem; Taylor series; Laurent series; residues and poles; conformal mappings. Optional topics: improper integrals, the Schwarz-Christoffel transformations; potential theory; applications to differential and integral equations. No credit after MAT 6600. Offered Every Other Winter.
Prerequisites: MAT 2150 with a minimum grade of C-, MAT 2350 with a minimum grade of C-, or (MAT 2030 with a minimum grade of C- and MAT 2250 with a minimum grade of C-)

MAT 5280 Methods of Differential Equations Cr. 3
Linear nth order differential equations; linear systems of differential equations (constant and periodic coefficients); oscillation and comparison theorems for second order differential equations; boundary value problems; stability theory (Liapunov's direct method and frequency domain stability criteria); asymptotic solutions; autonomous non-linear systems; classification of singularities. Offered Fall.
Prerequisites: MAT 2150 with a minimum grade of C- or MAT 2350 with a minimum grade of C-

MAT 5350 Logical Systems I Cr. 4
Metaresults concerning formal systems of sentential and first-order logics; soundness, completeness; independence of axioms; introduction to recursive functions; formalization of elementary arithmetic; discussion of Godel's incompleteness theorem and Church's Theorem. Offered Every Other Year.
Prerequisites: MAT 5600 with a minimum grade of C-, PHI 2850 with a minimum grade of C-, PHI 2860 with a minimum grade of C-, PHI 5050 with a minimum grade of C-, or MAT 5420 with a minimum grade of C-
Equivalent: PHI 5350

MAT 5400 Elementary Theory of Numbers Cr. 3
Primes and the Fundamental Theorem of Arithmetic; greatest common divisor, least common multiple, Euclidean Algorithm; congruences, theorems of Fermat, Wilson and Euler; arithmetic functions; linear Diophantine equations; quadratic congruences and the Law of Quadratic Reciprocity. Optional topics include: applications to cryptography, perfect numbers, primitive roots and indices, Fibonacci numbers, Pythagorean triples, sums of squares, continued fractions. Offered Yearly.
Prerequisites: MAT 2030 with a minimum grade of C- and MAT 2250 with a minimum grade of C-

MAT 5410 Applied Linear Algebra Cr. 4
Gaussian elimination, vector spaces, the four fundamental subspaces, orthogonality, least squares approximation, determinants, eigenvalues and eigenvectors, positive definite matrices, singular value decomposition, linear transformations, complex matrices. Applications such as differential and difference equations, Markov processes, graphs and networks, Fourier series, computer graphics, numerical linear algebra. Offered Winter.
Prerequisites: MAT 2030 with a minimum grade of C- and MAT 2250 with a minimum grade of C-

MAT 5420 Algebra I Cr. 4
Abstract concepts: sets, mappings, equivalence relations, induction, general methods of proof. Group theory: groups, subgroups, cyclic groups, direct products, cosets, Lagrange's Theorem, quotient groups, homomorphisms, permutation groups. Rings and fields (basic definitions). Offered Fall, Winter.
Prerequisites: MAT 2030 with a minimum grade of C- and MAT 2250 with a minimum grade of C-

MAT 5430 Algebra II Cr. 4
Group theory continued: Sylow Theorems, finite abelian groups. Ring theory: rings, integral domains, fields of quotients, homomorphisms, ideals, quotient rings, P.I.D.s, U.F.D.s, polynomial rings. Advanced topics in linear algebra: canonical forms. Field theory: extensions, splitting fields, finite fields, geometric constructions. Offered Fall, Winter.
Prerequisites: MAT 5420 with a minimum grade of C-

MAT 5530 Elementary Differential Geometry and its Applications Cr. 3
Introduction to the differential geometry of curves and surfaces in three-dimensional space. Curvature, torsion, Frenet formulas, fundamental theorem of space curves. Gauss and mean curvature, asymptotic and principal curves, geodesics, Gauss-Bonnet theorem. Applications such as pursuit curves, roulettes, brachistochrones, precession of Foucault's pendulum, design of packaging machines, shapes and soap films. Offered Intermittently.
Prerequisites: MAT 2030 with a minimum grade of C- and MAT 2250 with a minimum grade of C-

MAT 5540 Topological Data Analysis Cr. 3
Application of topological methods to reveal structure in data that are not visible by classical statistical methods. Basic ideas in topology, including topological spaces, continuous functions, homeomorphisms, simplicial complexes, simplicial homology, and the Vietoris-Rips complex. Use of computer software to calculate persistent homology of data sets from the applied sciences and elsewhere. Practical data analysis tools for mathematical sciences, as well as for engineering, physics, biology, medicine, economics, sociology, and any other subject in which experimental data is produced and analyzed. Offered Winter.
Prerequisites: MAT 2250 with a minimum grade of C-

MAT 5600 Introduction to Analysis I Cr. 4
Completeness, convergence, compactness, connectedness and continuity in the context of metric spaces; applications to differential calculus. Offered Fall, Winter.
Prerequisites: MAT 5070 with a minimum grade of C-

MAT 5610 Introduction to Analysis II Cr. 3
Integration, point-wise and uniform convergence of sequences and series of functions; power series; introduction to analytic functions; Fourier series; possible additional topics. Offered Fall, Winter.
Prerequisites: MAT 5600 with a minimum grade of C-

MAT 5700 Introduction to Probability Theory Cr. 4
Probability spaces; combinatorial analysis; independence and conditional probability; discrete and continuous random variables including binomial, Poisson, exponential and normal distributions; expectations; joint, marginal and conditional distribution functions; law of large numbers; central limit theorems. Offered Fall, Winter.
Prerequisites: MAT 2030 with a minimum grade of C-

MAT 5710 Introduction to Stochastic Processes Cr. 3
Non-measure-theoretic introduction to the theory of stochastic processes and its applications, with emphasis on Markov processes in both discrete and continuous time, the Poisson process, and Brownian motion. Offered Yearly.
Prerequisites: 2 of MAT 5700 with a minimum grade of C- and (MAT 2150 with a minimum grade of C-, MAT 2250 with a minimum grade of C-, or MAT 2350 with a minimum grade of C-)

MAT 5740 The Theory of Interest Cr. 3
Concrete problems used to explore concepts in the theory of interest, including measurement of interest, annuities, yield rates, amortization, bonds, and stochastic approaches. Students prepare for the actuarial examination FM/2. Offered Yearly.
Prerequisites: MAT 2020 with a minimum grade of C-

MAT 5750 Mathematics of Finance Cr. 3
Topics to be covered include: financial markets, binomial models, stocks and options, Black-Scholes formula, hedging, bond models and interest rate options, and computational methods for bonds. Offered Winter.
Prerequisites: (1 of (MAT 2150 or MAT 2350) and MAT 5700 with a minimum grade of C-)

MAT 5770 Mathematical Models in Operations Research Cr. 3
Deterministic and probabilistic mathematical modeling of real-world problems. Linear and nonlinear programming; Markov chains; queuing theory; inventory models; Markov decision processes. Offered Yearly.
Prerequisites: MAT 2030 with a minimum grade of C-, MAT 2250 with a minimum grade of C-, and MAT 5700 with a minimum grade of C-

MAT 5870 Methods of Optimization Cr. 3
Introduction to basic mathematical theory and computational methods of optimization; unconstrained and constrained optimization problems; optimality conditions in various optimization problems; numerical methods of optimization. Offered Winter.
Prerequisites: MAT 2150 with a minimum grade of C- or MAT 2350 with a minimum grade of C-

MAT 5890 Special Topics in Mathematics Cr. 3-4
Material currently of interest to students and faculty. Topics to be announced in Schedule of Classes. Offered Fall, Winter.
Prerequisites: MAT 2030 with a minimum grade of C- and (MAT 2150 with a minimum grade of C-, MAT 2250 with a minimum grade of C-, or MAT 2350 with a minimum grade of C-)
Repeatable for 12 Credits

MAT 5990 Directed Study Cr. 1-4
Undergraduates who elect this course must be mathematics majors of honors caliber. Content will vary to satisfy needs of individual student. Offered Every Term.
Repeatable for 8 Credits

MAT 5992 Teaching Mathematics in College Cr. 1
Preparation for first semester of teaching in developmental-level mathematics course. Content presentation, test-writing, grading, classroom management, use of technology. Students are videotaped and critiqued. Required of all graduate teaching assistants in Mathematics Department. Offered for S and U grades only. Offered Fall.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Mathematics or Mathematics Honors; enrollment is limited to Graduate or Undergraduate level students.

MAT 6130 Discrete Mathematics Cr. 3
Foundations of mathematics: logic, sets, functions, sequences. The integers. Matrices. Mathematical reasoning: induction, recursive definitions and recurrence relations. Combinatorics. Graph theory. Boolean algebra. No credit after former MAT 1860 or 1870. Not available to Math majors for degree credit. Offered Yearly.
Prerequisites: MAT 2010 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Education.

MAT 6140 Geometry: An Axiomatic Approach Cr. 3
Foundations: logic, axiom systems, models; Hilbert's axioms; the parallel postulate; Euclidean geometry; non-Euclidean geometries; hyperbolic geometry; philosophical questions. Offered Yearly.
Prerequisites: MAT 2500 with a minimum grade of C- or MAT 2860 with a minimum grade of C-

MAT 6150 Probability and Statistics for Teachers Cr. 4
Counting techniques, discrete sample spaces and probability, random variables, mean and variance, joint distributions, the binomial and normal distributions, central limit theorem, estimation and hypothesis testing. Not available to Math majors for degree credit. Offered Fall, Winter.
Prerequisites: MAT 1800 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Education.

MAT 6300 Mathematical Epidemiology Cr. 3
This is a first course in the mathematical modeling of infectious diseases. The course starts with historical, biological, and mathematical background. We introduce basic epidemic models (SIR, SIS, SIRS) first without and then with demographics, and study the properties of these models. We will learn about more complex epidemic models (SEIR etc.), and how to validate models using real-world data. If time permits, other topics may include: vector-borne disease models, global stability, or control strategies. No credit will be awarded to students who have previously taken MAT 2300. Graduate students in mathematics should take advanced courses in differential equations instead. Offered Yearly.
Prerequisites: MAT 2020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 6420 Advanced Linear Algebra Cr. 3
Vector spaces and linear maps from a basis free perspective. Vector spaces, linear transformations, dual spaces, quotient spaces, inner product spaces, quadratic forms, adjoint operators, normal operators, spectral theorem, Jordan canonical form, trace and determinant. Offered Winter.
Prerequisites: MAT 5430 with a minimum grade of C-

MAT 6480 Introduction to Quantum Computing Cr. 3
Serves as an introduction to quantum computing and brings together students with different backgrounds in mathematics, physics, chemistry, and computer science to foster interdisciplinary connections in the areas of quantum computing and quantum information. A strong background in linear algebra over the complex numbers as well as differential and integral calculus is required. Familiarity with quantum physics and complexity theory will be helpful, but it is not required. Offered Fall.
Equivalent: PHY 6480

MAT 6500 Topology I Cr. 3
Topological spaces and continuous functions; connectedness; compactness; product and quotient spaces; metric spaces; Urysohn's lemma; Tietze extension theorem; homotopy; covering spaces and path lifting; the fundamental group and examples; Brouwer fixed point theorem and applications. Offered Fall.
Prerequisites: MAT 5430 with a minimum grade of C- or MAT 5610 with a minimum grade of C-

MAT 6600 Complex Analysis Cr. 2-4
Complex differentiation; elementary functions; Cauchy's integral theorem; power series; Laurent expansions; singularities; residue theorem; entire and meromorphic functions; Riemann mapping theorem. Offered for three credits only, if student has taken MAT 5230. Offered Winter.
Prerequisites: MAT 5430 with a minimum grade of C- or MAT 5610 with a minimum grade of C-

MAT 6990 Internship in Mathematical Sciences Cr. 1-3
Experience in industry, or in a research laboratory, or in an institution, using tools from the mathematics curriculum. Students provide a written report based on the internship experience. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Mathematics.
Repeatable for 3 Credits

MAT 7200 Ordinary Differential Equations Cr. 3
Existence and uniqueness of solutions; linear solutions and linearization; linear differential equations in the complex domain; solutions near regular and irregular singular points; autonomous systems; stability theory; limit cycles; perturbation theory; boundary value problems; Green's function; spectral theory. Offered Winter.
Prerequisites: MAT 5610 with a minimum grade of C or MAT 7600 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7210 Partial Differential Equations Cr. 3
Linear partial differential equations; fundamental solutions; distributions and their Fourier transforms; hyperbolic equations; Cauchy-Kovalevsky theorem; energy inequalities; weak solutions; propagation of singularities; elliptic equations; maximum principles; Sobolev spaces and inequalities; Garding's inequality; existence and regularity of solutions of Dirichlet problems; fundamental solutions of parabolic equations; strongly continuous semigroups. Offered Fall.
Prerequisites: MAT 5610 with a minimum grade of C or MAT 7600 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7230 Finite Element Methods Cr. 3
Topics chosen at discretion of instructor from topics similar to: regularity theory for second order elliptic partial differential equations; Hamilton-Jacobi equations; conservation laws; evolution equations; semigroup theory; calculation of variations; nonvariational methods. Offered Winter.
Prerequisite: MAT 5100 with a minimum grade of C- and MAT 5070 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7240 Advanced Partial Differential Equations Cr. 3
Continuation of MAT 7210. Variety of topics chosen by the instructor. Offered Winter.
Prerequisite: MAT 7210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7270 Topics in Applied Mathematics Cr. 3-4
Topics of special interest such as differential equations; calculus of variations; elliptic functions; orthogonal functions; numerical methods; systems and control theory. Topics to be announced in Schedule of Classes . Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MAT 7400 Advanced Algebra I Cr. 3
Groups; group actions; group automorphisms; Sylow theorems; direct and semi-direct products; abelian groups; nilpotent and solvable groups; free groups; vector spaces and canonical forms; field extensions; Galois theory; finite fields; cyclotomic extensions; abelian extensions; Galois groups of polynomials. Offered Every Other Fall.
Prerequisite: MAT 5430 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7410 Advanced Algebra II Cr. 3
Rings; ideals; maximal and prime ideals; modules; submodules and quotient modules; tensor products; flatness; exactness of Hom and tensor; localization; rings of fractions; integrality; Noetherian and Artinian rings; completions; representation theory; group rings; injective and projective modules; Wedderburn theorem; character theory. Offered Every Other Fall.
Prerequisite: MAT 5430 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7470 Topics in Algebra Cr. 3-4
Selected topics from algebra. Offered Yearly.
Prerequisite: MAT 7400 with a minimum grade of C or MAT 7410 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MAT 7500 Topology II Cr. 3
Smooth manifolds and maps; examples from projective spaces, from Lie groups, and from low dimensions; local coordinates; partitions of unity; tangent vectors and tangent bundles; differentials of smooth maps; vector fields; local one-parameter groups of diffeomorphisms; differential forms; integration and Stokes theorem; definition of deRham cohomology. Offered Winter.
Prerequisite: MAT 6500 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7510 Algebraic Topology I Cr. 3
CW complexes; simplicial, singular, and cellular homology; Mayer-Vietoris sequences; categories and functors; derived functors of Ext and tensor; universal coefficients theorem; Künneth theorem; cohomology; cup product; orientations; Poincaré duality. Offered Every Other Winter.
Prerequisite: MAT 5430 with a minimum grade of C and MAT 6500 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7520 Algebraic Topology II Cr. 3
Fundamental group; Van Kampen's theorem; covering spaces; homotopy groups; Whitehead's theorem; cellular and CW approximation; excision; Hurewicz theorem; cofibrations and fibrations; cofiber and fiber sequences; Postnikov towers; obstruction theory. Offered Every Other Winter.
Prerequisite: MAT 5430 with a minimum grade of C and MAT 6500 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7570 Topics in Geometry and Topology Cr. 3-4
Selected topics from geometry and topology. Offered Yearly.
Prerequisite: MAT 7500 with a minimum grade of B or MAT 7510 with a minimum grade of B or MAT 7520 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MAT 7600 Real Analysis I Cr. 3
Lebesgue measure; general measures; measurable functions; integration (monotone and dominated convergence theorems); function spaces; Lebesgue spaces; modes of convergence; product measures; Fubini theorem. Offered Fall.
Prerequisite: MAT 5610 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7610 Real Analysis II Cr. 3
Differentiation; relationship between differentiation and integration; Radon-Nikodym theorem; Fourier transforms; Hilbert and Banach spaces; selected topics. Offered Winter.
Prerequisite: MAT 7600 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7700 Advanced Probability Theory I Cr. 3
Probability spaces; random variables; expectations and moments; convergence concepts; product spaces and Kolmogorov extension theorem; separability of random processes; continuity of random processes; conditional expectation; independence. Offered Every Other Fall.
Prerequisite: MAT 5700 with a minimum grade of C and MAT 7600 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MAT 7990 Directed Study Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MAT 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

MAT 8000 Advanced Topics in Mathematics Cr. 2-4
Topics to be announced in Schedule of Classes. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 24 Credits

MAT 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

MAT 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MAT 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

MAT 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: MAT 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

MAT 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: MAT 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

MAT 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: MAT 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

MAT 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Prerequisite: MAT 9994 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

MCT - Mechanical Engineering Technology

MCT 3010 Instrumentation Cr. 3
Theory and use of measurement instruments and techniques; standards and dimensional units; experimental procedures and data analysis; sensors and transducers for parameters such as displacement, stress, strain, force, torque, temperature, motion, sound. Offered Fall, Winter.
Prerequisites: EET 2000 with a minimum grade of C- and PHY 2140 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $25

MCT 3100 Mechanics of Materials Cr. 3
The elastic behavior of load bearing materials. Tension, compression, shear, combined stress, bending, torsion and columns. Failure analysis. Offered Fall, Winter.
Prerequisites: ET 3030 with a minimum grade of C- and (ET 3430 with a minimum grade of C- (may be taken concurrently) or MAT 2010 with a minimum grade of C- (may be taken concurrently))
Fees: $10

MCT 3410 Kinematics and Dynamics of Machines Cr. 3
Velocity and acceleration of moving parts in machine elements and mechanisms; cam, gear, and gear train design; static and inertial forces, balancing, gyroscopic effects, and critical speeds. Offered Fall, Winter.
Prerequisite: ET 3050 with a minimum grade of C-

MCT 4150 Applied Thermodynamics Cr. 3
Introduction to the concept of energy and the laws governing the transfers and transformations of energy. Emphasis on thermodynamic properties and the first and second law analysis of systems and control volumes. Integration of these concepts into the analysis of different power and refrigeration cycles. Offered Yearly.
Prerequisites: (ET 3430 with a minimum grade of C- or MAT 2010 with a minimum grade of C-), CHM 1020 with a minimum grade of C-, and (PHY 2130 with a minimum grade of C- and PHY 2131 with a minimum grade of C-)
Fees: $10

MCT 4180 Fluid Mechanics Cr. 3
Properties of fluids, fundamentals of fluid flow, dimensional analysis and similitude, and flow measurement techniques. Introduction to internal and external flows and how to analyze them. Analysis of hydrostatic equipment, hydrokinetic equipment and systems. Introduction to network analysis and calculation. Offered Yearly.
Prerequisites: ET 3030 with a minimum grade of C- and ET 3450 with a minimum grade of C- (may be taken concurrently)

MCT 4210 Heat Transfer Cr. 3
Basic modes of heat transfer and their applications. Steady state conduction in one and two dimensions and transient conduction. Numerical and graphical methods. Heat exchanges. Condensation and boiling heat transfer. Introduction to mass transfer. Offered Yearly.
Prerequisites: MAT 3450 with a minimum grade of C- (may be taken concurrently) and PHY 2140 with a minimum grade of C-

MCT 4400 Design of Machine Elements Cr. 3
Fundamental concepts in the design of the separate elements which compose the machine; application of properties and mechanics of materials modified by practical considerations. Offered Yearly.
Prerequisites: MCT 3100 with a minimum grade of C- and MCT 3410 with a minimum grade of C- (may be taken concurrently)

MCT 4990 Guided Study Cr. 1-6
Supervised study and instruction in the field selected by the student. Offered Intermittently.
Repeatable for 6 Credits

MCT 5150 Hybrid Vehicle Technology Cr. 3
Technical concepts and design, energy analysis, unified modeling approach, optimization, control; power generation, engine overview, concepts of hybridization, on-board energy storage; overview of motors, transmissions, fuel cells, future applications. Offered Fall.
Prerequisites: ET 3450 with a minimum grade of B+ and PHY 2140 with a minimum grade of B+

MCT 5210 Energy Sources and Conversion Cr. 3
Various energy sources and how they are utilized. Wind, solar, geothermal, fuel cells, storage devices, energy economics and transportation techniques, related to harnessing energy to a usable form such as electricity and heat. Offered Fall.
Prerequisites: (ET 3430 with a minimum grade of C- or MAT 2010 with a minimum grade of C-) and PHY 2140 with a minimum grade of C-

MD1 - Medical School: Year 1

MD1 5001 Human Body Foundations I Cr. 10
Human Body Foundations I is the first of a 3-part course series in the basic sciences that engages medical students with knowledge of the normal structure and function of the human body, prepares them for the study of human disease, sets the stage for success on the USMLE Step I exam, and provides the scaffolding on which the clerkship curriculum is built. Part I emphasizes fundamental principles in biochemistry, cell biology, embryology, histology, genetics, physiology, and pharmacology, and introduces students to the anatomical investigation of tissues and organs through full-body cadaver dissection beginning with the Musculoskeletal System. Offered Yearly.

MD1 5002 Human Body Foundations II Cr. 10
Human Body Foundations II is the second of a 3-part course series in the basic sciences that engages medical students with knowledge of the normal structure and function of the human body, prepares them for the study of human disease, sets the stage for success on the USMLE Step I exam, and provides the scaffolding on which the clerkship curriculum is built. Part II focuses on three organ systems of the body: Cardiovascular/Respiratory, Renal/Urinary, and Gastrointestinal, emphasizing fundamental principles of physiology, histology, biochemistry, pharmacology, genetics, and embryology, as well as anatomical study through full-body cadaver dissection of the visceral systems. Offered Yearly.

MD1 5003 Human Body Foundations III Cr. 10
Human Body Foundations III is the last of a 3-part course series in the basic sciences that engages medical students with knowledge of the normal structure and function of the human body, prepares them for the study of human disease, sets the stage for success on the USMLE Step I exam, and provides the scaffolding on which the clerkship curriculum is built. Part III focuses on the Reproductive & Endocrine Systems and the Central Nervous System and emphasizes fundamental principles of neuroscience, physiology, histology, embryology, genetics, biochemistry, and pharmacology. The sequence of full-body cadaver dissection is brought to a close with the anatomical investigation of pelvic and head & neck regions. Offered Yearly.

MD1 5101 Clinical Skills 1A Cr. 1
This course is designed to allow students to develop and demonstrate foundational knowledge and basic clinical skills in history-taking, patient examination, oral case presentation, clinical reasoning and performance of procedures required to participate in clinical service-learning activities. Students will be introduced to advanced skills in patient interviewing and physical examination emphasizing a patient-centered, empathic and compassionate approach, incorporating the patient's perspective, socioeconomic background and cultural intelligence, and protection of patient privacy required to participate in early clinical experiences. Students will be introduced to basic clinical reasoning concepts. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5102 Clinical Skills 1B Cr. 1
In this course, learners will continue to develop and demonstrate foundational knowledge and basic clinical skills in history-taking, patient examination, oral case presentation, clinical reasoning and performance of procedures required to participate in clinical service-learning activities. Students will practice advanced skills in patient interviewing and physical examination emphasizing a patient-centered, empathic and compassionate approach, incorporating the patient's perspective, socioeconomic background and cultural intelligence, and protection of patient privacy required to participate in early clinical experiences. Students will practice basic clinical reasoning skills. Offered Yearly.
Prerequisite: MD1 5101
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5103 Clinical Skills 1C Cr. 1
In this course, learners will demonstrate mastery of foundational knowledge and basic clinical skills in history-taking, patient examination, oral case presentation, clinical reasoning and performance of procedures required to participate in clinical service-learning activities. Students will continue to develop advanced skills in patient interviewing and physical examination emphasizing a patient-centered, empathic and compassionate approach, incorporating the patient's perspective, socioeconomic background and cultural intelligence, and protection of patient privacy required to participate in early clinical experiences. Students will refine basic clinical reasoning skills. Offered Yearly.
Prerequisite: MD1 5102
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5201 Population, Patient, Physician and Professionalism (P4) 1A Cr. 1
Provides the opportunity to learn, practice, and apply knowledge and skills as a physician-in-training in diverse urban clinical and community outreach settings. Using a variety of methods, including clinical/community engagement, students engage in activities demonstrating the interconnectedness of the population, patient, and physician. P4 also emphasizes the need for students to develop their professional identity by behaving professionally and demonstrating respect to their colleagues, faculty, and patients and their families. By exploring sensitive topics and communicating with a diverse population, students' attitudes, as well as knowledge and skills, will be developed with a concentrated focus on understanding the patient's perspective, leading to true patient-centered care. Students will become effective team members, learn evidence-based theories to reduce healthcare disparities, recognize their own professional identity formation, and develop self-directed learning habits. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5202 Population, Patient, Physician and Professionalism (P4) 1B Cr. 1

Provides the opportunity to learn, practice, and apply knowledge and skills as a physician-in-training in diverse urban clinical and community outreach settings. Using a variety of methods, including clinical/community engagement, students engage in activities demonstrating the interconnectedness of the population, patient, and physician. P4 also emphasizes the need for students to develop their professional identity by behaving professionally and demonstrating respect to their colleagues, faculty, and patients and their families. By exploring sensitive topics and communicating with a diverse population, students' attitudes, as well as knowledge and skills, will be developed with a concentrated focus on understanding the patient's perspective, leading to true patient-centered care. Students will become effective team members, learn evidence-based theories to reduce healthcare disparities, recognize their own professional identity formation, and develop self-directed learning habits. Offered Yearly.

Prerequisite: MD1 5201

Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5203 Population, Patient, Physician and Professionalism (P4) 1C Cr. 1

Provides the opportunity to learn, practice, and apply knowledge and skills as a physician-in-training in diverse urban clinical and community outreach settings. Using a variety of methods, including clinical/community engagement, students engage in activities demonstrating the interconnectedness of the population, patient, and physician. P4 also emphasizes the need for students to develop their professional identity by behaving professionally and demonstrating respect to their colleagues, faculty, and patients and their families. By exploring sensitive topics and communicating with a diverse population, students' attitudes, as well as knowledge and skills, will be developed with a concentrated focus on understanding the patient's perspective, leading to true patient-centered care. Students will become effective team members, learn evidence-based theories to reduce healthcare disparities, recognize their own professional identity formation, and develop self-directed learning habits. Offered Yearly.

Prerequisite: MD2 5202

Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5301 Service Learning 1-A Cr. 0

Provides students the opportunity to learn, practice, and apply knowledge and skills as a physician-in-training in diverse urban clinical and community outreach settings. Through large group sessions, small group sessions, online modules, self-directed reflective assignments, and clinical and community engagement, students will actively participate in activities demonstrating the interconnectedness of the population, patient, and physician. The course also emphasizes the need for students to quickly develop their professional identity as a physician-in-training by behaving professionally and demonstrating respect to their colleagues, faculty, patients and their families. By engaging early with patients and potential patients, students' attitudes, as well as knowledge and skills, will be developed with a concentrated focus on understanding the patient's perspective, leading to true patient-centered care. Offered Yearly.

MD1 5302 Service Learning 1-B Cr. 0

Provides students the opportunity to learn, practice, and apply knowledge and skills as a physician-in-training in diverse urban clinical and community outreach settings. Through large group sessions, small group sessions, online modules, self-directed reflective assignments, and clinical and community engagement, students will actively participate in activities demonstrating the interconnectedness of the population, patient, and physician. The course also emphasizes the need for students to quickly develop their professional identity as a physician-in-training by behaving professionally and demonstrating respect to their colleagues, faculty, patients and their families. By engaging early with patients and potential patients, students' attitudes, as well as knowledge and skills, will be developed with a concentrated focus on understanding the patient's perspective, leading to true patient-centered care. Offered Yearly.

MD1 5303 Service Learning 1-C Cr. 0

Provides students the opportunity to learn, practice, and apply knowledge and skills as a physician-in-training in diverse urban clinical and community outreach settings. Through large group sessions, small group sessions, online modules, self-directed reflective assignments, and clinical and community engagement, students will actively participate in activities demonstrating the interconnectedness of the population, patient, and physician. The course also emphasizes the need for students to quickly develop their professional identity as a physician-in-training by behaving professionally and demonstrating respect to their colleagues, faculty, patients and their families. By engaging early with patients and potential patients, students' attitudes, as well as knowledge and skills, will be developed with a concentrated focus on understanding the patient's perspective, leading to true patient-centered care. Offered Yearly.

MD1 5401 Wayne Trained and Coaching Professional Development A Cr. 1

Wayne Trained and Coaching Professional Development is a 1 credit course at Wayne State University School of Medicine designed to foster personal and professional growth through the Master Adaptive Learner (MAL) framework. Students engage in coaching, mentoring, and advising across areas like health, wellness, career planning, and academic support. Anchored by revitalized Warrior MD Houses, the course creates vibrant learning communities and consistent touchpoints, including "Wayne Trained" clinical scenarios that enhance reasoning and professionalism. The course emphasizes metacognitive skills, adaptability, and WSUSOM's 16 Principles of Professional Identity. Offered Yearly.

MD1 5402 Wayne Trained and Coaching Professional Development B Cr. 1

Wayne Trained and Coaching Professional Development is a 1 credit course at Wayne State University School of Medicine designed to foster personal and professional growth through the Master Adaptive Learner (MAL) framework. Students engage in coaching, mentoring, and advising across areas like health, wellness, career planning, and academic support. Anchored by revitalized Warrior MD Houses, the course creates vibrant learning communities and consistent touchpoints, including "Wayne Trained" clinical scenarios that enhance reasoning and professionalism. The course emphasizes metacognitive skills, adaptability, and WSUSOM's 16 Principles of Professional Identity. Offered Yearly.

MD1 5511 Community Engagement Elective 1A Cr. 2
Provides students with an opportunity to explore and understand the experience of under-served patients as they navigate community health services in Southeast Michigan. Medical students interact with patients or participants and staff to learn the circumstances and challenges faced with limited resources, to foster empathy, compassion, respect and humanistic care. Meeting with agency leaders and staff students learn about program design, administration and operation through outreach and mentoring volunteering. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5512 Community Engagement Elective 1B Cr. 3
Provides students with an opportunity to explore and understand the experience of under-served patients as they navigate community health services in Southeast Michigan. Medical students interact with patients or participants and staff to learn the circumstances and challenges faced with limited resources, to foster empathy, compassion, respect and humanistic care. Meeting with agency leaders and staff students learn about program design, administration and operation through outreach and mentoring volunteering. Offered Yearly.
Prerequisite: MD1 5511
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5521 Medical Education Research Elective 1A Cr. 2
Society places a large emphasis on education yet understanding the basic science of teaching and learning is neglected. That is, research exploring the effectiveness of curriculum, teaching, and learning strategies on student outcomes has not been a priority in medical education. To train students and residents for the practice of medicine in the 21st century, we must continue to be innovative in our curriculum and teaching, stay current with new technology, and be able to demonstrate the effectiveness of our programs through the practice of medical education research. To address this issue the Wayne State University School of Medicine has developed a medical education research course. The purpose of this course is to introduce undergraduate medical students to the field of medical education research and to have them participate in medical education research activities. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5522 Medical Education Research Elective 1B Cr. 3
Society places a large emphasis on education yet understanding the basic science of teaching and learning is neglected. That is, research exploring the effectiveness of curriculum, teaching, and learning strategies on student outcomes has not been a priority in medical education. To train students and residents for the practice of medicine in the 21st century, we must continue to be innovative in our curriculum and teaching, stay current with new technology, and be able to demonstrate the effectiveness of our programs through the practice of medical education research. To address this issue the Wayne State University School of Medicine has developed a medical education research course. The purpose of this course is to introduce undergraduate medical students to the field of medical education research and to have them participate in medical education research activities. Offered Yearly.
Prerequisite: MD1 5521
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5531 Leadership and External Affairs Development (LEAD)/Medical Political Action (MPAC) Elective 1A Cr. 2
The MPAC program elective provides students with an opportunity to learn, practice and apply knowledge and skills as physician healthcare leaders and advocates. Students will learn how to engage in advocacy to improve healthcare for patients and communities and to improve the health systems where they deliver care. Working with organized medicine, students will author solutions and meet with governmental leaders to present and advocate for reforms and improvements to the delivery of care. Students will learn about the use of media as a tool for advocacy and learn about philanthropy as it relates to healthcare. The program also serves as a primer on leadership development topics, by emphasizing the need for students to develop their professional identity by dressing professionally, arriving on time, and behaving professionally and demonstrating respect to their patients, peers, colleagues, supervisors, and others and by maintaining professional conduct and composure when conflict occur. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5532 Leadership and External Affairs Development (LEAD)/Medical Political Action (MPAC) Elective 1B Cr. 3
The MPAC elective provides students with an opportunity to learn, practice and apply knowledge and skills as physician healthcare leaders and advocates. Students will learn how to engage in advocacy to improve healthcare for patients and communities and to improve the health systems where they deliver care. Working with organized medicine, students will author solutions and meet with governmental leaders to present and advocate for reforms and improvements to the delivery of care. Students will learn about the use of media as a tool for advocacy and learn about philanthropy as it relates to healthcare. The program also serves as a primer on leadership development topics, by emphasizing the need for students to develop their professional identity by dressing professionally, arriving on time, and behaving professionally and demonstrating respect to their patients, peers, colleagues, supervisors, and others and by maintaining professional conduct and composure when conflict occurs. Offered Yearly.
Prerequisite: MD1 5531
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5541 Research Elective 1A Cr. 2
The ability to conduct and understand medical research is a valuable skill for any physician, since it has been the origin of many current treatments and procedures. Medical research goes far beyond the performance of experiments and collection of data. Research also involves the ability to critically read pertinent scientific literature and to develop hypotheses based on that reading. In addition, a researcher must design experiments to test hypotheses, analyze and critically evaluate resultant data, interpret results, and clearly present the findings. This course is designed to facilitate selection of a research mentor and to begin development of skills necessary to perform research. In this course, students will specifically learn to: 1) interact effectively and professionally with potential mentors, 2) critically read, evaluate, and discuss scientific literature at a level appropriate for a beginning research student, and 3) work professionally and efficiently as part of a team. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5542 Research Elective 1B Cr. 3
The ability to conduct and understand medical research is a valuable skill for any physician, since it has been the origin of many current treatments and procedures. Medical research goes far beyond the performance of experiments and collection of data. Research also involves the ability to critically read pertinent scientific literature and to develop hypotheses based on that reading. In addition, a researcher must design experiments to test hypotheses, analyze and critically evaluate resultant data, interpret results, and clearly present the findings. This course is designed to facilitate selection of a research mentor and to begin development of skills necessary to perform research. In this course, students will specifically learn to: 1) interact effectively and professionally with potential mentors, 2) critically read, evaluate, and discuss scientific literature at a level appropriate for a beginning research student, and 3) work professionally and efficiently as part of a team. Offered Yearly.
Prerequisite: MD1 5541
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5551 Medical Quality Improvement Elective 1A Cr. 2
Continuous quality improvement, or CQI, is a philosophy that organizations use to reduce waste, increase efficiency, and increase employee and customer satisfaction. It is an ongoing process that evaluates how an organization works and ways to improve its processes. When organizations focus on quality improvement, they can create significant positive change with the workforce, eliminate injuries that save patient lives, and reduce operating costs in hospitals and medical facilities. This course aims to introduce undergraduate medical students to the field of medical quality improvement, patient safety, and organizational leadership. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5552 Medical Quality Improvement Elective 1B Cr. 3
Continuous quality improvement, or CQI, is a philosophy that organizations use to reduce waste, increase efficiency, and increase employee and customer satisfaction. It is an ongoing process that evaluates how an organization works and ways to improve its processes. When organizations focus on quality improvement, they can create significant positive change with the workforce, eliminate injuries that save patient lives, and reduce operating costs in hospitals and medical facilities. This course aims to introduce undergraduate medical students to the field of medical quality improvement, patient safety, and organizational leadership. Offered Yearly.
Prerequisite: MD1 5551
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5911 Business of Medicine Elective 1A: Introduction to the Healthcare Ecosystem Cr. 3
This course creates a setting for 1st year medical students to explore various aspects of the business of medicine to gain insights into how they can affect the future of healthcare. Healthcare expenditures flow across intersections between patients and individuals/institutions that provide healthcare services. The flow of funds and clinical experience is impacted by those that purchase/finance healthcare, offer insurance and handle reimbursement, and those that design, produce, and distribute pharmaceuticals, medical technologies and devices, information systems and analytic services. This complex ecosystem affects access, cost, and quality of care. The quest for improved access and patient outcomes and cost containment is fueling changes across the healthcare landscape. Students will examine these changes and develop a multidisciplinary perspective by learning from individuals and organizations affecting the rate and flow of care, services, information and money in the health system. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD1 5912 Business of Medicine Elective 1B: Healthcare Ecosystem Explorations Cr. 3
The purpose of this course is to create a setting where 1st year medical students can gain confidence and experience interacting with subject matter experts operating throughout the healthcare ecosystem, and students delve deeper into various dimensions of this ecosystem via student-led panel discussions and team-level activities and discussions. Students explore current and emerging policies and practices in the drive toward improved access and patient outcomes and cost containment. Students further develop a multidisciplinary perspective by learning from the individuals and organizations affecting the rate and flow of care, services, products, information, and money within the healthcare system. In-class activities are augmented with required fieldwork. Offered Yearly.
Prerequisite: MD1 5911
Restriction(s): Enrollment limited to students with a class of Med First Year.

MD2 - Medical School: Year 2

MD2 6001 Human Disease Foundations I Cr. 10
Human Disease Foundations I launches the MD2 pre-clerkship segment of the MD degree program. This is the first of a 3-part series. This course builds on the normal structure and function of organ systems from Segment 1 to provide students with foundational knowledge of disease processes. The overall goal of the Human Disease Foundations series is to engage second-year medical students in learning the key concepts and foundational principles related to the etiology, pathogenesis, pathology, pathophysiology, clinical manifestations, basic principles of diagnosis, and treatment of disease processes. These courses emphasize foundational knowledge in pathophysiology, microbiology, immunology, genetics, and pharmacology. In Human Disease Foundations-I, we will cover the foundational aspects of the pathological and pathophysiological mechanisms of disease, clinical genetics, immunology, microbiology/infectious disease, and the musculoskeletal, peripheral nervous and integumentary systems. Offered Yearly.

MD2 6002 Human Disease Foundations II Cr. 10
Human Disease Foundations II continues the MD2 pre-clerkship segment of the MD degree program. This is the second course of a 3-part series. This course builds on the normal structure and function of these organ systems from Segment 1 to provide students with foundational knowledge of disease processes. The overall goal of the Human Disease Foundations series is to engage second-year medical students in learning the key concepts and foundational principles related to the etiology, pathogenesis, pathology, pathophysiology, clinical manifestations, basic principles of diagnosis, and treatment of disease processes. These courses emphasize foundational knowledge in pathophysiology, microbiology, immunology, genetics, and pharmacology. In Human Disease Foundations-II, we will cover the most important aspects of the pathology and pathophysiology mechanisms of diseases affecting the cardiopulmonary, gastrointestinal, and urinary systems. Offered Yearly.

MD2 6003 Human Disease Foundations III Cr. 10
Human Disease Foundations III concludes the MD2 pre-clerkship segment of the 4-year program leading to the MD degree. This is the last course of a 3-part series that provides medical students with foundational knowledge of disease processes, building on organ-based normal structure and function from Segment 1. The goal of Human Disease Foundations-III is to engage students in learning the key concepts and foundational principles related to etiology, pathology, pathophysiology, recognition of clinical presentations, basic principles of diagnosis, and treatment of disease processes which affect the hematologic/lymphatic, endocrine, reproductive and central nervous systems. This course emphasizes foundational knowledge in pathophysiology, microbiology, immunology, genetics, pharmacology, neurology and psychiatry. The knowledge gained will build a strong foundation for future clinical training on the internal medicine, obstetrics and gynecology, neurology, and psychiatry clerkships. Offered Yearly.

MD2 6101 Clinical Skills 2A Cr. 1
Designed to develop and demonstrate foundational knowledge and basic clinical skills in history-taking, patient examination, oral case presentation, clinical reasoning, and performance of procedures through exploration of pediatrics and general surgery. Students who are competent in these foundational skills will then proceed to develop advanced skills in patient interviewing and physical examination emphasizing a patient-centered empathic and compassionate approach incorporating the patient's perspective, socioeconomic background and cultural intelligence, and protection of patient privacy required to participate in early clinical experiences and service-learning activities. Offered Yearly.
Prerequisite: MD1 5103
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6102 Clinical Skills 2B Cr. 1
Designed to develop and demonstrate foundational knowledge and basic clinical skills in history-taking, patient examination, oral case presentation, clinical reasoning and performance of procedures through exploration of emergency medicine, urology, and internal medicine. Students who are competent in these foundational skills will then proceed to develop advanced skills in patient interviewing and physical examination emphasizing a patient-centered empathic and compassionate approach incorporating the patient's perspective, socioeconomic background and cultural intelligence, and protection of patient privacy required to participate in early clinical experiences and service-learning activities. Offered Yearly.
Prerequisite: MD2 6101
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6103 Clinical Skills 2C Cr. 2
Designed to develop and demonstrate foundational knowledge and basic clinical skills in history-taking, patient examination, oral case presentation, clinical reasoning and performance of procedures required to participate in clinical service-learning activities. Students who are competent in these foundational skills will then proceed to develop advanced skills in patient interviewing and physical examination emphasizing a patient-centered empathic and compassionate approach incorporating the patient's perspective, socioeconomic background and cultural intelligence, and protection of patient privacy required to participate in early clinical experiences. Offered Yearly.
Prerequisite: MD2 6102
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6201 Population, Patient, Physician and Professionalism (P4) 2-A Cr. 1
P4 Segment 2 is a second year medical student course designed to guide students to: provide patient-centered and culturally responsive care, to become effective team members, to learn evidence based theories that reduce healthcare disparities, to recognize their own professional development, and to foster self-directed learning through use of flipped classroom models, case studies, and real world interactions in community projects that utilize an inter-professional approach to caring for specialized populations. Offered Yearly.

MD2 6202 Population, Patient, Physician and Professionalism (P4) 2-B Cr. 1
P4 Segment 2 is a second year medical student course designed to guide students to: provide patient-centered and culturally responsive care, to become effective team members, to learn evidence based theories that reduce healthcare disparities, to recognize their own professional identity formation, and to foster self-directed learning through use of flipped classroom models, case studies, and real world interactions in community projects that utilize an inter-professional approach to caring for specialized populations. Offered Yearly.

MD2 6203 Population, Patient, Physician and Professionalism (P4) 2-C Cr. 1
P4 Segment 2 is a second year medical student course designed to guide students to: provide patient-centered and culturally responsive care, to become effective team members, to learn evidence based theories that reduce healthcare disparities, to recognize their own professional development, and to foster self-directed learning through use of flipped classroom models, case studies, and real world interactions in community projects that utilize an inter-professional approach to caring for specialized populations. Offered Yearly.

MD2 6301 Service Learning 2-A Cr. 0
Segment 2 Service Learning is a second year medical school course designed to guide students to: provide patient-centered and culturally responsive care, to become effective team members, to learn evidence based theories that reduce healthcare disparities, to recognize their own professional identity formation, and to foster self-directed learning through use of flipped classroom models, case studies, and real world interactions in community projects that utilize an inter-professional approach to caring for specialized populations. Offered Yearly.

MD2 6302 Service Learning 2-B Cr. 0
Builds on concepts learned in the first segment with additional emphasis on equipping trainees to provide patient-centered and culturally responsive care to distinct patient populations living in Detroit. Topics of discussion include nutrition-related chronic disease, veteran health, sexual health, homeless health, school-based health, and healthcare provided to those with disabilities. Through large group sessions, small group sessions, online modules, and service-learning activities, trainees will become effective inter-professional team members, learn how to reduce health care disparities, improve professional development, and foster self-directed learning skills. Offered Yearly.

MD2 6303 Service Learning 2-C Cr. 0
Builds on concepts learned in the first segment with additional emphasis on equipping trainees to provide patient-centered and culturally responsive care to distinct patient populations living in Detroit. Topics of discussion include nutrition-related chronic disease, veteran health, sexual health, homeless health, school-based health, and healthcare provided to those with disabilities. Through large group sessions, small group sessions, online modules, and service-learning activities, trainees will become effective inter-professional team members, learn how to reduce health care disparities, improve professional development, and foster self-directed learning skills. Offered Yearly.

MD2 6401 Clinical Experiential Course 2-A Cr. 1
The course is focused on ambulatory clinical exposure with the overall objective of developing students as medical professionals, patient advocates, and skilled clinicians. Offered Yearly.

MD2 6402 Clinical Experiential Course 2-B Cr. 1
The course is focused on ambulatory clinical exposure with the overall objective of developing students as medical professionals, patient advocates, and skilled clinicians. Offered Yearly.

MD2 6403 Clinical Experiential Course 2-C Cr. 1
The course is focused on ambulatory clinical exposure with the overall objective of developing students as medical professionals, patient advocates, and skilled clinicians. Offered Yearly.

MD2 6511 Community Engagement Elective 2A Cr. 2
Provides students with an opportunity to explore and understand the experience of under-served patients as they navigate community health services in Southeast Michigan. Medical students interact with patients or participants and staff to learn the circumstances and challenges faced with limited resources, to foster empathy, compassion, respect and humanistic care. Meeting with agency leaders and staff students learn about program design, administration and operation through outreach and mentoring volunteering. Offered Yearly.
Prerequisite: MD1 5512
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6512 Community Engagement Elective 2B Cr. 3
Provides students with an opportunity to explore and understand the experience of under-served patients as they navigate community health services in Southeast Michigan. Medical students interact with patients or participants and staff to learn the circumstances and challenges faced with limited resources, to foster empathy, compassion, respect and humanistic care. Meeting with agency leaders and staff students learn about program design, administration and operation through outreach and mentoring volunteering. Offered Yearly.
Prerequisite: MD2 6511
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6521 Medical Education Research Elective 2A Cr. 2
Society places a large emphasis on education yet understanding the basic science of teaching and learning is neglected. That is, research exploring the effectiveness of curriculum, teaching, and learning strategies on student outcomes, has not been a priority in medical education. To train students and residents for the practice of medicine in the 21st century, we must continue to be innovative in our curriculum and teaching, stay current with new technology and be able to demonstrate the effectiveness of our programs through the practice of medical education research. The purpose of this course is to leverage the knowledge and skills that students acquired in MD1 Medical Education Research and apply them to medical education research projects and topics. Offered Yearly.
Prerequisite: MD1 5522
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6522 Medical Education Research Elective 2B Cr. 3
Society places a large emphasis on education yet understanding the basic science of teaching and learning is neglected. That is, research exploring the effectiveness of curriculum, teaching, and learning strategies on student outcomes, has not been a priority in medical education. To train students and residents for the practice of medicine in the 21st century, we must continue to be innovative in our curriculum and teaching, stay current with new technology and be able to demonstrate the effectiveness of our programs through the practice of medical education research. The purpose of this course is to leverage the knowledge and skills that students acquired in the Medical Education Research electives completed so far and apply them to medical education research projects and topics. Offered Yearly.
Prerequisite: MD2 6521
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6531 Leadership and External Affairs Development (LEAD)/Medical Political Action (MPAC) Elective 2A Cr. 2
Section 1 was focused on primary content to ensure students have a basic understanding of the health policy and political process. Section 2 of the program will focus on applying that knowledge base to a real advocacy project. Upon completion of section 2, students will have the necessary skills to advocate on health policies issues on their own or in collaboration with their colleagues. The goal of the MPAC program is to support the leadership and advocacy development of medical students to better prepare them to become physician leaders for their patients, colleagues, and community. Offered Yearly.
Prerequisite: MD2 6532
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6532 Leadership and External Affairs Development (LEAD)/Medical Political Action (MPAC) Elective 2B Cr. 3
Section 1 was focused on primary content to ensure students have a basic understanding of the health policy and political process. Section 2 of the program will focus on applying that knowledge base to a real advocacy project. Upon completion of section 2, students will have the necessary skills to advocate on health policies issues on their own or in collaboration with their colleagues. The goal of the MPAC program is to support the leadership and advocacy development of medical students to better prepare them to become physician leaders for their patients, colleagues, and community. Offered Yearly.
Prerequisite: MD2 6531
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6541 Research Elective 2A Cr. 2
In the preceding M1 Research Electives, students learned to select and interact with a mentor, to critically read, evaluate, and discuss scientific literature at a beginner's level, to write a scientific mini-review, and to write a research proposal. This course is designed to further develop the skills learned in the M1 electives and to enhance a student's hands-on research skills by providing opportunities to perform research under the guidance of an individual mentor. In this course, students will specifically learn to: 1) apply their knowledge of research skills to perform scientific research in a laboratory under the guidance of a mentor, 2) critically read, evaluate, and discuss scientific literature at a level appropriate for an advanced research student, 3) interact effectively and professionally with a chosen mentor, and 4) work professionally and efficiently as part of a team of peers and other researchers. Offered Yearly.
Prerequisite: MD1 5542
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6542 Research Elective 2B Cr. 3
In the preceding M2 Research Elective A course, students further developed the research skills they had learned in the M1 electives and enhanced their hands-on research skills by performing research under the guidance of their mentor. This course is designed to enhance and sharpen the skills learned in the previous research electives. Here, students will specifically learn to: 1) apply their knowledge of research skills to perform scientific research in a laboratory under the guidance of a mentor, 2) apply their knowledge of research and presentation skills to prepare and professionally present a research presentation, 3) critically read, evaluate, and discuss scientific literature at a level appropriate for an advanced research student, 4) critically listen to and evaluate a scientific presentation, 5) interact effectively and professionally with a chosen mentor, and 6) work professionally and efficiently as part of a team of peers and other researchers. Offered Yearly.
Prerequisite: MD2 6541
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6561 Directed Teaching in a Medical Education Environment Elective 2A Cr. 1
Directed teaching in a medical school setting for which advanced students are preparing underclass peers for success in the medical education program. Includes near-peer tutoring and/or coaching opportunities. Seminars in which professional learning opportunities centers on teaching methods, industry best practices, and discussion of educational issues in various fields are explored. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6562 Directed Teaching in a Medical Education Environment Elective 2B Cr. 1
Directed teaching in a medical school setting for which advanced students are preparing underclass peers for success in the medical education program. Includes near-peer tutoring and/or coaching opportunities. Seminars in which professional learning opportunities centers on teaching methods, industry best practices, and discussion of educational issues in various fields are explored. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6563 Directed Teaching in a Medical Education Environment Elective 2C Cr. 1
Directed teaching in a medical school setting for which advanced students are preparing underclass peers for success in the medical education program. Includes near-peer tutoring and/or coaching opportunities. Seminars in which professional learning opportunities centers on teaching methods, industry best practices, and discussion of educational issues in various fields are explored. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6571 Medical Quality Improvement Elective 2A Cr. 2
Quality improvement (QI) is a systematic, formal approach to the analysis of practice performance and efforts to improve performance. When organizations focus on quality improvement, they can create significant positive change. QI within medical institutions will help the organizations save patient lives along with reducing the cost of hospital and medical offices' daily operations. A focus on quality improvement in a medical setting can also better prepare a future physician to handle a large-scale emergency or medical event, as illustrated during the COVID-19 pandemic. In this course, students will gain an understanding of the origin of quality improvement methodologies and the impact it has on health care and patient safety. Offered Yearly.

MD2 6572 Medical Quality Improvement Elective 2B Cr. 3
Quality improvement (QI) is a systematic, formal approach to the analysis of practice performance and efforts to improve performance. When organizations focus on quality improvement, they can create significant positive change. QI within medical institutions will help the organizations save patient lives along with reducing the cost of hospital and medical offices' daily operations. A focus on quality improvement in a medical setting can also better prepare a future physician to handle a large-scale emergency or medical event, as illustrated during the COVID-19 pandemic. In this course, students will gain an understanding of the origin of quality improvement methodologies and the impact it has on health care and patient safety. Offered Yearly.
Prerequisite: MD1 5551 and MD1 5552 and MD2 6571

MD2 6600 Directed Study Cr. 1-12
Students participate in an individualized curriculum designed to enhance their knowledge and skills in preparation for the next phase of medical school. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med First Year or Med Second Year; enrollment is limited to students with a major in Medicine; enrollment is limited to Medical level students; enrollment limited to students in the School of Medicine.
Repeatable for 12 Credits

MD2 6601 Step 1 Preparation Course 2A Cr. 1
All students will be provided with a structured Step 1 Prep Course to help facilitate and support their efforts during M2. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6602 Step 1 Preparation Course 2B Cr. 1
All students will be provided with a structured Step 1 Prep Course to help facilitate and support their efforts during M2. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6603 Step 1 Preparation Course 2C Cr. 1
All students will be provided with a structured Step 1 Prep Course to help facilitate and support their efforts during M2. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6605 Clinical Synthesis and Integration Course Cr. 3
This Clinical Synthesis and Integration (CSI) course builds on the normal and abnormal structure and function of organ systems from Human Body Foundations & Human Disease Foundation to provide students with the integrated foundational knowledge of Biomedical science, Clinical science and Health System Science. The course aims to engage second-year medical students in synthesizing & integrating the key concepts and foundational principles related to the etiology, pathogenesis, morphology, critical investigations, interpreting lab values, and clinical manifestations. Learners will also continue to develop and demonstrate basic clinical skills in history-taking, patient examination, note writing, oral case presentation, clinical reasoning and performance of procedures required to participate in clinical service-learning activities. Students will practice advanced skills in patient interviewing and physical examination emphasizing a patient-centered, empathic, and compassionate approach. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6610 Step-I Enhancement Course Cr. 2
As the first of what will be a lifetime of licensure exams, preparing for the USMLE Step 1 often creates a great deal of stress. While some amount of stress is a natural part of test preparation, it does not have to be debilitating. The Wayne State School of Medicine serves to mitigate some stress by providing students with resources and skills to help them optimize their performance on Step 1. This course provides students with a structured Step 1 Prep Course program to facilitate and support their efforts during the dedicated study period. Central to students' success on Step 1 is a clear understanding of student's strengths and deficiencies, which serve to inform the development of a study plan. Offered Yearly.

MD2 6800 Preparation for Clerkships Cr. 5
This course is required for all students who plan to begin clerkships in April of each year. It is designed to prepare students for the transition from the pre-clerkship classroom to the clerkship experience. Through lectures, small group sessions, and skills-building workshops, students will learn about their expected roles and responsibilities as members of the health care team, particularly an inpatient clinical team, and practice skills such as preparing oral and written presentations for inpatient rounds and performing basic procedures. During this course, students will also complete their mandatory training in electronic health records (EHR), infection control, basic cardiovascular life support (BLS), and HIPAA certification. Students will complete online curricula in advanced patient communication skills, professionalism and ethics. Effective use of the electronic health record as the platform for medical care will be a key component. Offered Yearly.

MD2 6911 Business of Medicine Elective 2A: Innovation and Entrepreneurship: Foundations Cr. 3
Students learn about the fundamentals and types of innovation and entrepreneurship in healthcare settings. Key trends shaping the pace and direction of innovation are examined as students explore the challenges and opportunities facing physician entrepreneurs attempting to design and introduce innovative solutions which are desirable, feasible and viable within the healthcare ecosystem. The upward pressure on costs associated with ongoing changes in payment models and in the operations of healthcare systems, coupled with search for improved outcomes and the abatement of health disparities underscores the importance of relevant, effective, and cost-efficient innovation efforts. The costs associated with translational and clinical research and development informed by patients, physicians and service providers engaged at the point of care promotes progress along commercialization pathways and can yield higher rates of success. In-class activities are augmented with required fieldwork. Offered Yearly.
Prerequisite: MD1 5912
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD2 6912 Business of Medicine Elective 2B: Innovation and Entrepreneurship: Following the Roadmap Cr. 3
Students continue to explore the challenges and opportunities facing physician entrepreneurs while taking concrete steps to design and develop an innovative solution by testing and validating the roadmap they developed in the Business of Medicine – Innovation and Entrepreneurship Foundations course. Students work in small teams with the assistance of a select multidisciplinary faculty group drawn from the WSU School of Medicine and the Mike Ilitch School of Business as well as other schools and colleges and the assistance of external coaches and mentors. In-class activities are augmented with required fieldwork. Offered Yearly.
Prerequisite: MD2 6911
Restriction(s): Enrollment limited to students with a class of Med Second Year.

MD3 - Medical School: Year 3

MD3 7100 Family Medicine Clerkship Cr. 4
Practice of family medicine learned in a community-based primary care setting; experiencing care and treatment of children, adolescents, and adults with acute and chronic disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.

MD3 7200 Internal Medicine Clerkship Cr. 12
Practical experience in recognition, evaluation, diagnosis, and management of hospitalized adult patients with acute non-surgical illnesses. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.

MD3 7300 Pediatrics Clerkship Cr. 6
Practical experience in recognition, evaluation, diagnosis, and management of pediatric patients in in-patient and ambulatory care settings. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.

MD3 7400 Surgery Clerkship Cr. 12
Practical experience in recognition, evaluation, diagnosis, and management of patients in general surgery or surgical sub-specialties. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.

MD3 7500 Psychiatry Clerkship Cr. 4
Practical experience in recognition, evaluation, diagnosis, and management of patients with behavioral and emotional brain disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.

MD3 7600 Obstetrics and Gynecology Clerkship Cr. 6
Practical experience in recognizing, evaluating, diagnosing, and managing the health care of women in a variety of inpatient and outpatient settings. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.

MD3 7700 Neurology Clerkship Cr. 4
Practical experience in recognition, evaluation, diagnosis, and management of patients with disorders of the nervous system. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.

MD3 7800 Directed Study Cr. 1-12
Individualized curriculum designed to enhance knowledge and skills in preparation for the next phase of medical school. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.

MD3 7950 Clinical Reasoning, Integration, Skills and Practice (CRISP) Cr. 1
This is a yearlong longitudinal course that gives the WSU Segment 3 students advanced skills in areas common to all specialties and is an integral part of the 4-year clinical excellence program as part of the Highways to Excellence© curriculum. Including sessions on clinical reasoning, interprofessional health care, continuation of the ultrasound curriculum in the clinical setting, leadership, career planning, wellness and other topics that help unify the core curriculum. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year.
Repeatable for 4 Credits

MD4 - Medical School: Year 4

MD4 8015 Senior Clinical Reasoning, Integration, Skills and Practice (CRISP) Cr. 1
This is a year-long longitudinal course that gives the WSU senior student advanced skills in areas common to all specialties and completes the 4-year clinical excellence program as part of the Highways to Excellence© curriculum. It will encompass a number of areas that are best taught to the experienced student. There is a mixture of online courses and assignments, in person workshops and asynchronous content. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 4 Credits

MD4 8020 Medical Education Cr. 6
Processes involved in evaluation of courses; coordination of the assessment of Year 1-2 courses. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8025 Curriculum Development Cr. 6
This is a directed student course in which students engage in individualized projects that are designed to reflect their self-directed learning skills that they have developed while at Wayne State University School of Medicine. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8035 Students Teaching and Educating Peers Cr. 6
Students will learn and apply techniques to prepare medical students for the Step 1 examination, as well as lead Step 1 preparation sessions. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8036 Independent Service Learning Cr. 3,6
Students will participate in a Service Learning Program within a community organization providing direct service to the organizations specific clientele. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8040 Special Topics in Anatomy and Cell Biology Cr. 3,6
Review of research training in gross anatomy, cell biology, histology, embryology, or neuroscience. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8041 Gross Anatomy Teaching Lab Cr. 6
Students taking this elective will gain teaching and mentorship experience in preparation for a career in academic medicine by teaching freshman medical students dissection skills in the anatomy labs. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8045 Medical Ethics Cr. 6
Medical ethics issues and concerns in the ICU, PICU, NICU, as well as those associated with a medical ethics committee. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8046 Street Medicine: Detroit Cr. 3,6
Knowledge and skills necessary to promote health, prevent illness, and manage the common chronic, and minor acute primary care needs of adults who are experiencing homelessness in Detroit. Clinical Experience (CLN): students will complete 120 hours of clinical education experience during their one-month rotation Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8050 Anesthesiology Sub-Internship Cr. 3,6
Practice of anesthesia including preoperative assessment, delivery of general and regional anesthesia, equipment use, and monitoring techniques. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8060 Pain Management Sub-Internship Cr. 3,6
Diagnosis, treatment and management of acute and chronic pain syndromes related to malignant and nonmalignant diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8070 Pediatric Anesthesiology Sub-Internship Cr. 3,6
Preoperative assessment, delivery of general and regional anesthesia, equipment use, and monitoring techniques in pediatric patients. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8090 Military Officer Training Cr. 6
The course will develop critical thinking in decision making processes that incorporate medical decisions within both a battlefield scenario as well as in a hospital setting. This course will emphasize how an officer fits within the TEAMSTEP concept of medical management which enforces medical excellence, team building within a hospital. This course is only available to students in the HPSP program. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8100 Law and Medicine Cr. 3,6
Legal issues associated with practicing clinical medicine. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8110 Healthcare: Systems, Quality, Safety and Social Determinants Cr. 6
The goal of every health care provider and organization is to provide safe, timely, equitable, effective, efficient, and patient-centered care. In order to do this, students need foundational knowledge and skills related to safety, quality, leadership and the business of medicine and Students electing this course will join the WSUSOM chapter of the Institute of Healthcare Improvement. Students will also complete a learning game and seven online learning modules to better understand how to provide care to underserved and disadvantaged patients. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8115 Special Topics: Interprofessional Education Cr. 2
This interprofessional course is for health professional student learners in the areas of advanced practice. The course allows health professional students to learn about, from and with each other, how each discipline contributes to the healthcare team, the importance of effective communication, the role of team collaboration and preparing health care professionals for collaborative practice with a focus on clinical decision making in interdisciplinary teams. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate, Medical or Professional level students.
Equivalent: NUR 7115, PAS 7115, PPR 7115, SW 7115

MD4 8120 Dermatology Sub-Internship Cr. 3,6
Fundamentals of diagnosing, treating and managing patients with common dermatologic disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8130 Dermatology Research Cr. 3,6
Knowledge and experience in dermatology research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8140 General Emergency Medicine Cr. 3,6
Initial evaluation, stabilization, and management of patients in the emergency department. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8145 ER Ultrasound Sub-Internship Cr. 3,6
Introduce students to point-of-care ultrasound (POCUS) examinations as well as more advanced skills and applications, with a focus on indications for scanning, image acquisition and image interpretation. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8150 Emergency Medicine Research Cr. 3,6
Process and participation in emergency medicine research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8155 Emergency Medical Services (EMS) Cr. 3,6
This elective will provide M4 medical students immersive exposure to prehospital emergency care in an urban environment. Students will observe and participate in field operations with EMS/Fire crews and physicians, gain understanding of prehospital systems, online medical control, and incident command structure, and appreciate the operational challenges in the prehospital environment. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8160 Emergency Medicine Core Clerkship Cr. 7
Evaluation, stabilization, and treatment of a variety of patients presenting to the ER with urgent and emergent illness and trauma. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8164 Social Emergency Medicine Cr. 3,6
This course provides a broad overview of social and community outreach opportunities to help Detroit-based Emergency Physicians better understand the social and medical needs of the population of Detroit. Students will serve in both healthcare and non-healthcare related volunteer activities designed to give them a more holistic view of urban patient care and equip them with the knowledge and skills to better serve their patients when working in the Emergency Department. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8165 Advanced Emergency Medicine Cr. 6
Being the primary provider for patients while in the ER, from initial evaluation to completion of disposition. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8166 Student Run Free Clinic - Underserved Populations Cr. 6
Students are involved in supervision of day-to-day operations of Student Run Free Clinic. This includes research, mentorship, patient support and advocacy, and non-clinic based learning. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8170 General Family Medicine Cr. 3,6
Enhancement of knowledge and skills in conducting a history/physical, diagnosing/managing patients, and participation in common office procedures in the outpatient setting. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8171 Rural Family Medicine Cr. 3-6
Students will gain a better understanding of the unique needs, challenges and rewards of practicing medicine in a medically underserved, rural or small-town community. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8172 Family Medicine Student Run Free Clinic Cr. 6
Students are involved in supervision of day-to-day operations of Student Run Free Clinic. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8173 Patient Centered Medical Home and Quality Curriculum Cr. 6
The Patient Centered Medical Home and Quality rotation exposes students to the concepts of the patient centered medical home and quality metrics as they pertain to current practices in family medicine. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8175 MPH Master's Project Cr. 6
Students apply the knowledge and skills gained from classroom and field experiences to a scholarly project of their own design and execution. The final products are a written paper and an oral presentation. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8176 Public Health and Clinical Medicine Cr. 6
Students will complete a set of activities that introduce students to various aspects of public health and its role in clinical patient care. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8177 Culinary Medicine: Integrating Nutrition into Clinical Care Cr. 3,6
This elective introduces medical students to the emerging field of culinary medicine, an evidence-based approach that integrates nutrition science, hands-on cooking, and clinical care. In partnership with Health Meets Food, a national culinary medicine organization adopted by more than 55 medical schools, students will complete structured modules, interactive cooking sessions, and clinical case-based reflections. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8210 Acting Internship: Family Medicine Cr. 7
Students expand on Year 3 family medicine clerkship experience with more intensive involvement in select patient populations. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8220 Hospice/Palliative Medicine Cr. 3,6
Care of terminally ill patients; basic communication and interactive skills associated with these patients and their families. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8230 Maternal and Child Health Sub-Internship Cr. 3,6
Gaining experience in an aggressive family medicine OB service. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8250 Sports Medicine Sub-Internship Cr. 3,6
Knowledge and skills to assess the fitness and health risks of athletes. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8255 International Elective Cr. 6
Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8258 International Away Cr. 6
Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8260 Allergy and Clinical Immunology Sub-Internship Cr. 3,6
Conducting an allergic H & P; understanding basic mechanisms, pathophysiology and testing of allergic and immunologic disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8261 Advanced Physical Diagnosis Cr. 6
Students will refine their basic physical examination, as well as advance their skills in evaluating hypertension, thyroid disease, cardiac murmurs, breast abnormalities, and geriatric assessment. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8262 Ambulatory Subspecialty in Internal Medicine Cr. 6
Students will learn the practice of ambulatory internal medicine, with an emphasis placed upon bedside teaching, physical diagnosis and in-depth discussion of the clinical, diagnostic and therapeutic aspects of each case. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8264 Independent Study in Medical Education Cr. 3,6
Students will improve their skills as learners and critical thinkers, and gain an appreciation of the importance of lifelong learning. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8265 Urban Medicine for Visiting Students Cr. 6
Students will learn academic internal medicine in an urban setting with an emphasis on recognizing, studying, treating, and preventing disparities in healthcare. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8270 Ambulatory Med Cr. 3,6
There is an increased role of ambulatory medicine in all specialties. By selecting this course, the student will gain valuable experience at an advanced level in an ambulatory setting based on the specialty of their choosing. This course will expose the student to the patient's needs as they differ in the outpatient environment, giving the student a more complete picture of longitudinal patient care outside hospitalization. Students who take this course will gain an appreciation and thorough expert understanding of how medical care is delivered in the clinic, while simultaneously exposing themselves to their planned specialty in the setting in which they will most likely be responsible for patient care after graduation. Students will select their top three sites/specialties in which to further develop their skills and be assigned a spot at a Michigan Healthcare Professionals (MHP) location based upon those selections. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8280 Cardiology Sub-Internship Cr. 3,6
Basic history/physical, diagnostic, treatment and management skills associated with common inpatient cardiac problems. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8281 Interventional Cardiology Cr. 6
Exposure to an interventional lab. Gaining familiarity with the clinical utility of routine cardiovascular interventions and hemodynamic measurements. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8290 Cardiology Consultation Sub-Internship Cr. 3,6
Skills needed to consult with medical and surgical patients with cardiac problems. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8310 Coronary Care Unit Sub-Internship Cr. 3,6
Diagnosis and treatment of common cardiac problems; care for critically ill patients admitted to cardiac care unit. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8320 Critical Care Medicine Sub-Internship Cr. 3,6
Management of critically ill patients to improve diagnostic, problem solving, assessment, and treatment skills. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8340 Endocrine/Bone and Mineral Metabolism Cr. 3,6
Diagnosing, treating, and managing patients with metabolic bone diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8350 Endocrinology Research Cr. 3,6
The research process; participation in research associated with medical endocrinology. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8360 Endocrine/Metabolism Cr. 3,6
Techniques of conducting a history and physical; diagnostic, therapeutic, and laboratory approaches to endocrine disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8365 Scholarly Writing for Critical Appraisal of Clinical Research Cr. 6
Peer review for clinical research practice. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8366 Scholarly Editing for Critical Appraisal of Clinical Research Cr. 6
Scholarship is defined as creating new knowledge. Scholarship in an academic environment requires peer review. Editors work with their assigned peer reviewers; both have shared responsibilities: ensure scientific validity and suggest ways to improve the manuscript. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8370 Gastroenterology Sub-Internship Cr. 3,6
Conducting a history and physical exam, and diagnosing, treating, and managing patients with common gastrointestinal diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8380 Gastroenterology Research Cr. 3,6
The research process; participation in specific gastroenterology research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8390 Internal Medicine Inpatient Sub-Internship Cr. 3,6
Common problems encountered in an internal medicine inpatient clinical setting. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8391 Internal Medicine: Miscellaneous Cr. 3,6
Students learn various topics and issues in general internal medicine. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8395 Clinical Pharmacology Cr. 6
Four-week on-line elective where students use case-based scenarios to apply pharmacology principles in a clinical setting. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8400 Clinical Genetics Cr. 3,6
Interviewing, conducting a physical examination, and other patient interactions in patients with suspected or known genetic diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8420 Geriatric Medicine Sub-Internship Cr. 3,6
Conduct of a comprehensive assessment and treatment of a geriatric patient; factors affecting the health of the elderly. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8430 Hematology Sub-Internship Cr. 3,6
Familiarization with a variety of hematologic and oncologic disorders; how to diagnose, treat, and manage patients with these disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8440 HIV/AIDS Sub-Internship Cr. 3,6
Basic knowledge and skills associated with care of HIV-infected persons in outpatient and inpatient settings. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8450 Infectious Disease Sub-Internship Cr. 3,6
Evaluating, diagnosing and treating patients with acute and chronic infectious diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8460 Infectious Disease Research Cr. 6
The research process; participation in specific infectious disease research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8470 Acting Internship: Internal Medicine Cr. 7
Expanding on Year 3 internal medicine clerkship experience; more intensive involvement in select patient populations. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8480 Medicine/Pediatrics Sub-Internship Cr. 3,6
Aspects of the day-to-day practice of a physician specializing in an internal medicine/pediatric practice. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8490 Nephrology Sub-Internship Cr. 3,6
Experience in diagnosing and managing patients with acute and chronic nephrologic problems. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8510 Oncology: Medical Sub-Internship Cr. 3,6
Evaluation, diagnosis, treatment and management of patients with oncologic conditions. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8520 Oncology: Outpatient Cr. 3,6
Cancer patients in the outpatient setting: initial evaluations, types of malignant diseases, role of staging, conducting a focused follow-up of cancer patients. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8530 Oncology Research Cr. 3,6
The research process; participation in research involving patients with cancer. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8540 Otolaryngology Sub-Internship Cr. 3,6
History and basic head and neck examination on patients with otolaryngologic disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8550 Otolaryngology Medical and Surgical: Head and Neck Cr. 3,6
Additional training in otolaryngology head and neck surgery. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8560 Otolaryngology Research Cr. 3,6
The research process; participation in otolaryngology research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8570 Palliative Medicine Sub-Internship Cr. 3,6
Understanding of and skills in palliative medicine: communication, cultural issues, psycho-emotional and spiritual aspects of end of life care and death and dying. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8580 Primary Care Medicine Cr. 6
Common problems encountered in internal medicine outpatient clinical setting. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8590 Pulmonary Medicine Sub-Internship Cr. 3,6
Diagnosis and management of a variety of pulmonary disorders; diagnosis of acute and chronic respiratory failure; interpretation of pulmonary tests. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8600 Pulmonary and Sleep Research Cr. 3,6
The research process; participation in pulmonary and sleep research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8610 Pulmonary Consultation Sub-Internship Cr. 3,6
Diagnosis and management of a variety of pulmonary disorders; diagnosis of acute and chronic respiratory failure; interpretation of pulmonary tests. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8620 Rheumatology Sub-Internship Cr. 3,6
Diagnosis and management of common rheumatologic problems; understanding ancillary procedures and lab tests. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8630 Sleep Disorders Sub-Internship Cr. 3,6
Interviewing, physical examination, diagnosis, and therapy of patients with sleep disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8640 Molecular Medicine Cr. 3,6
State-of-the-art molecular biological research and methods, relating to basic and applied research of human disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8650 Neurology Sub-Internship Cr. 3,6
Evaluation, diagnosis, treatment and management of patients with an array of general neurologic conditions. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8660 Neurology Consult Sub-Internship Cr. 3,6
Pathogenesis, genetics, neurochemistry, imaging, diagnostic testing, presentation and treatment of Alzheimer's and other forms of dementia. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8690 Movement Disorders Sub-Internship Cr. 3,6
Evaluation, diagnosis, treatment and management of patients with neurologic movement disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8700 Neurology - Oncology Cr. 6
Diagnosis, treatment and management of patients with malignancies of the neurologic system. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8710 Neurologic Sleep Disorders Sub-Internship Cr. 3,6
Operations of a sleep lab and evaluation of patients with sleep disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8730 Neurology Pediatrics Sub-Internship Cr. 3,6
Diagnosis, treatment, and management of a variety of neurologic disorders of infancy and childhood. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8750 Neurosurgery Sub-Internship Cr. 3,6
Preoperative, intraoperative, and post-operative care of neurologic patients. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8760 Neurosurgery Research Cr. 3,6
Basic research principles as they apply to clinical questions in neurosurgery. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8780 Gynecology Sub-Internship Cr. 3,6
Signs, symptoms, and management of both surgical and nonsurgical gynecologic disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8781 Family Planning and Abortion Sub-Internship Cr. 3,6
Students will learn the principles and counseling techniques for contraceptive management and abortion. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8790 Gynecologic Oncology Sub-Internship Cr. 3,6
Evaluation and treatment of patients presenting with a range of gynecologic malignancies. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8800 Obstetrics Sub-Internship Cr. 3,6
Signs, symptoms and management of normal/abnormal labor, and experience patients with intrapartum high-risk conditions and intrapartum/postpartum complications. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8810 Obstetrics/Gynecology Sub-Internship Cr. 3,6
Care of inpatient and outpatient obstetric and gynecologic patients, and participation in obstetric and gynecological procedures. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8820 Obstetrical Ultrasound Cr. 6
Basic knowledge and skills in obstetrical ultrasound. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8830 Maternal Fetal Medicine Sub-Internship Cr. 3,6
Experience patients with common medical and obstetrical complications; development of skills in fetal assessment and evaluation of high-risk pregnancies. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8835 OB/Gyn Clinical Research Practicum Cr. 3,6
Students will experience hands on clinical research projects and learn the components and principles involved in clinical research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8850 Nurse Midwifery Cr. 3,6
Ambulatory women's health care delivery as performed by a certified nurse midwife, including management of labor and delivery. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8860 Reproductive Endocrine and Infertility Sub-Internship Cr. 3,6
Diagnosis and treatment of couples with infertility and reproductive endocrine disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8890 Ophthalmology Sub-Internship Cr. 3,6
Conducting basic eye examinations; evaluation methods, management and treatment of eye diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8900 Ophthalmic Research Cr. 3,6
The research process; participation in ophthalmic research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8910 Orthopedic Surgery Sub-Internship Cr. 3,6
Conduct of an H & P, diagnosis and treatment of patients with orthopedic problems; participation in preoperative, operative, and post-operative care. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8911 Orthopedic Surgery Sports Medicine Sub-Internship Cr. 3,6
Through the clinic and operating room settings, students will learn the assessment of the athlete, emergent care of injuries on the field, as well as common sport injuries. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8914 Orthopaedic Surgery Research Cr. 3,6
Students participate in current orthopaedic surgery and biomechanics research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8930 Orthopedic Traumatology Cr. 3,6
Basic surgical principles and pathophysiology, diagnosis, and management of a variety of traumatic orthopedic conditions. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8940 Pathology Sub-Internship Cr. 3,6
Functions of a clinical laboratory, including interpretation of surgical pathology. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8950 Anatomic Pathology Sub-Internship Cr. 3,6
Basic pathologic processes; how gross, microscopic and other techniques are applied to the diagnosis and treatment of disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8970 Forensic Pathology Cr. 3,6
Basic mechanisms of injury; characteristic features of injury patterns; relationship between medicine and law. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8980 Tumor Genetics Cr. 6
Role of cytogenetics and molecular cytogenetics in diagnosis, management and prognosis of a patient's disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8990 Pediatrics Sub-Internship Cr. 3,6
Evaluating and managing children with common pediatric problems; aspects of normal growth and development. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 8991 Child Abuse Identification and Treatment Cr. 6
Students will learn the techniques to identify and report suspected child abuse and neglect, as well as methods of treatment and prevention. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 8992 Pediatric Pulmonary Sub-Internship Cr. 3,6
Students will learn the evaluation and treatment of pediatric patients with acute and chronic respiratory diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9000 Adolescent Pediatrics Sub-Internship Cr. 3,6
Interviewing and physical examination of adolescent patients; normal physical, cognitive and psychosocial development of adolescent patients. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9010 Allergy, Immunology, and Rheumatology Sub-Internship Cr. 3,6
Day-to-day care of pediatric patients with common allergic, immunologic and rheumatologic diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9045 Pediatric Community Partnership Cr. 6
Students will explore the intricate dynamics of social justice and systemic racism in relation to food insecurity. Students will delve into the intersectionality of food insecurity and early childhood development and education, while also critically assessing the effects of current interventions and engaging with local communities to craft innovative solutions that address these pressing issues. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9050 Pediatric Genetics Sub-Internship Cr. 3,6
Abnormal morphology of children; diagnostic skills in various inborn errors. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9060 Medical Toxicology and Poison Control Cr. 6
Assessment and management of pediatric patients with suspected or known poisoning or toxic exposure. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9070 Neonatology Sub-Internship Cr. 3,6
Evaluation of healthy newborns; common newborn conditions; care of high-risk infants and their mothers. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9080 Pediatric Cardiology Sub-Internship Cr. 3,6
Skills in taking and performing a cardiac exam; normal hemodynamics; natural history of children with congenital and acquired heart disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9090 Pediatric Ear, Nose and Throat Sub-Internship Cr. 3,6
Entire scope of pediatric otolaryngology. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9100 Pediatric Emergency Medicine Sub-Internship Cr. 3,6
Observation and participation in care of children presenting with a wide range of conditions in pediatric emergency medicine. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9110 Pediatric Endocrinology and Diabetes Sub-Internship Cr. 3,6
Evaluation of normal physical growth and development; recognition of common pediatric endocrine problems. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9120 Pediatric Gastroenterology, Hepatology, and Nutrition Sub-Internship Cr. 3,6
Performance of a history and physical exam, development of a diagnosis, and caring for patients with disorders of the gastrointestinal tract. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9130 Pediatric Hematology/Oncology Sub-Internship Cr. 3,6
Basic skills to conduct an H & P and diagnose and treat children with hematologic and oncologic problems. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9140 Pediatric Infectious Disease Sub-Internship Cr. 3,6
Evaluation, diagnosis, treatment, and management of common pediatric infections. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9150 Pediatric Intensive Care Sub-Internship Cr. 3,6
Basic diagnostic and therapeutic approach to care of critically ill children. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9160 Pediatric Nephrology Sub-Internship Cr. 3,6
Basic skills to examine, diagnose and treat patients with common renal diseases. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9180 Pediatric Pathology: Autopsy and Surgical Sub-Internship Cr. 3,6
Correlation of clinical, anatomical and laboratory findings in diagnosing pediatric disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9190 Pediatric Plastic Surgery/Craniofacial Sub-Internship Cr. 3,6
Recognition and development of a treatment plan for congenital craniofacial anomalies and vascular lesions. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9200 Pediatric PMR Sub-Internship Cr. 3,6
Childhood functional impairments including head injury, spinal cord injury, cerebral palsy, neuromuscular diseases, sports medicine, and electromyography. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9210 Acting Internship: Pediatric Cr. 7
Senior students expand upon Year 3 pediatric clerkship experience with more intensive involvement in select patient populations. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9230 Physical Medicine and Rehabilitation Sub-Internship Cr. 3,6
Performance of an H & P; development of greater understanding of diagnosis, management and treatment of patients with neuromuscular and musculoskeletal problems.] Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9240 Spinal Cord Injury Rehabilitation Cr. 3,6
Management of patients with spinal cord injuries; role of rehabilitation team approach to spinal cord injuries. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Third Year or Med Fourth Year; enrollment is limited to students with a major in Medicine; enrollment is limited to Medical level students; enrollment limited to students in the School of Medicine.

MD4 9261 Emergent and Consult Liaison Psychiatry Sub-Internship Cr. 3,6
Students will learn to assess psychiatric patients, manage acute intoxication and withdrawal syndromes, manage psychiatric patients with medical comorbidities and learn basic managed care principals. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9262 Emergency Psychiatry Sub-Internship Cr. 3,6
Students will learn to evaluate, diagnose, and treat psychiatric patients in an emergency setting. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9263 Clinical Electro-Physiology Research Cr. 3-6
Students will participate in the academic research process, as well as learn the strengths and weakness of the different electrophysiological testing modalities. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9264 Psychiatry Research Cr. 3,6
Students will participate in research projects and learn the clinical components associated with neuropsychiatric research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9265 Outpatient Psychiatry Cr. 3-6
The student will observe routine outpatient practice and have an opportunity to evaluate new outpatients under the supervision of residents/staff. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9267 Brain Imaging Psychiatry Research Cr. 3,6
Students will participate in research projects and learn the clinical components associated with neuropsychiatric research. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9270 Child and Adolescent Psychiatry Sub-Internship Cr. 3,6
Experience of a variety of children and adolescents with psychiatric disorders; evaluation of patients and provision of care. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9290 Psychiatric Consultation Sub-Internship Cr. 3,6
Knowledge and skills associated with the psychiatric interview; mental status examination; development of knowledge base in behavioral medicine and treatment of psychiatric illness. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9300 Psychiatry: Geriatrics Sub-Internship Cr. 3,6
Knowledge and skills associated with the psychiatric interview; mental status examination; interpretation of data, diagnosis, psychopharmacology and psychotherapy in geriatric patients. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year; enrollment is limited to students with a major in Medicine; enrollment is limited to Medical level students; enrollment limited to students in the School of Medicine.
Repeatable for 18 Credits

MD4 9320 Research and Practice in Addiction Psychiatry Cr. 3,6
Diagnosis and management of individuals with addictive disorders; psychotherapeutic and pharmacotherapeutic interventions for problems with psychotropic substances. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9340 Substance Use Disorders Sub-Internship Cr. 3,6
Inpatient and outpatient treatment of substance use disorders. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9345 Psychiatric Care of Veterans Sub-Internship Cr. 3,6
Clinical Experience; Students will complete 160 hours of clinical education experience during their one-month rotation. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9350 General Diagnostic Radiology Sub-Internship Cr. 3,6
Basic techniques of imaging; skills to diagnose and interpret radiographic studies. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9360 Intervention Radiology Sub-Internship Cr. 3,6
Role of interventional radiologic techniques in diagnosis and management of disease. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9380 Radiation Oncology Sub-Internship Cr. 3,6
Role of radiation therapy in variety of adult and pediatric malignancies. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9390 Surgery Sub-Internship Cr. 3,6
Experience in a variety of elective and acute surgical cases; diagnostic skills; basic surgical techniques and procedures. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9392 Residency Preparation - Surgical Cr. 6
Students will learn advanced surgical skills in preparation for their surgery residency program. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9393 Breast Surgery Sub-Internship Cr. 3,6
Students will gain exposure to the diagnosis and treatment of breast diseases at the Walt Comprehensive Breast Center. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9400 Acute Burn Care Sub-Internship Cr. 3,6
Physiologic principles and clinical management of burn victims. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9410 Cardiovascular Surgery Sub-Internship Cr. 3,6
Diagnosis and treatment of cardiology diseases using invasive surgical approaches. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9440 Pediatric Surgery Sub-Internship Cr. 3,6
Diagnosis and care of surgical disorders in children. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9470 Plastic and Reconstructive Surgery Sub-Internship Cr. 3,6
Evaluation, formulation of treatment plan, management of postoperative care, and participation in surgical procedures for patients requiring plastic surgery. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9480 Surgical Intensive Care Unit Sub-Internship Cr. 3,6
Care of critically ill surgical patients; common surgical intensive care unit procedures. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9500 Transplant Surgery Sub-Internship Cr. 3,6
Basic surgical principles and pathophysiology, diagnosis and management of a variety of transplant surgical conditions. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9510 Acute Care Surgery Sub-Internship Cr. 3,6
Evaluation, diagnosis, treatment, and management of critically ill patients; basic procedures in the care of this population. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9520 Vascular Surgery Sub-Internship Cr. 3,6
Pathophysiology, evaluation, diagnosis, and management of patients needing vascular surgery; participation of procedures for this population. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9525 Colorectal Surgery Cr. 3,6
Students will learn about common colon and rectal ailments and surgical procedures in both inpatient and outpatient settings. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9528 Maxillofacial Surgery Sub-Internship Cr. 3,6
In-depth exposure to the field of maxillofacial surgery and its subspecialties of trauma, oncology, and micro-vascular reconstruction. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9530 Urology Sub-Internship Cr. 3,6
Pathophysiology, evaluation, diagnosis and management of patients with urologic disease; participation in urologic surgery. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 18 Credits

MD4 9540 Male Reproductive Medicine Cr. 3,6
Understanding of the basic physiology of sperm production and photophysiology that lead to infertility and sexual dysfunction. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9545 Step 2 Preparation Cr. 1
Students will be introduced to methods for successfully passing the mandatory Step 2 CK United States Licensing Examination (USMLE). Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9600 Residency Preparation - Nonsurgical Cr. 6
This one month elective course will prepare Senior Medical Students to enter residency training with a superior degree of skill. The sessions will be organized into 2 phases--those topics applicable to all specialties and those specific to specialties. Lecture, online exercises, small group discussions and simulation will be used as instructional modalities. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.

MD4 9610 Teaching and Learning in Medical Education (TLMed) Cr. 2
Educational skills are increasingly recognized as essential components of the education of future physicians, particularly in residency training when learners take on new teaching responsibilities for their teams. MD4 8393 provides students with the skills, strategies, and techniques to instruct medical students in classroom and clinical contexts. This course integrates a full range of educational experiences, including teaching placements, live virtual workshops, self-paced online learning modules, instructional design projects, and a final capstone project to develop M4 students into skillful teachers. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 8 Credits

MD4 9620 Clinical Reasoning Using Integrated Skills in Education (CRUISE) Cr. 2
CRUISE is a year-long longitudinal course completes the four-year Highways to Excellence curriculum. WSU senior students will advance skills in areas common to all specialties while applying clinical reasoning to online assignments, in-person workshops, and asynchronous content. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Med Fourth Year.
Repeatable for 8 Credits

MDR - Medical Research

MDR 7100 Clinical Research Design Cr. 2
Design and implementation of authorized clinical research projects, with exposure to such topics as drug discovery, study design, obtaining FDA approval, subject recruitment and retention, data management, translational and biotechnological aspects, GCRC, and bioinformatics; preparation for establishment of career in clinical and translational research. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the MD & PHD program; enrollment is limited to Graduate level students; enrollment limited to students in the School of Medicine.

MDR 7110 Clinical Field Experience Cr. 2
Complexity of the disease process from initial presentation of patient in a clinic, to understanding the pathophysiological basis of the disease, to diagnosis, treatment, and patient management; application of clinical and laboratory research training and current technology. Topics may include: diabetes, sickle cell anemia, asthma, seizures, hypertension, congestive heart failure, chronic myeloid leukemia, genetics of cancer, stroke, lupus. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the MD & PHD program; enrollment is limited to Graduate level students; enrollment limited to students in the School of Medicine.
Repeatable for 2 Credits

MDR 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Medical Research; enrollment is limited to Graduate level students; enrollment limited to students in a MS in Medical Research degree.
Repeatable for 8 Credits

ME - Mechanical Engineering

ME 2200 Thermodynamics Cr. 3
Transformation of heat energy to other energy forms. Basic concepts and laws of thermodynamics. Thermodynamic properties and processes for simple substances. Applications to power and refrigeration cycles. No credit after ME 2210. Offered Every Term.
Prerequisites: MAT 2020 with a minimum grade of C-, PHY 2175 with a minimum grade of C-, and BE 1500 with a minimum grade of C-

ME 2410 Statics Cr. 3
Basic concepts and principles of statics with applications to Newton's Laws of Motion to engineering problems. Forces, moments, equilibrium, couples, free body diagrams, trusses, frames, fluid statics, friction, area and mass moment of inertia. Offered Every Term.
Prerequisites: MAT 2020 with a minimum grade of C- and PHY 2170 with a minimum grade of C-
Equivalent: CE 2410

ME 2420 Elementary Mechanics of Materials Cr. 3
Elastic relationships between external forces acting on deformable bodies and the associated stresses and deformations; structural members subjected to axial load, torsion, and bending; column buckling; combined stresses; repeated loads; unsymmetrical bending. Offered Every Term.
Prerequisites: ME 2410 with a minimum grade of C- or CE 2410 with a minimum grade of C-
Equivalent: CE 2420

ME 2500 Numerical Methods Using MATLAB Cr. 2
Developing numerical solutions for engineering problems using MATLAB. Evaluation of alternative approaches to the numerical solutions in terms of accuracy and efficiency. Offered Every Term.
Prerequisites: BE 1500 with a minimum grade of C- and MAT 2150 with a minimum grade of C- (may be taken concurrently)

ME 3300 Fluid Mechanics: Theory and Laboratory Cr. 4
Introduction to the nature and physical properties of fluids, statics, equation of motion, incompressible inviscid flow, dimensional analysis, incompressible one-dimensional compressible channel flow. Experiments to supplement lectures. Offered Fall, Winter.
Prerequisites: BE 1500 with a minimum grade of C- and ME 2410 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.

ME 3400 Dynamics Cr. 3
Basic concepts and principles of dynamics with application of Newton's Laws of Motion to engineering problems. Kinematics and kinetics of particles and rigid and variable-mass bodies. Equations of motion, impulse-momentum, impact and work-energy principles. Offered Every Term.
Prerequisites: BE 1500 with a minimum grade of C-, ME 2410 with a minimum grade of C-, and MAT 2150 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.

ME 3450 Manufacturing Processes I Cr. 3
A study of the field of manufacturing processes from a mechanical engineering design standpoint. Topics include: processing of metals, polymers and ceramics, and computer-aided manufacturing. Offered Fall, Winter.
Prerequisites: BE 1500 with a minimum grade of C-, ME 2420 with a minimum grade of C-, BE 1300 with a minimum grade of C-, and BE 1310 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.
Fees: $25
Equivalent: IE 3450

ME 4150 Design of Machine Elements Cr. 4
Static body stresses, strain and deflection, failure theories, introduction to impact loading and fatigue. Design of common mechanical elements: threaded fasteners, rivets, welding and bonding, springs, lubrication and sliding bearings, rolling element bearings. Offered Every Term.
Prerequisites: ME 2500 with a minimum grade of C- and ME 3450 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.
Fees: $40

ME 4210 Heat Transfer: Theory and Laboratory Cr. 4
Fundamental concepts and basic modes of heat transfer. General equation of heat conduction, steady state heat conduction on one and more dimensions. Transient heat conduction. Heat transfer by radiation, Kirchoff's law and the black body. Radiation between diffuse surfaces. Radiation from gases, vapors and flames. Introduction to heat convection; concept of heat transfer coefficient and Nusselt number. Lab experiments to supplement lectures. Offered Every Term.
Prerequisites: ME 3300 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.
Fees: $25

ME 4300 Thermal Fluid Systems Design Cr. 4
Design of thermal-fluid systems to meet system performance requirements, computer-aided design, system simulation, design optimization including investment economics. Offered Fall, Winter.
Prerequisites: ME 2500 with a minimum grade of C-, ME 4210 with a minimum grade of C-, and ENG 3060 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment limited to students in the College of Engineering.
Fees: $40

ME 4410 Vibrations: Theory and Laboratory Cr. 4
Fundamentals of dynamic principles, energy relation and Rayleigh's principle. Undamped and damped free vibration of one degree of freedom systems. Forced vibrations with harmonic excitation. Vibration isolation, critical speed of shafting. Experiments to supplement theory. Offered Every Term.
Prerequisites: ME 3400 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.
Fees: $25

ME 4420 Dynamic Modeling and Control of Engineering System Cr. 4
Mathematical modeling of linear, lumped, time-invariant systems, open and closed loop systems, single-input-single-output system design using root locus method. Offered Fall, Winter.
Prerequisite: ME 3400 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering; enrollment is limited to Undergraduate level students.

ME 4500 Mechanical Engineering Design II Cr. 4
Involve teamwork on semester-long open-ended design project. Develop design concepts based on various design theories, analyze alternative solutions and identify "best design solution" within given constraints. Students perform patent literature search, design, fabricate, develop and test prototypes. Perform product verification and validation. Require submission of formal progress reports, a final written report and a public presentation. Course satisfies Writing Intensive course requirement. Offered Every Term.
Prerequisites: ME 4150 with a minimum grade of C-, ME 4410 with a minimum grade of C- (may be taken concurrently), ENG 3060 with a minimum grade of C-, and (ECE 3300 with a minimum grade of C- (may be taken concurrently) or ECE 3320 with a minimum grade of C- (may be taken concurrently))
Restriction(s): Enrollment limited to students in the following programs: BS in Biomedical Engineering, BS in Chemical Engineering, BS in Civil Engineering, BS in Electrical Engineering, BS in Electrical and Comp Engg, BS in Industrial Engineering, BS in Mechanical Engineering.
Fees: $50

ME 5000 Engineering Analysis I Cr. 4
Applications of ordinary differential equations. The method of Frobenius, Bessel functions, Legendre polynomials. Orthogonality of characteristic functions. Fourier series and Fourier integrals. Characteristics and solutions of partial differential equations. Method of separation or variations. Applications to initial and boundary value problems in engineering. Offered Fall.
Fees: $5

ME 5040 Finite Element Methods I Cr. 4
Introduce finite element methods and review solid mechanics concepts and formalisms, variational methods and potential energy principles. Emphasize the basic understanding of the finite element method including its physical and mathematical principles, numerical procedures and their implementation. Define displacement-based formulations of spring, bar, beam, plane strain and plane stress elements along with isoparametric element formulation, assembly of elements and solution of global stiffness equations. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Engineering.

ME 5100 Quantitative Physiology Cr. 4
Basic principles of human physiology presented from the engineering perspective. Bodily functions, their regulation and control discussed in quantitative terms and illustrated by mathematical models where feasible. Offered Every Term.
Equivalent: BME 5010, CHE 5100, ECE 5100

ME 5110 Fundamental Fuel Cell Systems Cr. 4
Introduce various types of fuel cells, materials properties of electrodes and polymeric membranes, and electrochemical mechanisms. Reforming of various types of hydrocarbon fuel to hydrogen, and reforming technology. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: EVE 5130

ME 5115 Fundamentals of Electric-drive Vehicle Modeling Cr. 4
Covers engineering and modeling fundamentals and basic design of electric-drive vehicle powertrains by understanding and analyzing the relevant multi-physics and applying the associated equations and simple models. MATLAB script m-file is required for all assignments. Offered Fall.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to Graduate or Undergraduate level students; enrollment limited to students in the College of Engineering.
Equivalent: EVE 5115

ME 5160 Musculoskeletal Biomechanics Cr. 4
Structure and properties of the major tissue components of the musculoskeletal system and evaluation of how tissues combine to provide support and motion to the body. Offered Fall.
Prerequisite: BME 5010 with a minimum grade of B-
Equivalent: BME 5210

ME 5180 Introduction to Biomaterials Cr. 4
Introduction to study of both biological materials (bone, muscle, etc.) and materials for medical applications. Topics include tissue properties and effects of pathology, biocompatibility, and design considerations. Offered Intermittently.
Prerequisites: BME 5010 with a minimum grade of C- (may be taken concurrently)
Equivalent: BME 5370

ME 5215 Fundamentals of Battery Systems for Electric and Hybrid Vehicles Cr. 4
Fundamental electrochemistry and engineering aspects for electric propulsion batteries, including lead acid, nickel metal hydride, and lithium ion technologies. Offered Intermittently.
Equivalent: AET 5310, CHE 5120, EVE 5120

ME 5300 Intermediate Fluid Mechanics Cr. 4
Introduce fluid kinematics entailing vector field, potential flows, vorticity along with the computation of particle trajectory in a given velocity field and near stagnation points. Define basics of fluid dynamics including stress tensor in fluids, Navier-Stokes equations, Euler's equations, properties of solutions of Euler's equations, Bernoulli's integral and role of viscosity. Extend the analysis to two-dimensional potential flows and vortex flows. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 5330 Advanced Thermal Fluid System Design Cr. 4
Involve teamwork on semester-long open-ended design project of thermal fluid systems to meet performance requirements using sound design process and system engineering approach. Apply engineering principles and computational design software to analyze and optimize system or subsystem processes. Offered Fall, Winter.
Prerequisites: ME 2500 with a minimum grade of C-, ME 4210 with a minimum grade of C-, and ENG 3060 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the College of Engineering.
Fees: $40

ME 5400 Dynamics II Cr. 4
Cover three-dimensional kinematics and kinetics of rigid bodies, Euler angles, angular momentum, D'Alembert Principle, equations of motion in general rotating coordinate frames. Derive Lagrange's equation of motion for particles and rigid bodies. Introduce Lagrange multipliers, holonomic and non-holonomic constraints, virtual work principle, and Hamilton's Principle. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Engineering.
Fees: $10

ME 5440 Industrial Noise Control Cr. 4
Basic and advanced measurement techniques to acquire various acoustic quantities in a non-ideal environment including measurements of pressure, power and intensity of sound levels, reverberation time, absorption, coefficients of materials, room acoustics, and modal analysis. Cover noise reduction and control strategies for engineering applications. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Engineering.

ME 5453 Product and Manufacturing Systems and Processes Cr. 4
Introduce principles and methodologies for critical product design within the context of vehicle development. Various tools and processes will be introduced and integrated to develop technical skills required for lean product and manufacturing development principles. Cover operation management, quality management, principles of system development, planning and analysis of product development and manufacturing systems, and honing processes of sheet metal parts. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Engineering.

ME 5460 Fundamentals in Acoustics and Noise Control Cr. 4
Introduce principles of sound generation, propagation and interaction with solid boundary surfaces, as well as engineering noise control applications. Gain hands-on experience on simulating sound radiation and interactions with solid boundaries, and estimating sound transmission through partitions. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 5470 Creative Problem Solving in Design and Manufacturing Cr. 3
Concepts of laws of natural development of engineering systems. Algorithm for inventive (creative) problem-solving (AIPS-85). Creative use of physical and geometrical effects in design of mechanical and manufacturing systems. Concepts of strength, stiffness, vibratory effects, reliability in mechanical design. Offered Yearly.
Equivalent: IE 5490, SYE 5470

ME 5500 Advanced Engineering Design Cr. 4
Involve teamwork on semester-long open-ended design project. Develop design concepts based on various design theories, analyze alternative solutions and identify "best design solution" within given constraints. Students perform patent literature search, design, fabricate, develop and test prototypes. Perform product verification and validation. Require submission of formal progress reports, a final written report and a public presentation. Course satisfies Writing Intensive course requirement. Offered Fall, Winter.
Prerequisites: ENG 3060 with a minimum grade of C-, ME 4150 with a minimum grade of C-, ME 4410 with a minimum grade of C- (may be taken concurrently), and (ECE 3300 with a minimum grade of C- (may be taken concurrently) or ECE 3320 with a minimum grade of C- (may be taken concurrently))
Fees: $50

ME 5580 Computer-Aided Mechanical Design Cr. 4
Introduce aspects of constraint-based solid modeling and parametric modeling using Unigraphics, Solid Edge, I-DEAS and Pro-E. Develop intelligent solid models with application to data management and sheet metal design. Introduce computer-aided simulation and manufacturing. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Engineering.

ME 5620 Fracture Mechanics in Engineering Design Cr. 4
Introduce linear and nonlinear fracture mechanics principles and their applications to structural design. Formulate fracture parameters based on energy methods and stress-intensity factors for linear elastic fracture mechanics (LEFM), J-Integral and crack tip opening displacement (CTOD) for elastic plastic fracture mechanics (EPFM). Introduce design concepts based on failure assessment diagram and damage tolerance. Cover crack growth mechanisms, crack closure and crack retardation concepts. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 5720 Mechanics of Composite Materials Cr. 4
Develop a comprehensive understanding of analytical models of micro-mechanical and macro-mechanical behavior of composite materials. Conduct stiffness, strength, hydrothermal, laminate, viscoelastic, dynamic behavior and fracture analyses. Introduce experimental characterization procedures for mechanical behavior evaluation. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 5800 Combustion Engines Cr. 4
Cover thermodynamics and cycle analysis of spark and compression ignition engines. Introduce combustion processes in actual systems, engine performance characteristics and engine modeling. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Engineering.
Fees: $35

ME 5810 Combustion and Emissions Cr. 4
Define air quality and emissions standards. Cover fundamentals of emission formation in combustion systems, wall quenching and imperfect combustion, unburned hydrocarbons, carbon monoxide, aldehydes, nitrogen oxides, species stratification in the combustion chamber, and particulates. Discuss the effects of design parameters and engine operating variables on emission formation. Introduce chemical kinetics simulation. Offered Winter.
Prerequisite: ME 5800 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Fees: $35

ME 5900 National Design Competition Projects Cr. 1-4
Offered Every Term.
Repeatable for 998.99 Credits

ME 5990 Directed Study Cr. 1-4
Student selects topics in mechanical engineering to perform research work. Offered Every Term.
Repeatable for 4 Credits

ME 5992 Research Experiences for Undergraduates Cr. 1-4
Offered for undergraduate credit only. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

ME 5995 Special Topics in Mechanical Engineering I Cr. 1-4
Topics to be announced in Schedule of Classes . Offered Intermittently.
Restriction(s): Enrollment limited to students in the College of Engineering.
Repeatable for 12 Credits

ME 6550 Modeling and Control of Dynamic Systems Cr. 4
Introduce state-space representation of dynamical systems, apply Lyapunov stability criteria, and examine controllability and observability of systems. Design linear state feedback controllers using pole-placement technique and formulate full- and reduced-order linear state observers such as Luenberger observer. Design linear model following controller and linear quadratic optimal controllers. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Fees: $5

ME 6991 Internship in Industry Cr. 1-4
Written report describing internship experience. Offered Every Term.
Repeatable for 4 Credits

ME 7020 Finite Element Methods II Cr. 4
Introduce isoparametric elements, plate and shell elements. Perform dynamic analysis of structures (explicit versus implicit methods). Formulate problems with geometric, materials, and/or contact nonlinearities. Introduce hybrid variational techniques, Cover examples dealing with solids, fluids and heat transfer by utilizing commercially available software such as HyperMesh, OptiStruct, LS/DYNA and ANSYS. Offered Winter.
Prerequisite: ME 5040 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 7100 Mathematical Modeling in Impact Biomechanics Cr. 4
Review of models created for impact simulations. Regional impact simulation models. Human and dummy models subject to various restraint systems. Offered Intermittently.
Prerequisite: BME 5010 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7100, ECE 7100, IE 7100

ME 7160 Impact Biomechanics Cr. 4
Biomechanical response of the body regions and the whole body to impact. Mechanisms of injury in blunt impact. Effects of restraints on injury reduction. Development of test surrogates such as dummies. Offered Fall.
Prerequisite: BME 5010 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10
Equivalent: BME 7160

ME 7180 Advanced Topics in Biomaterials and Tissue Biomechanics Cr. 4
Seminar format: advanced topics presented to the class; lectures by the instructor and by the participants based on literature reviews. Topics determined by student interest. Offered Every Other Fall.
Prerequisite: BME 5210 with a minimum grade of C or BME 5370 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7300, MSE 7180

ME 7195 Advanced Tissue Biomechanics Cr. 3
Tissue-level mechanical properties. Analytical models of hard and soft tissue mechanics. Soft tissue viscoelasticity and poroelastic theory. Nonlinearity and anisotropy. Composite mechanics. Form and function relationships from microstructure to macrostructure. Application of theoretical models to experimental data sets. Offered Every Other Year.
Prerequisites: (BME 5010 with a minimum grade of C or BMS 6550 with a minimum grade of C), BME 5020 with a minimum grade of C, and BME 5210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7210

ME 7260 Heat and Mass Transfer Cr. 4
Introduce transport phenomena and rate equations. Formulate heat and mass transfer problems using lumped, differential and integral formulations. Solve these problems using the method of separation of variables, partial solutions, variation of parameters, superposition, Laplace transformation and Duhamel Integral for problems with time-dependent boundary conditions. Apply these concepts to various thermal and combustion systems. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 7290 Advanced Combustion and Emissions I Cr. 4
Introduce thermodynamics of chemically reacting mixtures, oxidation mechanisms of hydrocarbon fuels, theories of explosions, structure of pre-mixed hydrocarbon flames, propagation of laminar premixed flames, pre-mixed turbulent flames, kinetics of nitrogen oxides formation, combustion and emissions in spark ignition engines and control strategies. Offered Winter.
Prerequisite: ME 7260 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Fees: $5

ME 7310 Computational Fluid Mechanics and Heat Transfer Cr. 4
Understand the physics of governing equations of conservation of mass, momentum, energy, and other scalar properties in transport processes. Express the numerical aspects of the transport processes in finite volume approach and pressure-based solution algorithm. Introduce physical models of turbulence, multi-phase and reacting flows. Acquire hands-on experience of formulation, meshing, simulation, post-processing and presentation to solve engineering problems. Stress the importance of CFD encountered in real-life engineering applications. Offered Fall.
Prerequisite: ME 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ME 7315 Electric-drive Vehicle Simulation and Control Cr. 4
Cover modeling, simulation and control of electric-drive vehicle powertrain including plant modeling, controls model development, and in-the-loop controls testing. Proficiency in MATLAB/Simulink is required. Offered Winter.
Prerequisites: EVE 5115 with a minimum grade of B- or ME 5115 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Equivalent: EVE 7310

ME 7400 Advanced Dynamics Cr. 4
Introduce physical concepts and formalisms of Newtonian, Lagrangian, and Hamiltonian mechanics. Formulate calculus of variations including Hamiltonian least action principle and Euler-Lagrange equation. Develop the boundary-value problem of continuous elastic structures using Hamilton's principle. Model strongly nonlinear dynamical systems involving impact, non-smooth and discontinuous loads. Offered Winter.
Prerequisite: ME 5400 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Fees: $5

ME 7440 Signal Processing Technologies and Their Applications Cr. 4
Develop advanced signal processing techniques for analyzing transient signals containing discontinuities and sharp spikes with applications to such fields as blind sources separation, de-noising time-domain signals, etc. Acquire hands-on experience with software such as LabVIEW to set up experiments and analyze data. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 7451 Advanced Manufacturing II: Material Forming Cr. 4
Cover classical theory of plasticity and basic equations, deformation behavior and constitutive equations of materials, deformation mechanisms related to microstructures, mechanical analyses of various forming processes, experimental study on material properties, microstructure evolution and forming mechanics. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 7460 Advanced Acoustics and Noise Control Cr. 4
Introduce advanced techniques in near-field acoustical holography for visualizing acoustic fields, analyzing vibro-acoustic correlations and identifying the critical vibration components responsible for acoustic radiation from a vibrating structure. Offered Every Other Winter.
Prerequisite: ME 5460 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 7480 Nonlinear Vibration Cr. 4
Categorize nonlinearities in mechanical systems and qualitatively describe their effects on the dynamic response. Introduce the concepts of phase portrait, limit cycles, dynamic characteristics of Duffing and Van der Pol oscillators, parametric vibration and parametric resonance. Outline nonlinear techniques such as harmonic balance, averaging method, and multiple scales methods to analyze nonlinear modal interaction (internal resonance), vibro-impact dynamics and chaotic motion. Offered Fall.
Prerequisite: ME 5400 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ME 7550 Control of Dynamic Systems Cr. 4
Formulate static optimization problems with equality constraints, system identification, parameter optimization using Lyapunov's method. Introduce calculus of variations including dynamic optimization with equality constraints and apply them to formulate linear regulator and tracking problems. Introduce Pontryagin's minimum principle and state inequality constraints. Solve minimum-time problems and minimum control-effort problems. Offered Winter.
Prerequisite: ME 6550 with a minimum grade of B- or ECE 5470 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.
Fees: $5

ME 7590 Nonlinear Control Systems Cr. 4
Provide examples of nonlinear dynamical control systems, perform system analysis using phase-portrait, and examine stability using Lyapunov's direct method and invariant set theorems (local and global stability). Introduce describing function method, feedback linearization technique, internal dynamics, and zero-dynamics. Design nonlinear robust controllers. Offered Fall.
Prerequisite: ME 6550 with a minimum grade of B- or ECE 5470 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 7680 Manufacturing Processing Mechanics Cr. 4
Perform finite element analysis (FEA) of non-linear large strain deformation problems using the software ABAQUS. Cover thermal-mechanical coupled deformation problems involving micro-manufacturing of micro-electronic mechanical systems (MEMS), electronic packaging, composite curing, creep-fatigue of micro-system and large plastic deformation in metal forming. Offered Yearly.
Prerequisite: ME 5040 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 7720 Advanced Mechanics of Composite Materials Cr. 4
Conduct a review on tensor notation with application to stress strain and constitutive equations. Develop damage tolerance analysis and approaches including durability of composite materials and structures. Conduct extensive literature review and independent focused research on the above topics that encompass advanced models and their applications. Offered Winter.
Prerequisite: ME 5720 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ME 7820 Engineering Non-Destructive Evaluation (NDE) Methods and Industrial Applications Cr. 4
Cover basic and advanced non-destructive evaluation methods used in industry. Treat in-depth the physics and engineering NDE applications of ultrasonics, vibration, acoustic emission and thermal wave sciences. Cover methodologies of penetrant and eddy current diagnostics. Illustrate NDE concepts through laboratory experiments. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

ME 7990 Directed Study Cr. 1-4
Advanced study and instruction in mechanical engineering. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ME 7995 Special Topics in Mechanical Engineering II Cr. 1-8
Special subject matter in mechanical engineering. Topics to be announced in Schedule of Classes . Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ME 7996 Research Cr. 1-4
Perform experimental and analytic study on a selected topic in mechanical engineering. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ME 8020 Crashworthiness and Occupant Protection in Transportation Systems I Cr. 4
Introduce crashworthiness and occupant safety facts along with computational environment influences. Review of federal motor vehicle safety regulations. Design strategies for crash load sustainment and disbursement. Review the plasticity theory and its application to modeling and design. Define strategic material selection for crash affected and related regions. Cover modeling, analysis and simulation techniques in restraint systems, energy management, and various barrier crash tests. Offered Fall, Winter.
Prerequisite: ME 5040 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ME 8030 Crashworthiness and Occupant Protection in Transportation Systems II Cr. 4
Develop mathematical models of vehicle crashes in front, side, rear, and rollover modes. Cover roles of vehicle structures and restraint systems in reducing risk of injury. Offered Winter.
Prerequisite: ME 8020 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ME 8290 Advanced Combustion and Emissions II Cr. 4
Introduce single-component and multi-component droplet evaporation and combustion processes, liquid fuel sprays formation, evaporation and combustible mixture formation, comparison between autoignition of homogeneous and heterogeneous mixtures, diffusion flames, combustion of liquid sprays in compression ignition engines and emission control strategies along with advances in gasoline compression ignition engines. Offered Winter.
Prerequisite: ME 7260 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

ME 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

ME 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ME 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ME 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: ME 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

ME 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ME 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ME 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ME 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

ME 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

MED - Music Education

MED 2500 Piano Skills for the Music Classroom Cr. 2
Continuation of MUA 2795. Additional practice with functional skills needed in music classroom. Students acquire a repertoire of musical selections commonly used in the educational setting. Offered Winter.
Prerequisite: MUA 2795 with a minimum grade of C
Fees: $75

MED 3500 Introduction to Music Education Cr. 2
Course work includes lesson-plan writing, introduction to methodologies, and participating in teaching experiences. Exploration of philosophical, historical, psychological, and cultural/social foundations of the profession in the context of practical exercises. Offered Fall.

MED 3510 Teaching & Learning Music Cr. 3
In this course, students build the knowledge, skill, and vision required for meaningful music teaching and learning in K-12 settings, including: engaging with core principles of how people learn music and how teachers design and facilitate learning experiences, exploring varied approaches to instruction, considering the diverse needs and strengths of music learners, and developing pedagogical decision-making. Throughout the course, students draw connections between theory and practice to deepen their understanding of what it means to teach and learn diverse forms of music with an equitable, inclusive approach. Offered Winter.
Prerequisite: MED 3500 with a minimum grade of C

MED 3990 Directed Study Cr. 1-3
Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Junior, Senior or Post Bachelor; enrollment is limited to students with a major in Music or Music Honors.
Repeatable for 6 Credits

MED 4510 General Music Methods Cr. 3
This course provides students with a strong foundation in the knowledge, skill, and vision required to facilitate meaningful music teaching and learning in elementary general music settings. It is designed to engage a community of practice, where we learn with, and from each other. Teaching and learning opportunities are established within a set of critical relationships: knowledge of self (identity, history, self-awareness), knowledge of students/communities (sociological lens), and knowledge of content (music) and teaching strategies (pedagogy). Within each, a variety of philosophical and sociological topics and current issues are explored, inviting students to make connections and imagine applications to music learning spaces. Offered Fall.
Prerequisite: MED 3500 with a minimum grade of C

MED 4530 Choral Methods Cr. 3
Role of choral and vocal music education in secondary schools. Class activities, readings, and fieldwork focus on curriculum development, repertoire, score analysis, rehearsal planning, rehearsal techniques, vocal pedagogy and assessment. Organizational and managerial aspects such as recruitment, budgeting and scheduling are also included. Offered Winter.
Prerequisite: MED 4510 with a minimum grade of C

MED 4540 Instrumental Music in the Schools I Cr. 3
Teaching techniques, materials and organization of instrumental music in elementary schools. Offered Fall.
Prerequisite: MUA 1720 with a minimum grade of C and MUA 1730 with a minimum grade of C and MUA 1740 with a minimum grade of C and MUA 1750 with a minimum grade of C and MUA 1760 with a minimum grade of C and MED 3500 with a minimum grade of C

MED 4550 Instrumental Music in the Schools II Cr. 3
Teaching techniques, materials and organization of instrumental music in secondary schools. Offered Winter.
Prerequisite: MED 4540 with a minimum grade of C

MED 4560 Practicum in Music Education Cr. 3
Practicum provides field experiences in elementary or secondary school settings prior to full-time student teaching. Students apprentice with a cooperating teacher while assisting, observing and teaching throughout the semester. A minimum of 15 hours per week in an approved classroom is required. Offered Fall, Winter.
Prerequisite: MED 3500 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Education.

MED 4570 Student Teaching and Seminar Cr. 12
Directed teaching in schools at grade levels for which advanced students are preparing for certification. Seminars feature discussion of important educational issues. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Education.

MED 5550 Choral Conducting and Rehearsal Techniques Cr. 3
Conducting and rehearsal methods and materials for secondary schools. No credit for M.Mus. in conducting or music education. Offered Winter.
Prerequisite: MUA 3670 with a minimum grade of C

MED 7990 Directed Study in Music Education Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

MED 7999 Master's Essay Direction Cr. 3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

MED 8999 Master's Thesis Direction Cr. 1-8
Preparation of M.M. thesis project in music education. Offered Every Term.
Restriction(s): Enrollment limited to students in the Master of Music program; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Music degree.
Repeatable for 8 Credits

MGG - Molecular Genetics and Genomics

MGG 6010 Molecular Biology and Genetics Cr. 4
Covers the basic aspects of molecular genetics. Students should have completed previous coursework in organic chemistry, introductory biology, and biochemistry or cell and molecular biology. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

MGG 7010 Molecular Biology and Genetics Cr. 4
Basic aspects of molecular genetics. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7015 Introduction to Genetics Cr. 2
Forges a link between genotype and phenotype and covers topics in contemporary genetics, including Mendelian analysis, chromosomes, mitosis/meiosis, recombination, mutations and mutagenesis, linkage mapping, complementation, extranuclear inheritance, genetic interactions and epistasis, epigenetics, and developmental genetics. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7020 Metabolism and Disease Cr. 2
This course will review normal metabolic pathways and their regulation and then discuss in depth aberrant metabolism as it contributes to or causes diseases such as diabetes, cancer, and neurodegeneration. Didactic lectures will be complemented with student-based presentations of classic and current primary literature studies. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PSL 7220

MGG 7030 Functional Genomics and Systems Biology Cr. 2
Exploration of several new technologies for determining gene function on a genome-wide scale and for integrating information into a systems-level view of biological processes. Offered Winter.
Prerequisite: IBS 7015 with a minimum grade of C or MGG 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IBS 7030

MGG 7040 Molecular Organelle Physiology Cr. 2
Consists of lectures covering the fundamental topics of eukaryotic cell biology, with a focus on the cellular and molecular mechanisms that underlie organelle activities and their relevance in human physiology, metabolism and diseases. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7050 Bioinformatics: theory and practice Cr. 3
This course will teach graduate students in the biological sciences how to use public web-based bioinformatics resources to analyze the structure and function of protein-coding and noncoding-RNA genes. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7091 Scientific Communication Cr. 2
Advanced technical and grant-writing techniques related to the unique requirements in NIH grant proposals. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7100 Biostatistics with R Cr. 2
This course covers basic statistical concepts and methods that are regularly used in genetics and genomics, as well as basics in R programming and skills in data manipulation, analysis and visualization. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7400 Molecular Biology of Cellular Signalling Cr. 2
Molecular basis of cell-cell interactions, hormonal interactions, and interactions between different cellular compartments. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7460 Research Training in Molecular Biology and Genetics Cr. 1-8
Direct participation in laboratory research under the supervision of faculty advisor. Design and execution of experiments; analysis of laboratory data; interpretation of results and their relation to published findings. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 24 Credits

MGG 7600 Advanced Human Genetics Cr. 3
Concepts, problems, and methods of human genetics at an advanced level. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7640 Principles of Genetic Counseling Cr. 4
History and evolution of genetic counseling and how it relates to clinical genetic services within the health care delivery system. Genetic counseling skills such as case preparation, interviewing techniques, and family history assessment; counseling methods. Offered Fall.
Restriction(s): Enrollment limited to students in the MS in Genetic Counseling program; enrollment is limited to Graduate level students.

MGG 7660 Practical Applications of Genetic Counseling Cr. 3
Provides the foundation for identifying and applying the practical aspects of genetic counseling, including genetic testing and billing and reimbursement, to the reproductive, cardiovascular, pediatric, neurogenetic and cancer genetics clinical settings. Offered Winter.
Prerequisite: MGG 7640 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7710 Introduction to Medical Genetics Cr. 2
The principles of genetics and genomics related to medical genetics and how it is integrated into clinical practice. Offered Winter.
Prerequisite: MGG 7010 with a minimum grade of C or IBS 7015 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Genetic Counseling.

MGG 7730 Introduction to Promoting Health Equity in Genetic Counseling Cr. 1
This course aims to introduce learners to how diversity influences access to, the experience with, and utilization of health care, leading to health disparities in under-represented people and what they can do as future genetic counselors to provide inclusive practice and promote health equity. Through didactic instruction, readings, video reviews, discussions, self-assessments, and self-reflection, led by faculty from diverse backgrounds, students will: define diversity, equity, inclusion, justice and related terms; recognize a broad array of aspects of diversity and the role of intersectionality in any individual's lived experiences; describe and recognize one's own implicit and explicit biases; identify microagressions, their impact and strategies for addressing them; and start to develop one's own plan for promoting health equity in genetic counseling. Offered Fall.
Restriction(s): Enrollment limited to students in the MS in Genetic Counseling program; enrollment is limited to Graduate level students.

MGG 7740 Theory and Practice of Genetic Counseling Cr. 3
Major theories of human behavior and application of these theories to the practice of genetic counseling. Development of interpersonal communication and psychosocial assessment skills. Offered Winter.
Prerequisite: MGG 7640 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7741 Advanced Genetic Counseling Theory and Practice Cr. 3
Cultural, social, ethical, legal, professional and health-related issues that influence delivery of genetic counseling service and patient decision-making. Application of knowledge to practice. Offered Fall.
Prerequisite: MGG 7740 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7800 Advanced Medical Genetics Cr. 3
Overview of medical genetic disorders taught at a level suitable for those preparing for certification examinations in clinical genetics specialties or for those whose research focus or clinical practice will have a strong emphasis in medical genetics. Offered Fall.
Prerequisite: MGG 7600 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7830 Human Development and Teratology Seminar Cr. 1
Through lecture, self-study, exam, and oral presentation, students learn key aspects of fetal development, the embryological basis of birth defects and genetic dysmorphology syndromes, clinical teratology, and the associated medical terminology. Offered Fall.
Restriction(s): Enrollment limited to students in the MS in Genetic Counseling program; enrollment is limited to Graduate level students.

MGG 7860 Evaluating the Health Care Literature Cr. 1
Reading and analysis of health care literature with focus on research articles. Principles of health research design and analysis; skills for critical assessment of medical literature. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Genetic Counseling; enrollment is limited to Graduate level students.

MGG 7880 Genetic Counseling Seminar Cr. 1-6
Discussion format; issues relevant to medical genetics and the genetic counseling process. Presentations by students and invited faculty. Offered Every Term.
Restriction(s): Enrollment limited to students in the MS in Genetic Counseling program; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

MGG 7881 Senior Seminar in Genetic Counseling Cr. 2
Preparation for the transition to from student to practicing professional in the areas of the job search, billing and reimbursement, clinical supervision, developing effective educational programs, advocacy, and other relevant areas. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 7998 Master's Essay in Molecular Genetics and Genomics Cr. 3
Students will write a scholarly document (essay) based upon a topic of ongoing research in genetics or genomics. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major in Molecular Genetics & Genomics.

MGG 7999 Master's Research Project and Direction Cr. 1-5
Student conducts hypothesis-driven research and prepares written manuscript and oral presentation. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Genetic Counseling; enrollment is limited to Graduate level students; enrollment limited to students in a MS in Genetic Counseling degree.
Repeatable for 5 Credits

MGG 8010 Quantitative Data Analysis for Biological and Medical Sciences Cr. 2
Covers several of the statistical concepts and data analytic skills needed to succeed in data-driven life science research, beginning with relatively basic concepts related to computing p-values and advancing to topics related to analyzing high-throughput data. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.

MGG 8680 Advanced Topics in Molecular Genetics and Genomics Cr. 1-3
Offers an in-depth study of concepts and research in specific fields. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MGG 8770 Molecular Biology of Mitochondrial Disease Cr. 2
Mitochondrial structure and function; mitochondria as sites of phenomena such as cell death, generation of free radicals, and production of most cellular energy. Traditional mitochondrial diseases (e.g., caused by mutations in the mitochondrial DNA); more recent findings of involvement of mitochondria in pathologies such as cancer, diabetes, aging, and neurodegenerative diseases. Offered Fall.
Prerequisite: IBS 7015 with a minimum grade of C or MGG 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGG 8998 Genetic Counseling Internship Cr. 1-8
Students work in variety of genetics and subspecialty clinics as well as laboratory settings, under supervision of genetic counselor/geneticist. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Genetic Counseling; enrollment is limited to Graduate level students; enrollment limited to students in a MS in Genetic Counseling degree.
Repeatable for 8 Credits

MGG 8999 Master's Thesis Research and Direction Cr. 1-8
Student conducts research and prepares written presentation, designed to test specific hypothesis dealing with method, concept, or data. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to students with a major, minor, or concentration in Molecular Biology and Genetics; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Science degree.
Repeatable for 8 Credits

MGG 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MGG 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

MGG 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: MBG 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

MGG 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

MGT - Management

MGT 1000 Student Success and Career Development for Business Students Cr. 1
Designed to assist all incoming Mike Ilitch School of Business students in a successful transition to Wayne State University through interactive exercises and engaging assignments, student will develop the insights, skills and attitudes necessary for becoming a successful student. No credit after former BA 1000. Offered Every Term.
Restriction(s): Enrollment limited to students in the School of Business.

MGT 1040 Managing Diversity in the Workplace Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
This course prepares students to become effective coworkers and managers in today's diverse workplace. Traditional management theories are analyzed within a multicultural framework and students will be exposed to current diversity management practices in the field. Practical and experiential activities designed to help students understand the concepts are provided. No credit after former BA 1040. Offered Yearly.

MGT 2530 Management of Organizational Behavior Cr. 3
Applied issues in management examined through a focus on the organization and its external environment, group functions and processes, and employee attitudes and behaviors. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

MGT 4500 Business Co-op Assignment Cr. 0
Must be elected by Professional Development Co-operative Program students during work semester. Offered for S and U grades only. No credit toward degree. Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. Offered Every Term.
Equivalent: ACC 4500, FIN 4500, MKT 4500

MGT 4990 Directed Study in Management Cr. 1-3
Advanced readings and research or tutorial under the supervision of a faculty member in areas of special interest to student and faculty member. Offered Every Term.
Prerequisites: MGT 5510 with a minimum grade of D- and MGT 5530 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

MGT 4991 Study Abroad Cr. 3
Study abroad programs in various countries. Programs run 10-15 days in length. Recent country programs have been in China; Netherlands, Germany, Poland; Italy and Canada. Travel within a given country with visits to various companies and cultural attractions. Traveling costs are over and above tuition and vary by country. Various reading and assignments required. Offered Winter, Spring/Summer.
Equivalent: GSC 4991, MKT 4991
Repeatable for 6 Credits

MGT 5100 Introduction to Sport & Entertainment Management Cr. 3
Provides an overview of the sport & entertainment industry, and examines issues encountered by sport and entertainment managers with special emphasis on the use of business principles to identify, attract and retain consumers. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: SEM 5100

MGT 5510 Managing Organizational Structure and Processes Cr. 3
Analysis of strategic pressures on the organization. Application of advanced concepts of structured organizational change to contemporary organizational design problems. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: MGT 2530 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5530 Advanced Organizational Behavior Cr. 3
Analysis and application of advanced organizational behavior concepts relevant to managing in a complex and changing environment. Topics include: leading and managing organizational change; solving workplace problems creatively; communicating effectively in a diverse work environment; building and empowering effective teams. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: MGT 2530 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5550 Special Topics in Management Cr. 3
This course covers critical management topics relevant to today's current and aspiring managers and leaders. Offered Intermittently.
Prerequisite: MGT 2530 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

MGT 5560 Building Leadership Competencies Cr. 3
The course is designed to provide an understanding of how and why effective leaders do what they do. The instructor will integrate theory, practice, scientific evidence, hands-on experience, and personal reflections to help students achieve the following goals: 1) gain awareness of personal attributes and a unique style of leadership, 2) understand what effective leadership is and how to build a leadership skillset, and 3) identify leadership solutions to real-world challenges in organizations. Offered Yearly.
Prerequisite: MGT 2530 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5650 The Entrepreneur and Venture Creation Cr. 3
Nature of entrepreneurship and the role of the entrepreneur in society. Focus on the critical factors and special problems associated with the process of creating new business ventures. Emphasis on development of a business plan. Offered for undergraduate credit only. No credit after EI 5000. Offered Yearly.
Prerequisites: ACC 3010 with a minimum grade of C, FIN 3290 with a minimum grade of D-, MGT 2530 with a minimum grade of D-, and MKT 2300 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5700 Human Resource Management Cr. 3
Theory, policies, procedures and practices in employment relationships. Topics: strategic HRM, legal environment of HRM, equal employment opportunity, job analysis and design, employment planning, recruitment, selection, training and development, performance appraisal, compensation and benefits, labor relations, health and safety. Managerial and policy implications; linkages between HRM practices and organizational effectiveness. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: MGT 2530 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5730 Introduction to People Analytics Cr. 3
Most people-related decisions in organizations are based on intuition and experience rather than on employee data. In this course, students will gain an understanding of the types of people-related decisions that can be addressed using people analytics in an organizational setting. Students will develop critical thinking skills to draw meaningful conclusions across a range of HR contexts. Students will also utilize software to apply basic statistics concepts and principles to people-related data. Offered Yearly.
Prerequisite: MGT 5700 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5740 Employee Relations Cr. 3
Development and maintenance of employee-management relations, including employee and management rights and responsibilities, administration and creation of employment contracts and handbooks, and management of employee attitudes and behaviors. Students typically complete a collective bargaining simulation. Offered for undergraduate credit only. Offered Yearly.
Prerequisites: MGT 2530 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5770 Staffing and Selection Cr. 3
This is an advanced course that covers the Human Resource Management (HRM) functions of staffing (HR planning and recruitment) and selection. These functions are responsible for bringing talent—the central source of competitive advantage—into organizations. It is assumed that students have a basic familiarity with the major concepts, functions, and activities of HRM. Recent developments in recruitment and selection will be emphasized, with a particular focus on innovative methods that alignment with organizational strategy and mission, metrics for assessing the effectiveness of such methods, and the legal implications and challenges posed by these methods. Offered Fall, Winter.
Prerequisites: MGT 5700 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5790 Internship in Management Cr. 3
Student performs assigned tasks and responsibilities in a professional manner under supervision of host-employer for minimum 160 hours during the semester, abiding by rules and regulations established by the employer and expected of all employees; student must satisfactorily complete all course requirements outlined in the internship program for the Mike Ilitch School of Business. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: MGT 2530 with a minimum grade of C and 9 credits from (BA 1000-6999 (must be taken at WSU), ACC 1000-6999 (must be taken at WSU), GSC 1000-6999 (must be taken at WSU), FIN 1000-6999 (must be taken at WSU), MGT 1000-6999 (must be taken at WSU), MKT 1000-6999 (must be taken at WSU), ISM 1000-6999 (must be taken at WSU), or BLW 2510-5190 (must be taken at WSU))
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 5900 Project Management Cr. 3
Understanding and appreciation of the different knowledge areas of project management. Insight into developing the inputs, tools, techniques, and outputs to successfully manage products. Offered for undergraduate credit only. No credit after former ISM 5900. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C and MGT 2530 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Equivalent: TIS 5900

MGT 6020 Contemporary Principles of Management Cr. 2
Basic principles of organization theory and behavior in contemporary organizational settings. Offered for graduate credit only. No credit after former BA 6020. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

MGT 6890 Strategic Management and Business Policy Cr. 3
Managing the firm as an integrated unit under conditions of uncertainty. Integration of concepts and skills covered in previous specialized courses. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 6995 Management Capstone: Applying Management and Leadership Principles Cr. 3
Capstone course that focuses on 1) integrating and applying management theory and best practices to applied projects, 2) increasing students' self-awareness of their own management and leadership strengths, and 3) strengthening students' leadership and professional skill sets. Offered Every Term.
Prerequisites: MGT 5530 with a minimum grade of C-, MGT 5700 with a minimum grade of C-, and 6 credits from MGT 5000-9999
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MGT 7040 Managing Organizational Behavior Cr. 3
Contemporary issues in managing and leading people and organizations. Topics include: creativity, culture change, leadership, teamwork, cross-cultural factors, performance management, and organizational change. No credit for undergraduate management majors. No credit after former BA 7040. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

MGT 7070 Social Perspectives on the Business Enterprise Cr. 3
Political, social, legal, ethical, regulatory, environmental, and global issues that interrelate with business decisions in the societal fabric. No credit after former BA 7070. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

MGT 7080 Strategic Management Cr. 3
Application of theory and concepts regarding strategic formulation and implementation from the perspective of senior management, to integrate the functional areas and provide a unified direction for the firm when it is operating in complex local and/or global environments. No credit after former BA 7080. Offered Every Term.
Prerequisites: MGT 6020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

MGT 7620 Complex Organizations Cr. 3
The formal structure and processes in complex organizations: departmentalization, decentralization, authority and power, relationships between groups, organizational design and evaluation. Factors affecting organizational design, adaptation to environments, and designing effective decision-making systems. Offered Yearly.
Prerequisites: MGT 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7630 Organizational Change and Development Cr. 3
Analysis of the impact of dynamic forces, particularly globalization, on the theory, methods, and skills involved in designing and implementing planned changes in organizations. Offered Intermittently.
Prerequisites: MGT 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7640 Management of Human Resources Cr. 3
Theory, policy, research and process issues in employment relationships. The specific personnel practices of planning, selecting, employee development and appraisal, compensation and labor relations examined as they relate to conceptual and pragmatic views of management or employee behavior. Offered Every Term.
Prerequisites: MGT 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7650 Strategic Human Resource Management Cr. 3
Survey of human resource management from a strategic perspective. Formulation and implementation of human resource strategy addressed for recruitment, placement, training, development, issues in an international community. Offered Yearly.
Prerequisite: MGT 7640 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7660 Entrepreneurial Management Cr. 3
Nature of entrepreneurship and role of entrepreneur. Focus on problematic issues involved in creating and managing a small business. Emphasis on special knowledge and skills required of an entrepreneurial manager. Individual students may act as consultants to entrepreneurs or small business owner/managers. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7670 Leadership Excellence Through Workplace Inclusion Cr. 3
This course equips students with the skills and knowledge to navigate today's diverse workplaces and employee relations. Integrating diversity, equity, and inclusion (DEI) principles with practical management strategies, students will develop the tools to excel as leaders in any organizational setting. By the end of the course, students will be prepared to foster inclusive workplaces where all employees can thrive. Offered Yearly.
Equivalent: ELR 7670

MGT 7700 Leadership and Management of Innovation and Technology Cr. 3
Technology and innovation in corporations. Building on principles of leadership and management, consideration of technology, innovation, organizational effectiveness and global competition. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7730 People Analytics Cr. 3
The goal of this course is to equip students with the knowledge and skills needed to set-up and implement a data-driven approach to improving people-related decision-making in organizations. Through this course, students will develop critical thinking skills about people analytics by applying basic statistics concepts and principles to HR-related data. Students will gain an understanding of the types of problems that can be addressed using people analytics through examples from a range of HR contexts and will use statistical software to analyze data to draw meaningful conclusions. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7750 Managing Employee Relations Cr. 3
Development and maintenance of employee-management relations, including employee and management rights and responsibilities, administration and creation of employment contracts and handbooks, and management of employee attitudes and behaviors. Emphasis on union and management perspectives of the employment relationship. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7780 Workplace Negotiations Cr. 3
The purpose of this course is to examine the process of negotiations. It focuses on the skills, strategies, and techniques behind effective negotiating. The course content is applicable to a broad spectrum of work- or business-related relationship challenges faced by managers and professionals. This course embraces an active experiential approach to learning in an effort to bridge the theoretical and pragmatic aspects of negotiations. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: DR 7210

MGT 7815 Strategic Leadership Cr. 3
Academic and practitioner views of strategic leadership to understand the dynamics of leadership influence in complex organizations. Offered Fall, Winter.
Prerequisite: BA 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7816 Leading Self and Others Cr. 3
This course is designed to empower students with essential interpersonal leadership competencies through self-reflection exercises, assessments, and practical application. Students enhance their understanding of their own leadership capabilities and challenges via a personal leadership development plan that incorporates their unique self-awareness goals and strategies for continuous growth. By integrating theory with real-world experiences, students refine critical leadership competencies to lead effectively in diverse organizational contexts. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7820 Improvisation in Business Organizations Cr. 3
This course facilitates learning and skill building based on organization studies research on improvisation in business. Students participate in a variety of experiential exercises from organizational behavior and theatrical improvisation. Using organization studies literature informed by theatrical and jazz metaphors, students learn and apply underlying concepts of improvisation including good communication, active listening, creative thinking, rapid response, concentration, focus, teamwork, and building a positive culture of agreement. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7830 The Voice of Leadership: Communication Skills for Managers and Leaders Cr. 3
This is a highly pragmatic course, which is designed to help prepare new and seasoned managers. The course will cover a broad array of typical communications media and opportunities in your professional life. This course uses a seminar style where students are active learners and students learn from one another. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7850 Management through Constructive Persuasion Cr. 3
Introduction to methods of persuasion. Students learn how persuasion strategies can be applied in listening, speaking and written formats for business management situations. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

MGT 7895 Internship in Management Cr. 3
Students work a minimum of 160 hours for fifteen weeks in an entry-level management position in management. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

MGT 7900 Project Management Cr. 3
Management of resources (budget, personnel, materials, etc.) within the scope of a given project; understanding and appreciation for the different knowledge areas of project management; insight into identification of inputs, tools, and techniques of project management. No credit after TIS/MGT 5900 or after former ISM 5900 or ISM 7900. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: TIS 7900

MGT 7950 Business and Sustainability Cr. 3
How organizations can be good to the environment while being profitable. Sustainability concerns such as climate change, rising energy prices, natural resource depletions, and air pollution. Evaluation of aspects of business operations including marketing and communications, stakeholder engagement, product development, operations, supply chain management, and reporting concerns. Offered Fall.
Prerequisites: MGT 7040 with a minimum grade of C or MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: MKT 7950

MGT 7995 Directed Study in Management Cr. 1-3
Advanced independent readings and research under supervision of a graduate faculty member in areas of special interest to student and faculty member. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 3 Credits

MGT 8000 Seminar in Management Cr. 3
Selected topics in the management and organizational sciences. Offered Intermittently.
Prerequisite: BA 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

MIT - Manufacturing and Industrial Engineering Technology

MIT 2500 Machine Tool Laboratory Cr. 1
Laboratory experiences in manufacturing processes, machine tools, and mechanization. Calibration and part-setup. Offered Fall, Winter.
Prerequisites: ET 2140 with a minimum grade of C-

MIT 3520 Manufacturing Processes Theory Cr. 3
Fundamentals of material manufacturing processes in the context of their applications in industry. Emphasis on the nature and deformation behavior of materials commonly used in manufacturing, basic processes used in transforming them into useful products, the scientific theories underlying those processes, and criteria for selecting particular processes for industrial manufacturing operations. Offered Fall, Winter.
Prerequisites: CHM 1020 with a minimum grade of C-

MIT 3600 Process Engineering Cr. 3
Processing functions. Methods of manufacturing analysis. Manufacturing sequence, mechanization. Selection of tooling and equipment. Planning the process of manufacture. Offered Yearly.
Prerequisites: MIT 3520 with a minimum grade of C-

MIT 4700 Computer-Aided Design and Manufacturing Cr. 3
Fundamentals of computer-aided manufacturing using computer software. Two- and three-dimensional applications programming, numerical control and programming. Offered Fall.
Prerequisites: MIT 3600 with a minimum grade of C-
Fees: $25

MIT 4990 Guided Study Cr. 1-6
Supervised study and instruction in the field selected by the student. Offered Intermittently.
Repeatable for 6 Credits

MIT 5500 Machine Tool Laboratory Cr. 1
Laboratory experiences in manufacturing processes, machine tools, and mechanization. Calibration and part-setup. Offered Fall, Winter.
Prerequisites: ET 2140 with a minimum grade of C-

MIT 5700 Industrial Robots Modeling and Simulation Cr. 4
Topics include: the direct kinematic problem (homogeneous transformation matrices, composite homogeneous transformation matrix, links, joints and their parameters, the Denavit-Hartenberg representation, kinematic equations for manipulators); the inverse kinematic problem (geometric approach applied for 2DOF, 3DOF, 4DOF, 5DOF, and 6DOF manipulators; modeling, simulation and off-line programming of industrial robots and cobots (collaborative robots); and current trends and research in industrial robotics and cobotics. Offered Winter.
Prerequisites: ET 3430 with a minimum grade of C-

MIT 7700 Robotics and Flexible Manufacturing Cr. 4
Kinematics, dynamics and controls of the manipulators, their design and applications in flexible manufacturing cells. Computer-integrated manufacturing. Offered Intermittently.
Prerequisite: ET 7430 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT - Marketing

MKT 2300 Marketing Management Cr. 3
Planning the marketing program within social, economic and legal environments, market segmentation and behavior, market systems and strategy, international marketing. Offered Every Term.
Prerequisites: ECO 2010 with a minimum grade of C
Restriction(s): Enrollment limited to students in the School of Business.

MKT 4500 Business Co-op Assignment Cr. 0
Must be elected by Professional Development Co-operative Program students during work semester. Offered for S and U grades only. No credit toward degree. Opportunity to put theory into practice on the job. Students will normally be assigned to cooperating business organizations for internship periods of one semester. Offered Every Term.
Equivalent: ACC 4500, FIN 4500, MGT 4500

MKT 4990 Directed Study in Marketing Cr. 1-3
Advanced readings and research or tutorial under the supervision of a faculty member in areas of special interest to student and faculty member. Offered Every Term.
Prerequisites: MKT 5410 with a minimum grade of C- and MKT 5450 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

MKT 4991 Study Abroad Cr. 3
Study abroad programs in various countries. Programs run 10-15 days in length. Recent country programs have been in China; Netherlands, Germany, Poland; Italy and Canada. Travel within a given country with visits to various companies and cultural attractions. Traveling costs are over and above tuition and vary by country. Various reading and assignments required. Offered Winter, Spring/Summer.
Equivalent: GSC 4991, MGT 4991
Repeatable for 6 Credits

MKT 5410 Marketing Research and Analysis Cr. 3
Methods of gathering and analyzing data which will facilitate the identification and solution of marketing problems. Planning the project, data sources for exploratory and conclusive research. Questionnaire construction, sample design, and design of marketing experiments. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: MKT 2300 with a minimum grade of C- and (TIS 3400 with a minimum grade of C- or BA 3400 with a minimum grade of C-)
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5450 Consumer Behavior Cr. 3
Concepts and theories to explain consumer and organizational buyer behavior. Application of this understanding to marketing management and public policy decision making. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: MKT 2300 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5460 Sales Management Cr. 3
Organization and direction of a sales organization including selection, training, compensation, supervision, motivation, budgets, quotas, territories, and sales analysis. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: MKT 2300 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5490 Principles of Advertising Cr. 3
Introduces the basic elements of consumer advertising including the difference between marketing and advertising, how an advertising agency works, campaign strategy and planning, the creative process, foundations of media planning, and the concept of integrated marketing communications. Offered Fall, Winter.
Prerequisites: MKT 2300 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5510 Media Planning in the Digital Age Cr. 3
This course introduces students to key elements surrounding the use of consumer facing media as part of the marketing mix. Media planning terminology and calculations for all major media platforms will be explored. On the digital side, there will be a focus specifically on display and paid search. Students will learn, understand, and apply the variables involved in developing a comprehensive, integrated, media plan. They will also learn about the role of paid, owned and earned media as part of campaign planning, with the primary focus being paid media. Offered Fall.
Prerequisites: MKT 5490 with a minimum grade of C- or MKT 5800 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5511 Search Engine Marketing and Optimization Cr. 3
Examines the strategic use of search engine marketing and optimization and teaches students how to drive traffic to websites and build customer relationships. Topics include search behavior, search engines, performance indicators, crawlability, keyword research, content optimization, off-page SEO, paid search marketing, and the future of search. Offered for undergraduate credit only. Offered Intermittently.
Prerequisites: MKT 5800 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5512 Social Media Marketing Cr. 3
The term digital marketing is no longer a niche area of study. Rather, digital marketing is a core tenet of marketing in today's society. Every organization, small or large, practices some form of digital marketing and requires skilled personnel who can deliver effective digital marketing strategies while being able to measure their effectiveness using a variety of analytics. Social media and content marketing are possibly the most widely practiced topics under the larger digital marketing umbrella, with businesses constantly using them to (attempt to) drive revenue and brand awareness. However, these are also the quickest to change, with new platforms and strategies emerging every year. In this course, students will examine how to utilize social media and content to grow business and the analytics used to measure their effectiveness. Offered Intermittently.
Prerequisites: MKT 5800 with a minimum grade of C

MKT 5610 Marketing New Ventures Cr. 3
Topics include: product development vs. customer development; market types; customer types; diffusion and adoption life cycle theories and concepts; market opportunity analysis and product/ market fit, estimation of market size; value proposition; positioning statement; marketing strategy and plan to launch and sustain a new venture. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

MKT 5700 Retail Management Cr. 3
Retailing concepts and problems. Competitive structure, store location, organization, buying, inventory control, sales promotion, pricing, credit policy, customer services, research and franchising. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisites: MKT 2300 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5750 International Marketing Management Cr. 3
Offered for undergraduate credit only. Offered Winter.
Prerequisites: MKT 2300 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5800 Digital Marketing and Analytics Cr. 3
Introduces all major aspects of digital marketing and analytics. Examines web design and analytics, search engine optimization and marketing, online advertising, email marketing, social media, and reputation management. Prepares students to improve an organization's digital marketing presence. Offered Fall, Winter.
Prerequisites: MKT 2300 with a minimum grade of C-

MKT 5840 Special Topics: Search Engine Marketing and Optimization Cr. 3
This course examines the strategic use of search engine marketing and optimization and teaches students how to drive traffic to websites and build customer relationships. Topics in the course will include searcher behavior, anatomy of the search engine, keyword research, content optimization, off-page SEO, and strategies for conducting successful search engine campaigns. By the end of the course, students will be able to derive insights and apply new skills towards improving an organization's search engine strategy. This course covers emerging research, development, and practice topics from across the field of Marketing. Topics to be announced in schedule of classes. Offered for undergraduate credit only. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5850 Integrated Marketing Communications Strategy Cr. 3
Application of basic advertising skills to development of a fully-integrated marketing communications program for a major national or international business; research, media, creative, and promotion strategies. Offered for undergraduate credit only. Offered Winter.
Prerequisites: MKT 5490 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 5890 Internship in Marketing Cr. 3
Consult Mike Ilitch School of Business website for further guidelines and application form for the internship. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: MKT 2300 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 6015 Marketing Foundations Cr. 3
Fundamental principles that guide decision making in market-based management systems. Offered for graduate credit only. No credit after former BA 6015. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

MKT 6996 Strategic Marketing Cr. 3
Capstone course in the marketing sequence; includes four components designed to develop skills in planning and development of strategies to solve marketing problems. Offered for undergraduate credit only. Offered Every Term.
Prerequisites: MKT 2300 with a minimum grade of C-, MKT 5410 with a minimum grade of C-, and MKT 5450 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

MKT 7050 Marketing Strategy Cr. 3
Application of theory, concepts, and models to contemporary marketing issues and problems. Developing and evaluating successful marketing strategies through analysis of customers, competitors, the organization, and the external environment. No credit for undergraduate marketing majors. No credit after former BA 7050. Offered Every Term.
Prerequisites: MKT 6015 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

MKT 7150 Global Automotive Marketing Strategy Cr. 3
Marketing concepts, strategies, and tactics in global automotive industry. Marketing principles, role of marketing, target market selection, segmentation, brand management, distribution systems. Offered Spring/Summer.
Prerequisites: MKT 6015 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7430 Advertising Management Cr. 3
Planning, implementing, and controlling advertising and sales promotion. Internal and external relationships of the advertising department, determining advertising objectives and copy platform, setting the budget, selecting media and measuring advertising effectiveness. Offered Fall, Winter.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7450 Business Research and Methodology Cr. 3
An intensive study of the objectives and methodologies of research for business decisions. Course topics include: the scientific method, primary and secondary data sources, research design, reliability and validity, sampling, and applied statistics. Focus on the development of decision-oriented research information for all aspects of a business organization. Offered Fall, Winter.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7460 International Business Cr. 3
Globalization, the multinational firm, and emerging economies. Evolution of the international monetary environment and monetary systems. Theory of the multinational firm and foreign direct investment. Cultural and market opportunity analyses. Internationalization patterns and modes of foreign market entry. Strategic and organizational choice in international business. International alliances and emerging market economies. Fundamentals of international financial management. Offered Fall.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7470 Consumer and Industrial Buying Behavior Cr. 3
Behavioral theory as it relates to consumer and industrial decision processes. Relevant concepts, theories, and recent research findings are drawn from the fields of marketing, psychology, social psychology, and communications. Examination of consumer and industrial buying practices. Offered Fall.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7500 International Marketing Strategy Cr. 3
Globalization and marketing in the current decade. Marketing and research in the international environment. Cross-national consumer behavior and cross-national segmentation, targeting, and positioning. Product policy and branding in the international environment. International pricing, supply chain management, and communication strategy. Global branding. Marketing problems and opportunities in emerging markets. Organizational and strategic issues in global marketing. Offered Winter.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7700 Management of Retail Enterprises Cr. 3
In-depth study of the retail mix variables as they relate to products and services, pricing, promotion, place, and operating policies. Merchandising, inventory controls, store operations, and research approaches in monitoring current trends in retail management. Offered Fall.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7860 Social Media and Digital Marketing Analytics Cr. 3
Students will examine some of the top social media platforms today and the analytics used to measure their effectiveness. In addition, students will learn the basics of building a digital marketing team including how to manage digital marketing employees. Offered Winter, Spring/Summer.
Prerequisite: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7870 Seminar in Marketing Cr. 3
In-depth exploration of new and important subjects or techniques in marketing. Topics vary by semester; consult instructor. Offered Intermittently.
Prerequisite: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MKT 7890 Internship in Marketing Cr. 3
Students work a minimum of 160 hours for fifteen weeks in an entry-level management position in marketing. Offered Every Term.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

MKT 7950 Business and Sustainability Cr. 3
How organizations can be good to the environment while being profitable. Sustainability concerns such as climate change, rising energy prices, natural resource depletions, and air pollution. Evaluation of aspects of business operations including marketing and communications, stakeholder engagement, product development, operations, supply chain management, and reporting concerns. Offered Fall.
Prerequisites: MGT 7040 with a minimum grade of C or MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: MGT 7950

MKT 7995 Directed Study in Marketing Cr. 1-3
Advanced independent readings and research under supervision of a graduate faculty member in areas of special interest to student and faculty member. Offered Every Term.
Prerequisites: MKT 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 5 Credits

MLC - Med-Direct Community Learning

MLC 0100 Wayne Med Direct Pre-Freshman Summer Enrichment Program Cr. 0
Offered to Wayne Med-Direct scholars in the summer semester prior to freshman year, the course is designed as an orientation to campus life and the Med-Direct program. Successful completion of this course is mandatory for all Wayne Med-Direct scholars. Offered Spring/Summer.

MLC 1100 Wayne Med Direct Summer Research Program Cr. 3
Designed to provide a basic science research experience. Successful completion of this course is mandatory for all scholars as a part of the Wayne Med-Direct program. Offered Spring/Summer.

MLC 3100 Wayne Med-Direct Study Abroad Cr. 3
Offered in the summer semester of junior year to Wayne Med-Direct scholars and designed to provide the students with an opportunity to explore the fields of medicine and public health in China in addition to having them experience Chinese culture. Examines important aspects of Chinese culture – history, philosophy, language, literature, martial arts, and calligraphy – as well as the traditional Chinese Medicine practices and modern Chinese medicine and public health practices. Offered Spring/Summer.

MLS - Medical Laboratory Science

MLS 2080 Medical Laboratory Science Seminar Cr. 1
Introduction to the medical laboratory science profession, educational requirements, and opportunities. Offered Every Term.

MLS 3020 Hematology I Cr. 4
Basic study of blood-forming organs and components of blood; explanation of basic hematological procedures. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $75

MLS 3040 Immunohematology I Cr. 4
Introduction to principles of immunohematology and theory and practice of routine testing procedures employed in the clinical blood bank. Survey of the organization and operation of a blood bank. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $130

MLS 3080 Instrumentation Lecture and Laboratory Cr. 3
Introduction to fundamental laws of electronics, the theoretical basis of instrument design, and quality control in laboratory testing. Application of instrumental methods, including spectrophometric, flurometric, electroanalytical, and chromatographic methods to the clinical laboratory. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Medical Laboratory Science.
Fees: $85

MLS 3100 Urine and Body Fluid Analysis Cr. 4
Specimen collection, preparation, and examination of urine and other body fluids such as spinal fluid, semen, and synovial fluid. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

MLS 3280 Clinical Chemistry Lecture and Laboratory Cr. 3
Methodologies and interpretations of results of clinical chemistry diagnostic tests. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

MLS 3330 Medical Terminology Cr. 1
Study of medical terms in a body system approach. Review of anatomy and physiology. Offered Every Term.

MLS 4000 Clinical Hematology Cr. 5
This course takes place at one of the clinical laboratories affiliated with the MLS Program. The experiential training consists of performing assays on specimens, microscopic identification of cells and other formed elements, and correlating lab results with clinical findings in hematology, urinalysis, and coagulation. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $43

MLS 4010 Clinical Chemistry Cr. 4
This course takes place at one of the clinical laboratories affiliated with the MLS Program. The experiential training consists of biochemical analysis of constituents of blood and other body fluids, operating and maintaining automated instruments and correlating lab results with clinical findings in clinical chemistry. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $43

MLS 4020 Clinical Blood Bank Cr. 3
This course takes place at one of the clinical laboratories affiliated with the MLS Program. The experiential training consists of application of the theory and principles involving antigen-antibody reactions of blood. Students perform assays on specimens and obtain, store, and prepare whole blood and blood components for transfusion, and correlate lab results with clinical findings. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $43

MLS 4030 Clinical Microbiology Cr. 4
This course takes place at one of the clinical laboratories affiliated with the program. The experiential training consists of obtaining, culturing, identification and determining antibiotic sensitivity of microorganisms causing infection or infestation. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $43

MLS 4040 Laboratory Operations Cr. 2
Laboratory management issues and problems, with emphasis on the hospital setting. Includes professional conduct, management theory, interpersonal and technical skills, legal and regulatory issues, computers in laboratories, quality assessment and improvement, educational methodologies, and clinical study design. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Medical Laboratory Science.

MLS 4210 Hemostasis Lecture and Laboratory Cr. 2
Lecture and laboratory course covering principles of hemostasis and assessment of hemostasis status. Performance and interpretation of diagnostic tests, along with problem solving and correlation of laboratory findings with disease states. Offered Spring/Summer.
Fees: $75

MLS 4230 Hematology II Cr. 4
Continuation of Hematology I. Introduction to hematologic neoplasms. Application of laboratory methods for diagnosis and treatment. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

MLS 4240 Immunohematology II Cr. 4
Advanced immunohematology practices, including investigation and resolution of unusual serological conditions related to transfusion of blood and blood components, blood component processing and transfusion reaction investigation. Continuation of MLS 3040. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $65

MLS 4990 Professional Directed Study Cr. 1
Independent study under faculty supervision. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

MLS 5500 Immunology and Serology Cr. 3
Applications of immunology and serology in a clinical laboratory setting, including relevance to human medicine, performance and interpretation of diagnostic tests, along with problem solving and correlation of laboratory findings with disease states. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $90

MLS 5510 Diagnostic Microbiology I Cr. 4
Introduction to the fundamental principles of clinical microbiology with in-depth study of important human bacterial pathogens, and of principles and methods used in the diagnostic bacteriology laboratory. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $219

MLS 5520 Diagnostic Microbiology II Cr. 4
Lecture and laboratory course in diagnostic microbiology with a focus on clinical virology, mycology, and parasitology and the recognition of bacterial pathogens according to body site. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $140

MLS 5530 Medical Laboratory Science Simulation Laboratory Cr. 2
Application of previously acquired theory and techniques in a simulated clinical laboratory, with emphasis on work organization, correlation of results, management, decision-making, and quality assurance. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $100

MLS 5550 Molecular Diagnostics Cr. 3
Review of molecular biology principles applicable to current testing systems. Laboratory techniques to elucidate molecular structure and disease states, including DNA hybridization, agarose gel electrophoresis, southern and western blot techniques, DNA sequencing, PCR. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $90

MLS 5590 MLS Honors Thesis Project Cr. 3
Independent study under faculty supervision for the purpose of developing and completing an MLS Honors thesis research project, writing a thesis paper, and producing a poster to be submitted to the College of Pharmacy and Health Sciences Research Day. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Medical Lab Science Honors.

MLS 5993 Writing Intensive Course in Medical Laboratory Science Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Course must be elected in conjunction with designated corequisite; see Schedule of Classes for corequisites available each term. Satisfies University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

MLS 5996 MLS Clinical Pathology Review Cr. 2
A review of the Medical Laboratory Science Body of Knowledge. In-class discussions, case studies, and quizzes to prepare students for the certification examination. This course culminates in a comprehensive mock exam. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

MS - Mortuary Science

MS 3100 Thanatochemistry Cr. 2
Discussion, problem solving, and application of general inorganic, organic and biochemistry to postmortem changes, biologic preservation, and embalming chemistry. Course includes a problem-based laboratory and case studies with correlations to embalming chemistry. Offered Winter.
Prerequisite: CHM 1000 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3300 Religions, Values, and Death Cr. 2
Various religious, secular, and philosophical views regarding the value of life, the meaning of death, and life after death. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science, BS in Pathologist Assistant or PBC in Forensic Investigation programs.

MS 3400 Funeral Service Law and Ethics I Cr. 3
Business law and legal environment affecting funeral service. Introduction to American legal system, court structure, and civil & criminal procedure. Contract law, property law and UCC Articles 2, 3, and 9. Survey of tort law. Discussion and problems based on the ethical responsibilities of funeral practitioners Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3410 Funeral Service Law and Ethics II Cr. 3
Legal principles affecting funeral service including legal status of a deceased, rights and responsibilities affecting disposition, licensing laws, regulatory compliance, preneed and probate law. Funeral service torts and discussion and problems on due diligence, best practices, and ethical responsibilities of funeral practitioners. Offered Spring/Summer.
Prerequisite: MS 3400 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $60

MS 3500 Embalming I Cr. 2
Theories, practices, and techniques of biologic preservation and disinfection of human remains; case analyses; methods of application of embalming chemicals; use of instruments and equipment; special case embalming. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $200

MS 3510 Embalming II Cr. 2
Dynamics of decomposition; influence of disease and its treatment on the embalming process; public health considerations; anatomical embalming; disaster response. Offered Winter.
Prerequisite: MS 3500 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $200

MS 3600 Restorative Art I Cr. 3
Theories, methods, and techniques used in the restoration of superficial tissues and features. Color theory, cosmetology, facial proportions, skin tones correlated with reconstruction. Clay and wax modeling. Case studies in restorative art. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $50

MS 3610 Restorative Art II Cr. 2
Continuation of MS 3600. Offered Winter.
Prerequisite: MS 3600 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $35

MS 3620 Preparation for Disposition Cr. 2
Preparing the decedent for disposition, including handling of personal effects, refrigeration, container selection, identification viewing, dressing, transportation and special ceremonial preparation. Offered Spring/Summer.
Prerequisite: MS 3610 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $200

MS 3760 Funeral Service History and Trends Cr. 2
Basic human need to memorialize the dead, examined throughout history. Funeralization as a process affected by social and religious change. The funeral service professional in a socio-temporal context. Possible future practices based on understanding of historical records and current trends. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3800 Funeral Directing Cr. 3
Funeral service operations. Practical applications including field trips. Funeral service process from first call to final disposition. Terminology, government regulations, ethics, professional conduct, vital statistics records, necessary forms. Religious, ethnic, fraternal and military variations. Computer technologies and applications. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $80

MS 3810 Funeral Service Marketing and Merchandising Cr. 3
Marketing, merchandising, public relations, pre-need planning, personnel management, job-seeking skills, licensing requirements; planning, building and establishing of funeral home. Government regulations. Offered Winter.
Prerequisite: MS 3800 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $80

MS 3830 Psychology of Death and Dying Cr. 3
Various social and cultural perspectives; psychosocial changes related to death, dying, and disposition; special cases: sudden, violent or unexpected death. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3840 Funeral Service Applications Cr. 3
Case studies involving discussion and analysis of National Board Examination (NBE) subject matter application to funeral service practice. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 3970 Practicum I Cr. 3
Student placement in licensed funeral service facility to acquire practical experience in basic funeral service skills. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $30

MS 3980 Practicum II Cr. 3
Continuation of the Practicum I course. Students are placed in a licensed funeral service facility to acquire practical experience in advanced funeral service skills. Offered Winter.
Prerequisite: MS 3970 with a minimum grade of P
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $30

MS 4000 Practicum III Cr. 3
Continuation of the Practicum II course. Students are placed in a licensed funeral service facility to acquire practical experience in advanced funeral service skills and evaluation of clinical embalming competency. Offered Spring/Summer.
Prerequisite: MS 3970 with a minimum grade of P and MS 3980 with a minimum grade of P
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 4050 Anatomy for Mortuary Science Cr. 2
Detailed systemic study of human anatomy. Laboratory work consists of demonstrations and selected dissections; emphasis on vascular anatomy and adjacent structural relationships; anatomic guides. Material Fee As Indicated In The Schedule of Classes. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $30

MS 4250 Pathology and Microbiology for Mortuary Science Cr. 3
Discussion and application of pathogenic microbial agents; host-parasite relationships; disinfection-decontamination; immunology; epidemiology of infectious disease; and public health issues. Basic study of disease states and processes that may negatively impact restorative art efforts or the success of preservation through embalming. Lecture and problem-based laboratory/case studies. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 4450 Funeral Service Management and Accounting Cr. 3
Financial aspects of starting and operating a funeral business; basic accounting principles; dealings with fellow professionals and government agencies. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 5350 Funeral Service Communications Cr. 1
Survey of professional communication in funeral service, including: verbal and non-verbal communication strategies, email and written communication, principles of customer service, public relations, networking, conflict resolution, workplace and professional expectations. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.

MS 5550 Special Topics in Mortuary Science Cr. 1
Lectures and discussions; invited speakers on current topics in the profession. Topics to be announced in Schedule of Classes. Offered Yearly.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science or PBC in Forensic Investigation programs.
Repeatable for 3 Credits

MS 5990 Directed Study Cr. 3
Library and/or laboratory study of current or pending professional development; study of an existing problem, study or development of new procedures or techniques. Assigned project under the guidance of departmental/program faculty member. Offered Every Term.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science or PBC in Forensic Investigation programs.
Repeatable for 9 Credits

MS 5996 Professional Review Cr. 3
A comprehensive review and assessment in preparation for the National Board Examination consisting of assigned questions and in-class discussion and assessment, culminating in the Practice National Board Examination. Students receive a grade of Y at the conclusion of the course and have 30 days to take the National Board Examination after completion of the Mortuary Science professional coursework. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Mortuary Science program.
Fees: $100

MS 5999 Funeral Service Residency Cr. 0
Experiential learning in focused and/or specialty funeral service settings through placement in a limited-duration residency, including combination operations, final disposition, ethnic funeral customs, and others. Enrollment subject to program selection. Zero credits. Offered Fall.
Prerequisite: MS 5996

MSL: Master of Studies in Law

MSL 8900 Working with Lawyers Cr. 3
Offers an introduction to the language of the law and the basic structure of the legal system. Teaches legal research and writing for non-lawyers, with a focus on producing investigative reports. Deals with the non-lawyer professional's interface with legal counsel, both within and outside the organization. Includes instruction regarding the types of activities non-lawyers can handle and what activities should be reserved for lawyers, emphasizing the relevant ethical constraints. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8901 Survey of the Common Law Cr. 3
Provides an overview of torts, contracts, and property. Includes an introduction to basic legal concepts, especially those likely to be encountered in the business world, including agency, vicarious liability, the differences between civil and criminal liability, and how rights are enforced through legal remedies. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8902 Civil Procedure and Introduction to Dispute Resolution Cr. 3
Teaches how legal disputes unfold, from demand letters, pleadings, and service of process through discovery, trial, and appeal. It addresses both formal courtroom process — the life-cycle of a lawsuit — and informal processes such as negotiation, mediation, and arbitration. The course touches upon due process issues and includes an overview of evidence principles. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8903 Government Organization and Regulation Cr. 3
Introduces the structures of government. Covers the key concepts of our constitutional system, including the enumerated powers of the federal government, separation of powers, federalism, the role of the judiciary in constitutional interpretation, and criminal procedure. It also addresses the processes of legislation and administrative law. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8905 Administrative Law for Non-Lawyers Cr. 3
This course introduces students to the function of administrative law in the United States. Administrative law impacts multiple sectors of life, for example health and environment, and understanding how it works is important for those who wish to understand or influence policy. This course will provide information on what agencies do, how they fit into our governmental system, and how their power is limited. Students will leave the course with a better understanding of how administrative law impacts multiple sectors of public life in the United States and how they can interact with and influence the administrative process. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8910 Employment Law: Legal Obligations Cr. 3
Key topics cover wages and hours, hiring and termination, performance evaluation, employee rights (including safety, privacy, use of social media, and whistle-blowing), unemployment compensation, and workers' compensation. It includes an introduction to employment-related legislation, including the WARN Act, Fair Labor Standards Act, Occupational Safety and Health Act, non-compete and nondisclosure agreements, trade secrets, and employment-related immigration. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8911 Employment Law: Workplace Management Cr. 3
This course covers topics such as recruiting employees, assembling an application pool, the application and interview process, pre-employment testing and screening, performance management, severance and post-employment obligations, arbitration agreements, and restrictive covenants. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8912 Employment Discrimination Cr. 3
Discrimination based on race, religion, sex, national origin, sexual orientation, age, and disability, including the role of the Equal Employment Opportunity Commission. Includes diversity and inclusion, affirmative action, unconscious bias, and disability accommodations. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8913 Labor Law and Practice Cr. 3
This course teaches about the right to organize, engage in collective bargaining, strike, and pursue grievances under the National Labor Relations Act and other labor laws. It addresses the role of labor unions and other organizations in both the private and public sectors, and includes treatment of collective bargaining agreements, unfair labor practices, and labor arbitration. The course may include some comparative content, such as European works councils. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8914 Employee Benefits for Human Resource Specialists Cr. 3
Addresses employment-based retirement plans, health plans, short-term and long-term disability insurance, executive compensation, and fringe benefits. Features coverage of relevant statutes, including the Employee Retirement Income Security Act, Internal Revenue Code (as applicable to benefits), COBRA health insurance coverage, Health Insurance Portability and Accountability Act, and Family and Medical Leave Act. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8915 Dispute Resolution in Employment Cr. 2
This course consists of a context-based survey of the dispute resolution processes most often used in employment, including negotiation, mediation, arbitration, and hybrid processes, as well as human resources investigations, interaction with governmental regulators, and termination agreements. It gives consideration to emotionally volatile interactions, and includes some hands-on simulation. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8930 Healthcare Organizations and Administration Cr. 3
This course provides an introduction to healthcare organizations in the United States and legal issues impacting their administration. The course will provide information on types of healthcare organizations, operation of healthcare organizations, and major policies impacting these organizations. Students will leave the course with an overview of the foundational information needed for those who lead in a healthcare organization. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8931 Regulating the Conduct of Healthcare Providers Cr. 3
This course introduces students to the complex set of federal and state regulations which govern the work of healthcare providers. Students will learn about licensing, scope of practice, and discipline of healthcare providers. They will also learn about medical malpractice as it relates to providers. This course seeks to provide those who work in leadership roles in healthcare organizations a survey of the information needed to understand the specialized regulatory landscape impacting those who work in the healthcare system. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8932 Patient Privacy and Control of Patient Medical Records Cr. 3
This course introduces students to legal issues applicable to health information privacy. The sensitive and personal nature of health information and the expansion of modern digital technologies raise important concerns related to how this information is handled, protected, and utilized, particularly in healthcare settings. This course will examine how law governs the uses of health information. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8933 Health Insurance and Healthcare Fraud Cr. 3
The course offers a survey of the myriad legal rules that govern health insurance and healthcare fraud in the United States, primarily on the federal level. Key statutes discussed include the Patient Protection and Affordable Care Act, Medicare, Medicaid, the False Claims Act, the Anti-Kickback Statute, Stark laws, and the Employee Retirement Income Security Act. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8934 Legal Issues in Public Health Cr. 3
This course introduces students to the importance of law and policy as a critical component of public health. The course will provide key information regarding the difference between population based public health and health care and the tensions it can create between private rights and public good. It will provide an overview of the variety of types of laws which are commonly encountered in public health, and it will provide students with an overview of tools non-lawyers may use to understand and/or influence public health policies in their work. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8935 Legal Issues in Bioethics Cr. 3
This course introduces students to legal issues in bioethics. Bioethics is a discipline that examines ethical and social issues that arise from developments in medicine, biological sciences, emerging technologies, and public health. This course will address the legal and policy implications of bioethics in our modern society. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8950 Regulatory Compliance Cr. 3
This course serves as an introduction to fundamental statutes, regulations, and administrative practices essential for regulatory compliance within business and corporate entities. It provides students with a foundational understanding of basic risk management concepts. Throughout the course, students will acquire the skills to identify pertinent laws, regulations, and industry standards crucial for the development of strong compliance management programs. They will learn to formulate and execute effective compliance policies and procedures, as well as design appropriate audit protocols to assess the efficacy of existing policies and procedures. Additionally, students will gain skills to guide the organization's response to regulatory audits or investigations. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8951 Corporate Compliance Cr. 3
This course provides students with a basic understanding of the law that governs business organizations, particularly publicly held corporations. The course considers different business relationships, including the agent/principal dynamic, partnerships, LLCs, ESG, and nonprofits, along with the rights and duties of boards of directors, officers, and shareholders. Other topics include the nature of debt and equity securities, the role of fiduciary duties, the regulation of conflicts of interest, and the fundamentals of mergers and acquisitions. The course introduces students to state and federal statutory systems that regulate business organizations. The course also reviews ethical considerations along with specialized issues in the corporate world. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8952 International Business Compliance Cr. 3
This course provides a survey of the principles required to understand the importance and specialized landscape of legal compliance when conducting international business transactions involving the sale of goods, provision of services, licensing of technology, and foreign direct investment. General themes will include the range of transactions that one encounters in international business, the history and development of compliance and risk assessment in a global context, and the particular challenges of compliance in settings where transactions are regulated by two or more national governments. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8953 Environmental Compliance Cr. 3
This course explores important federal and state environmental laws and regulations as well as significant international treaties concerning the environment. Students will learn about how these laws and regulations are enforced and the role of the various stakeholders involved with monitoring and otherwise ensuring enforcement, including employees, consumers, investors, advocacy groups, and various governmental agencies. Throughout the course, students will acquire familiarity with, and the skills to identify environmental issues arising under pertinent laws, regulations, and industry standards applicable to various industry types or company operations. They will be introduced to environmental reporting and other compliance requirements and how environmental compliance programs are designed and implemented. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8954 Financial Regulation and Compliance Cr. 3
This course will equip you with the basic knowledge and vocabulary to navigate the web of financial institutions, markets, and the legal and regulatory frameworks to which they apply. You will leave this class with: (1) relevant knowledge about financial compliance and the laws and regulations governing financial institutions, (2) an understanding of how financial institutions reduce their legal risk, and (3) well-reasoned opinions about financial regulation and compliance to contribute to future policy debates. The concepts we explore in this class will be relevant for those considering a career in investment banking, financial services, private equity, consulting, accounting, or law. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8955 Privacy and Cybersecurity Law Cr. 3
This course provides an introduction to the law and policy of privacy and cybersecurity. It covers the principal federal laws regulating privacy, such as the Electronic Communications Privacy Act and the Health Insurance Portability and Accountability Act along with the ethical considerations of data privacy. It addresses relevant state laws, including security breach laws and the rapidly expanding set of comprehensive privacy laws, as well as some key non-U.S laws. It introduces cybersecurity frameworks and touches on cybercrime. In addition to cases and statutes, the course will draw from policy discussions and will address the role of regulatory agencies in the enforcement process. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8956 Understanding Financial and Tax Reporting Cr. 3
This course covers basic accounting and tax principles necessary to understand, interpret and analyze financial statements, comply with reporting obligations, and communicate intelligently with business and financial professionals. This class will use real-world examples to illustrate the interrelationships between financial and tax reporting obligations and specific business transactions. The class will also spend time analyzing past financial and tax scandals, the issues that led to them, and the role that compliance professionals could have played in preventing them. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8957 Fair Business Practices Cr. 3
This course explores the regulation of business practices in the United States. Intended to balance the often-competing goals of consumer protection and business growth, laws and regulations governing business practices may put businesses at risk of financial penalties and public scrutiny. This course will also equip you with the basic knowledge and vocabulary to navigate issues related to unfair and deceitful business practices, false advertising and marketing, antitrust, consumer law, and the role of federal and state agencies in regulating business practices. You will leave this course with: (1) relevant knowledge about the laws and regulations governing fair business practices, antitrust, consumer law, and false advertising; (2) an understanding of how businesses identify and reduce their legal risk in these areas, and (3) the ability to engage in meaningful discourse surrounding these topics. Offered Yearly.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSL 8995 Capstone Experience Cr. 1-3
This course represents the culmination of a student's course of study leading to the Master of Studies in Law (MSL) degree. It requires students to draw upon and synthesize what they have learned from their other courses and apply that knowledge in a way that demonstrates mastery of the subject matter. Offered Every Term.
Restriction(s): Enrollment limited to students in the Master of Studies in Law program; enrollment is limited to Graduate level students.

MSE - Materials Science and Engineering

MSE 5350 Polymer Science Cr. 3
Fundamental relationships between chemical structure and physical properties of high polymers. Basic structures, states and transitions of polymers. Polymerization reactions and processes. Molecular weight, viscous flow and mechanical properties of polymers. Offered Fall.
Prerequisites: MAT 2150 with a minimum grade of C- (may be taken concurrently)
Fees: $10
Equivalent: CHE 5350

MSE 5360 Polymer Processing Cr. 3
A detailed analysis of polymer processing. Rheology of polymers, flow in tubes, calendering, extrusion, coating and injection molding. Offered Intermittently.
Prerequisites: CHE 3200 with a minimum grade of C-
Fees: $10
Equivalent: CHE 5360

MSE 5385 Biocompatibility Cr. 4
Introduces concepts and applications of biocompatibility. Cellular response to implants (e.g. prosthetics, gene therapies, cells, etc.) will be covered in detail, including wound healing, immune response, and foreign body response. Topics include stem cell effects; in vitro and in vivo studies; and synthetic and natural material body response. The course material will be applicable to implant design, gene therapies, and stem cell treatments. Offered Winter.
Prerequisites: BIO 1050 with a minimum grade of C-, BIO 1500 with a minimum grade of C-, or BIO 1510 with a minimum grade of C-
Equivalent: BME 5380

MSE 5650 Surface Science Cr. 3
An introduction to the science and technology of surface phenomena, including surface structure, surface energy, surface diffusion, crystal growth and selected applications of technological importance. Offered Intermittently.
Prerequisites: BE 1300 with a minimum grade of D- and CHM 5440 with a minimum grade of D-

MSE 7100 Advanced Engineering Mathematics Cr. 3
Presentation, evaluation and use of mathematical methods within the framework of engineering problems; including ordinary and partial differential equations, transforms and vector operations. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CHE 7100

MSE 7180 Advanced Topics in Biomaterials and Tissue Biomechanics Cr. 4
Seminar format: advanced topics presented to the class; lectures by the instructor and by the participants based on literature reviews. Topics determined by student interest. Offered Every Other Fall.
Prerequisite: BME 5210 with a minimum grade of C or BME 5370 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7300, ME 7180

MSE 7300 Advanced Thermodynamics Cr. 3
Advanced presentation of the principles of thermodynamics; application to open systems, phase diagrams and chemical equilibria. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CHE 7300

MSE 7400 Mechanical Behavior of Materials Cr. 3
Analysis of elastic and plastic deformation of single crystals and polycrystalline materials, emphasizing the relations between metallurgical microstructure and material properties. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

MSE 7530 Materials Characterization and Computational Data Analysis for Engineers Cr. 3
Principles of data acquisition and analysis from a wide range of experimental measurements, with an emphasis on high-throughput and automated processing, data visualization, and effective communication. Data management and functional Python skills (no prior programming experience needed, though students with concerns should reach out to the instructor early). Experimental techniques covered in lessons and examples include microscopies, spectroscopies, thermal characterization, ellipsometry, rheology, and X-ray and neutron scattering and reflectivity. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: CHE 7530

MSE 7990 Directed Study Cr. 1-6
Library investigation of an approved project in materials science and engineering. Independent study, conferences with supervisor and preparation of a comprehensive report. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

MSE 7995 Special Topics in Materials Science II Cr. 1-4
A consideration of special subject matter in materials science. Topics to be announced in Schedule of Classes . Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MSE 8996 Research Cr. 1-10
Library and laboratory investigation of an approved proposal for advanced research project. Conferences and periodic oral progress reports. Comprehensive report of entire project upon completion. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

MSE 8997 Seminar Cr. 0.5
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MSE 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

MSE 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MSE 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

MSE 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: MSE 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

MSE 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: MSE 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

MSE 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: MSE 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

MSE 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

MUA - Music Ensembles and General Courses

MUA 0804 Warrior Band Cr. 0
Warrior band performs for all home football games during fall term and basketball games during late fall and winter terms. Performances for University special events may be scheduled. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

MUA 0900 General Lectures and Concerts Cr. 0
Lectures by visiting scholars; recitals by invited guest artists; student and faculty recitals, concerts and convocations. Offered Fall, Winter.

MUA 1700 Guitar Class Cr. 2
Fundamentals in guitar playing; techniques, hand positions, bar chords, general performance practices. Offered Fall, Winter.
Fees: $75
Repeatable for 8 Credits

MUA 1710 Piano Class Cr. 2
Rudiments of rhythmic and staff notation, beginning keyboard technique, hand positions, scales, simple compositions. Offered Fall, Winter.
Fees: $75
Repeatable for 8 Credits

MUA 1720 Voice Techniques and Pedagogy Cr. 2
Fundamentals in voice training and pedagogy for music majors. Offered Fall.
Prerequisite: MUT 1140 with a minimum grade of C and MUT 1150 with a minimum grade of C
Repeatable for 8 Credits

MUA 1730 String Techniques and Pedagogy Cr. 2
Techniques and fundamental problems in the playing and teaching of stringed instruments. Offered Fall, Winter.
Prerequisites: MUT 1140 with a minimum grade of D- or MUT 1100 with a minimum grade of D-
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Fees: $75
Repeatable for 6 Credits

MUA 1740 Woodwind Techniques and Pedagogy Cr. 2
Techniques and fundamental problems in the playing and teaching of woodwind instruments. Offered Fall, Winter.
Prerequisites: MUT 1140 with a minimum grade of D- or MUT 1100 with a minimum grade of D-
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Fees: $75
Repeatable for 6 Credits

MUA 1750 Brasswind Techniques and Pedagogy Cr. 2
Techniques and fundamental problems in the playing and teaching of brasswind instruments. Offered Fall.
Prerequisites: MUT 1140 with a minimum grade of D- or MUT 1100 with a minimum grade of D-
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Fees: $75
Repeatable for 6 Credits

MUA 1760 Percussion Techniques and Pedagogy Cr. 2
Techniques and fundamental problems in the playing and teaching of percussion instruments. Offered Fall.
Prerequisites: MUT 1140 with a minimum grade of D- or MUT 1100 with a minimum grade of D-
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Fees: $75

MUA 1795 Piano Skills I Cr. 2
Repertoire, scales, sight reading, harmonization, and simple transpositions. Offered Every Term.
Prerequisites: MUA 1710 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors; enrollment limited to students in the BA in Fine Arts or Bachelor of Music programs.
Fees: $75

MUA 2400 Survey of the Music Business and Labor Cr. 3
Satisfies General Education Requirement: Social Inquiry
Overview of music business, intellectual property basics, and music business careers. Survey of the economic structure and social institutions of the music industry. Examination of problems in cultural careers. Offered Winter.
Equivalent: ELR 2400

MUA 2500 Music Technology Cr. 3
Introductory class on music technology. Learn to record, edit, and export music using a computer. Learn the basics of audio hardware setup for music, multimedia, and classes. Offered Every Term.
Fees: $75

MUA 2510 Studio Recording Techniques Cr. 2
Learn techniques of multi-track recording. Students will learn how to observe and understand equipment in a professional recording studio. Offered Fall.
Prerequisite: MUA 2500 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Fees: $75

MUA 2530 Electronic Music Synthesis Cr. 3
Learn to create sounds by manipulating electronic signals. Topics include fundamentals of synthesizers, theories of digital signal processing, and principle of sound design. Offered Fall.
Prerequisite: MUA 2500 with a minimum grade of C
Fees: $75

MUA 2720 Voice Class Cr. 2
Fundamentals in voice training. Correct breathing: tone placement: articulation vocalises. Offered Fall, Winter.
Repeatable for 8 Credits

MUA 2795 Piano Skills II Cr. 2
Continuation of MUA 1795; development of basic piano skills to a higher level. Offered Winter, Spring/Summer.
Prerequisite: MUA 1795 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music; enrollment limited to students in the BA in Fine Arts or Bachelor of Music programs.
Fees: $75

MUA 2800 University Bands Cr. 1
. Offered Fall, Winter.
Fees: $30
Repeatable for 99 Credits

MUA 2802 Chamber Winds Cr. 1
Offered Fall, Winter.
Fees: $25
Repeatable for 10 Credits

MUA 2804 Warrior Band Cr. 1
Warrior band performs for all home football games during fall term and basketball games during late fall and winter terms. Performances for University special events may be scheduled. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $30
Repeatable for 8 Credits

MUA 2806 Campus Band Cr. 0
Co-curricular concert band open to all University students. Campus Band performs one formal concert during winter term. Performances for University special events may be scheduled. Offered Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $30

MUA 2810 University Symphony Orchestra Cr. 1
Offered Fall, Winter.
Fees: $30
Repeatable for 99 Credits

MUA 2820 Jazz Big Band Cr. 1
Offered Fall, Winter.
Fees: $30
Repeatable for 99 Credits

MUA 2822 Jazz Guitar Ensemble Cr. 1
Large ensemble for jazz guitar majors/principals. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Fees: $30
Repeatable for 99 Credits

MUA 2824 Jazztet Cr. 1
Select ensemble for jazz majors. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Fees: $25
Repeatable for 10 Credits

MUA 2826 Jazz Combos Cr. 1
Small ensemble for jazz majors. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Fees: $25
Repeatable for 10 Credits

MUA 2830 Men's Glee Club Cr. 1
Music majors must enroll for one credit to satisfy degree requirements. Offered Fall, Winter.
Fees: $20
Repeatable for 99 Credits

MUA 2840 Choral Union Cr. 1
Offered Fall, Winter.
Fees: $30
Repeatable for 99 Credits

MUA 2850 Concert Chorale Cr. 1
Offered Fall, Winter.
Fees: $30
Repeatable for 99 Credits

MUA 2860 Opera Workshop Cr. 1
Offered Fall, Winter.
Fees: $30
Repeatable for 10 Credits

MUA 2870 Women's Chorale Cr. 1
Offered Fall, Winter.
Fees: $25
Repeatable for 99 Credits

MUA 2880 Chamber Music and Special Ensembles Cr. 1
All forms including: flute ensemble, percussion ensemble, string trios and quartets, small wind or brass ensembles, and mixed ensembles. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music.
Fees: $25
Repeatable for 10 Credits

MUA 2891 Electronic Music Ensemble Cr. 1
Learn to play electronic instruments in an ensemble. Current and vintage electronic instruments as well as approved traditional instruments are being used to perform contemporary electronic music repertoire. Offered Fall, Winter.
Prerequisite: MUA 2500 with a minimum grade of C or MUA 2530 with a minimum grade of C
Fees: $75
Repeatable for 2 Credits

MUA 3500 Music IP and Stakeholders Cr. 3
Exploration of intellectual property and music law, including copyright, contracts, music licensing, and negotiation. In-depth examination of relationships between stakeholder entities. Offered Fall.

MUA 3510 Mixing and Mastering Cr. 2
Students will learn project management skills through proper session documentation and billing. Topics include surround sound mixing, live sound, and large ensemble production techniques. Offered Winter.
Prerequisite: MUA 2510 with a minimum grade of C
Fees: $75

MUA 3530 Advanced Music Synthesis Cr. 3
Covers the basics of audio programming using text-based audio applications. Students will learn to create their own plugins and software synthesizers. Offered Winter.
Prerequisite: MUA 2530 with a minimum grade of C
Fees: $75

MUA 3550 Advanced Studio Techniques Cr. 2
Examines project management skills through proper session documentation and billing. Topics include surround sound mixing, live sound, and large ensemble production techniques. Offered Fall.
Prerequisite: MUA 3510 with a minimum grade of C
Fees: $75

MUA 3670 Conducting Techniques I Cr. 2
Rudiments of conducting; special attention to baton techniques. Offered Fall.
Prerequisite: MUT 2160 with a minimum grade of C and MUT 2170 with a minimum grade of C

MUA 3680 Conducting Techniques II Cr. 2
Continuation of MUA 3670. Score reading and rehearsal techniques. Offered Winter.
Prerequisite: MUA 3670 with a minimum grade of C

MUA 3795 Advanced Piano Skills Cr. 2
Continuation of MUA 2795; emphasis on jazz skills and styles. Offered Fall.
Prerequisite: MUA 2795 with a minimum grade of C
Restriction(s): Enrollment limited to students in the Bachelor of Music program.
Fees: $75

MUA 3800 Collaborative Piano Cr. 2
The study and practical application of accompaniment techniques on the piano. Topics include vocal and instrumental repertoire (17th–21st centuries), chord chart and lead sheet reading, music theatre and opera playing, open score reading and reduction, choral rehearsal techniques and ensemble playing, collaboration and coaching skills, and hymn playing and historical keyboards (including guest organist session). Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.

MUA 3990 Directed Study Cr. 1-3
Individualized research and work in a particular aspect of music under the supervision of a faculty member. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major, minor, or concentration in Music or Music Honors.
Repeatable for 6 Credits

MUA 4000 Marketing and Artist Management in Music Cr. 3
Artist management theory and practice. The application of product, sales, and brand marketing to the artists, stakeholders and products created in the for and non-profit music industry. Offered Every Other Winter.
Prerequisite: MUA 3500 with a minimum grade of C

MUA 4010 Audio Electronics Cr. 3
Examines practical electronics for music production and electronic music composition. Topics include basic electronics, building and repairing audio equipments, and building analog and digital signal processors and synthesizers. Offered Fall.
Prerequisites: (MAT 1070 with a minimum grade of C and MUA 3510 with a minimum grade of C) or MUA 3530 with a minimum grade of C

MUA 4020 Theories of Electronic Music Cr. 3
Covers advanced digital theories of electronic music synthesis and production. Topics include digital signal processing, advanced audio programming, interactive audio, and audio synthesis. Offered Fall.
Prerequisite: MUA 3510 with a minimum grade of C or MUA 3530 with a minimum grade of C

MUA 4030 Sound Design for Visual Media Cr. 3
Covers sound design and audio treatment for visual media. Topics include research and creation of sound for film, web, sound libraries, instructional technology, sound installations, and non-linear sound design (video games). Offered Winter.
Prerequisite: MUA 3510 with a minimum grade of C or MUA 3530 with a minimum grade of C

MUA 4040 Electroacoustic Music Cr. 3
Introduces techniques, aesthetics, and composition of electroacoustic music. Topics include analytical techniques for electronic music, creative usage of audio hardware and software, and advanced electroacoustic music performance. Offered Fall.
Prerequisite: MUA 3510 with a minimum grade of C or MUA 3530 with a minimum grade of C

MUA 4500 Music Entrepreneurship and Leadership Cr. 3
Exploration of entrepreneurship, the practice of entrepreneurial skills, arts leadership elements and skills, and basic organizational design in the context of the music industry. Offered Every Other Fall.
Prerequisite: MUA 3500 with a minimum grade of C

MUA 4620 Music Business Internship Cr. 2
Directly supervised professional experience in the music and creative arts industries and related fields (marketing, management, publicity, public relations, and live performance). Offered Every Term.
Prerequisite: MUA 2400 with a minimum grade of C
Restriction(s): Enrollment limited to students in the Bachelor of Music program.
Repeatable for 4 Credits

MUA 4650 Directed Study: Internships Cr. 1-3
Directly supervised professional experience in the music and creative arts industries and related fields (marketing, music technology, recording, publicity, public relations). Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment limited to students in the Bachelor of Music program.
Repeatable for 6 Credits

MUA 4950 Music Technology Senior Project Cr. 1
Students will create a large-scale, long-term project that demonstrates the skills learned in the music technology classes. Offered Winter.
Prerequisite: MUA 4650 (may be taken concurrently) with a minimum grade of C

MUA 4990 BA Project Cr. 2
Directed study leading to completion of the B.A. project in music. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major, minor, or concentration in Music or Music Honors; enrollment limited to students in a Bachelor of Arts degree.
Equivalent: MUH 4990, MUT 4990

MUA 5690 Stage Band Direction Cr. 1
Techniques of big-band direction in a jazz medium. Offered for undergraduate credit only. Offered Fall, Winter.
Prerequisite: MUA 3670 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 3 Credits

MUA 5800 Strategy and Organization in Music Cr. 3
Strategic management, organizational behavior, and organizational structures in the for and non-profit music industry with a term-long consulting project for an external client. Offered Every Other Fall.
Prerequisite: MUA 3500 with a minimum grade of C
Fees: $50

MUA 5900 Music Industry Seminar Cr. 1
Real-world experience running and operating a record label by sourcing recorded music products to release. Practice in legal, business, and industry norms. Significant out-of-classroom work is expected. Offered Fall, Winter.
Prerequisite: MUA 3500 with a minimum grade of C and MUA 4000 with a minimum grade of C
Repeatable for 4 Credits

MUA 5950 Special Topics in Music Industry & Technology Cr. 3
Interdisciplinary seminar exploring a broad range of topics within music technology and/or the music industry. Topical focus varies. Student may repeat course when topic changes. Offered for undergraduate and graduate credit. Offered every other winter term. Offered Every Other Winter.
Repeatable for 12 Credits

MUA 6500 Music IP and Stakeholders Cr. 3
Exploration of intellectual property and music law, including copyright, contracts, music licensing, and negotiation. In-depth examination of relationships between stakeholder entities. Offered Fall.

MUA 6510 Mixing and Mastering Cr. 3
Students will learn project management skills through proper session documentation and billing. Topics include surround sound mixing, live sound, and large ensemble production techniques. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MUA 6530 Advanced Music Synthesis Cr. 3
Covers the basics of audio programming using text-based audio applications. Students will learn to create their own plugins and software synthesizers. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

MUA 6540 Advanced Studio Techniques Cr. 2
Examines project management skills through proper session documentation and billing. Topics include surround sound mixing, live sound, and large ensemble production techniques. Offered Fall.
Prerequisite: MUA 6510 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUA 6550 Marketing and Artist Management in Music Cr. 3
Artist management theory and practice. The application of product, sales, and brand marketing to the artists, stakeholders and products created in the for and non-profit music industry. Offered Winter.
Prerequisite: MUA 6500 with a minimum grade of C

MUA 6570 Music Entrepreneurship and Leadership Cr. 3
Exploration of entrepreneurship, the practice of entrepreneurial skills, arts leadership elements and skills, and basic organizational design in the context of the music industry. Offered Winter.
Prerequisite: MUA 6500 with a minimum grade of C

MUA 6800 Music Internship Cr. 1-3
The music internship is designed to provide educational experiences to music students beyond those offered in the classroom. During the internship, students develop professional skills and knowledge in music business, technology, or other areas of musical practice. Students are placed in a studio, business, or other institution in the metro-Detroit area and supervised by local personnel, who provide regular reports on the student's performance to the faculty of record. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

MUA 7010 Audio Electronics Cr. 3
Examines practical electronics for music production and electronic music composition. Topics include basic electronics, building and repairing audio equipment, and building analog and digital signal processors and synthesizers. Offered Fall.
Prerequisite: MUA 6510 with a minimum grade of B or MUA 6530 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUA 7020 Theories of Electronic Music Cr. 3
Covers advanced digital theories of electronic music synthesis and production. Topics include digital signal processing, advanced audio programming, interactive audio, and audio synthesis. Offered Fall.
Prerequisite: MUA 6510 with a minimum grade of B or MUA 6530 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUA 7030 Sound Design for Visual Media Cr. 3
Covers sound design and audio treatment for visual media. Topics include research and creation of sound for film, web, sound libraries, instructional technology, sound installations, and non-linear sound design (video games). Offered Winter.
Prerequisite: MUA 6510 with a minimum grade of B or MUA 6530 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUA 7040 Electroacoustic Music Cr. 3
Introduces techniques, aesthetics, and composition of electroacoustic music. Topics include analytical techniques for electronic music, creative usage of audio hardware and software, and advanced electroacoustic music performance. Offered Fall.
Prerequisite: MUA 6510 with a minimum grade of B or MUA 6530 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUA 7080 Strategy and Organization in Music Cr. 3
Strategic management, organizational behavior, and organizational structures in the for and non-profit music industry with a term-long consulting project for an external client. Offered Fall.
Prerequisite: MUA 6500 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

MUA 7730 Advanced Diction Cr. 3
In-depth study of diction for singers. Offered Intermittently.
Prerequisite: MUH 5370 with a minimum grade of C and MUH 5380 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

MUA 7800 University Bands Cr. 1
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $30
Repeatable for 3 Credits

MUA 7802 Chamber Winds Cr. 1
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

MUA 7810 University Symphony Orchestra Cr. 1
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $30
Repeatable for 3 Credits

MUA 7820 Jazz Big Band Cr. 1
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $30
Repeatable for 3 Credits

MUA 7822 Jazz Guitar Ensemble Cr. 1
Large ensemble for jazz guitar majors/principals. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $30
Repeatable for 2 Credits

MUA 7824 Jazztet Cr. 1
Select ensemble for jazz majors. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $25
Repeatable for 2 Credits

MUA 7826 Jazz Combos Cr. 1
Small ensemble for jazz majors. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $25
Repeatable for 2 Credits

MUA 7840 Choral Union Cr. 1
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $30
Repeatable for 3 Credits

MUA 7850 Concert Chorale Cr. 1
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $30
Repeatable for 3 Credits

MUA 7860 Opera Workshop Cr. 1
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $30
Repeatable for 4 Credits

MUA 7870 Women's Chorale Cr. 1
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25
Repeatable for 4 Credits

MUA 7880 Chamber Music and Special Ensembles Cr. 1
All forms including piano and string trios and quartets, and small wind groups. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25
Repeatable for 3 Credits

MUA 7891 Electronic Music Ensemble Cr. 1
Learn to play electronic instruments in an ensemble. Current and vintage electronic instruments as well as approved traditional instruments are being used to perform contemporary electronic music repertoire. Offered Fall, Winter.
Prerequisite: MUA 6510 with a minimum grade of B or MUA 6530 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

MUA 7999 Master's Essay Direction Cr. 2
The master's essay is an individualized course through which graduate students explore a topic in music business or music technology more deeply than through the regular curriculum and, through scholarly research and/or creative activity, produce an original essay that assesses or contributes to the field. Offered Yearly.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

MUA 8999 Master's Thesis Direction Cr. 1-8
The master's thesis is an individualized course through which graduate students explore a topic in music business or music technology more deeply than through the regular curriculum and, through scholarly research and/or creative activity, produce an original work that contributes to the field. Offered Every Term.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

MUH - Music History

MUH 1340 Music Appreciation: World Music Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Introduction to the musical styles of Africa, Asia, South America, and the Middle East. Offered Every Term.

MUH 1345 Music Cultures Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Indigenous musics and cultures of Asia, Africa and the Americas; emphasis on features of the musics that have influenced Western art musics. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors; enrollment limited to students in the BA in Fine Arts or Bachelor of Music programs.

MUH 1350 History of American Popular Music Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
History of American popular music from the early nineteenth century to the present. Political, economic, social, and cultural influences on music. Offered Winter.

MUH 1351 History and Styles of Rock and Roll Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Exploration of American ""mainstream"" and ""subcultural"" popular music; focus on art, technology, business, cultural contexts. Offered Yearly.

MUH 1360 Women, Music, and Culture: Global, National & Regional Narratives Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
This course explores the importance of narrative perspective, documentation, and publication in shaping cultural beliefs regarding women's musical roles historically and culturally, ultimately reflecting the inherent challenges women have faced in "musical" arenas of diversity, equity, struggles of feminism and musical inclusivity. Offered Every Term.

MUH 1370 Music Appreciation: Beginnings to the Present Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Survey of Western music from its beginnings to the present. Developing musical understanding and critical listening skills by focusing on major composers and styles, and by concentrating on social, political and cultural influences. Offered Every Term.

MUH 2210 African American Music History: A Detroit Perspective Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
A chronological survey of the various genres of music created by African Americans in the United States and a discussion of the contributions of Black Detroit musicians to this history. Offered Intermittently.

MUH 3310 Music History Survey I Cr. 3
A broad survey of the music of the Western classical tradition from antiquity through the early Romantic period. Concentration on major composers and styles, as well as on significant historical, philosophical, artistic, and cultural influences. Offered Fall.
Prerequisite: MUT 1160 with a minimum grade of C and MUH 1345 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors; enrollment limited to students in a Bachelor of Arts or Bachelor of Music degrees.

MUH 3320 Music History Survey II Cr. 3
Survey of important developments in western music history from around 1800 to the present. Concentration on major composers and styles, as well as on significant historical, philosophical, artistic, and cultural influences, such as competing conceptions of music, the changing role of composers in society, music in relation to the other arts, challenges faced by female musicians, controversies surrounding music and language, music and drama, and music and identity. Offered Winter.
Prerequisite: MUT 1160 with a minimum grade of C and MUH 1345 with a minimum grade of C

MUH 3330 Music History Topics Cr. 3
Culminating course in music history, with rotating topics each semester. Concentration on major composers, genres and styles, techniques, approaches, etc. Topics may include the history of opera, symphony, song, etc.; opera, symphony, song, etc. in today's culture and society; the sacred and the secular, historical approaches to music technology; film and video game music; popular music; globalization, exchange, and appropriation of music; and music and identity. Other topics are also possible. Contact the department for information about the topic for a specific semester. Offered Fall.
Prerequisite: MUT 1160 with a minimum grade of C and MUH 1345 with a minimum grade of C

MUH 3360 Jazz History Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Survey of major developments in jazz from its beginnings to the present. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors; enrollment is limited to Undergraduate level students.

MUH 3380 American Music Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
A survey of American music in its many forms. Social, cultural, and philosophical issues are considered alongside the music and its relationship to other arts. Offered Intermittently.

MUH 3990 Directed Study Cr. 1-3
Individualized research and work in music history or literature under the supervision of a faculty member. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major, minor, or concentration in Music or Music Honors.
Repeatable for 6 Credits

MUH 4990 BA Project Cr. 2
Directed study leading to completion of the B.A. project in music. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Music or Music Honors; enrollment limited to students in a Bachelor of Arts degree.
Equivalent: MUA 4990, MUT 4990

MUH 5300 Music Research Cr. 3
Music bibliography and research techniques. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.

MUH 5315 Special Topics in Music History Cr. 3
In-depth study of such topics as the historical development of opera and oratorio, symphonic or chamber music styles, or specialized study of individual composers. Course may be repeated when topics change. Offered for undergraduate credit only. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

MUH 5340 Survey of World Music Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Musical expressions of five or six non-European cultures en route to a better understanding of the peoples themselves. Attention given to biases, culturally-determined learning patterns, and aesthetics. No credit for graduate degrees in music. Offered Fall, Winter.

MUH 5350 Instrumental Pedagogy Cr. 3
This course is designed to create a greater personal awareness and understanding of one's own technique and musicianship. Students will learn how to optimize their ability to self-analyze, self-assess, and think pedagogically. Through a deeper understanding of all the varied aspects of the musical performance and self-reflection, students will learn to enhance their own performances, becoming an accomplished performer and teacher in the profession. Further, the course is designed to strengthen students' performances through classroom demonstrations, but also include a variety of ancillary topics, including, but not limited to interpretation, performance anxiety, collaboration, stage presence, student-teacher dynamics and related health issues. Offered Yearly.
Prerequisite: MUT 2140 with a minimum grade of C and MUT 2150 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Music or Music Honors.

MUH 5355 Vocal Pedagogy & History Cr. 3
This course is designed for students to improve their understanding of vocal pedagogy. Topics include vocal anatomy and function, historical and contemporary approaches to the voice and vocal pedagogy, the "three Rs" (respiration, resonance, and registration), voice categories and the Fach system, vocal exercises for the studio and practice room, and the development of the singing career from the beginning of opera to the present day. Offered Yearly.
Prerequisite: MUT 2140 with a minimum grade of C and MUT 2150 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

MUH 5358 Piano Pedagogy Cr. 3
This course introduces the principles and practices of piano teaching for beginning through intermediate levels, from young students to adult learners. Students will explore historical and contemporary teaching philosophies, materials, and methods, while developing practical teaching skills through observation, teaching demonstration, and studio planning. Offered Yearly.
Prerequisite: MUT 2140 with a minimum grade of C and MUT 2150 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

MUH 5360 Jazz History Cr. 3
Survey of major developments in jazz from its beginnings to the present. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUH 5370 Diction and Vocal Literature I Cr. 3
Singers' diction in Italian, Latin, French and Spanish; methodologies, solo and chamber repertoire in these languages. No credit for M.Mus. degree in vocal performance. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Music, Music Honors, Theatre or Theatre Honors.

MUH 5380 Diction and Vocal Literature II Cr. 3
Singers' diction in German, Hebrew, Russian and English; methodologies, solo and chamber repertoire in these languages. No credit for M.Mus. degree in vocal performance. Offered Every Other Year.
Prerequisite: MUH 5370 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music, Music Honors, Theatre or Theatre Honors.

MUH 5993 Writing Intensive Course in Music Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for majors. Offered Fall, Winter.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

MUH 6315 Seminar in Music History Cr. 3
Interdisciplinary seminar, open to non-music majors, examining diverse themes and critical methods in music history and literature. Research projects. Specific focus changes regularly, see Department of Music. No credit for graduate degrees in music. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 15 Credits

MUH 7315 Seminar in Music History Cr. 3
Interdisciplinary seminar for graduate-level music majors examining diverse themes and critical methods in music history and literature. Research projects. Specific focus changes regularly, see Department of Music. Offered Fall, Winter.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Repeatable for 15 Credits

MUH 7320 Studies in Renaissance Music Cr. 3
Fifteenth and sixteenth centuries, from Burgundian School through Palestrina. Special reports; research projects. Offered Every Other Year.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

MUH 7330 Studies in Baroque Music Cr. 3
From Monteverdi to 1750. Special reports; research projects. Offered Every Other Year.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

MUH 7340 Studies in Classical Music Cr. 3
From 1750 to 1825. Special reports; research projects. Offered Every Other Year.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

MUH 7350 Studies in Romantic Music Cr. 3
Nineteenth century. Special reports and research projects. Offered Every Other Year.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

MUH 7360 Studies in Twentieth Century Music Cr. 3
Special reports and research projects. Offered Every Other Year.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

MUH 7370 Studies in Advanced Literature for Conductors Cr. 3
Literature for various instrumental and choral ensembles from the Renaissance to the present; emphasis on stylistic characteristics, rehearsal techniques, and authenticity of performance. Offered Yearly.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment limited to students in the Master of Music program; enrollment is limited to Graduate level students.

MUH 7380 Studies in American Music Cr. 3
An extensive study of American music in its many forms. Social, cultural, and philosophical issues are considered alongside the music and its relationship to other arts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

MUH 7390 Studies in Jazz History Cr. 3
Continuation of MUH 5360. Offered Yearly.
Prerequisite: MUH 5360 with a minimum grade of C and MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

MUH 7991 Directed Study in Music History Cr. 1-3
Research investigations in historical musicology. Offered Every Term.
Prerequisite: MUH 5300 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

MUH 8999 Master's Thesis Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

MUP - Music Private Instruction

MUP 1201 Organ Lessons - Lower Division Cr. 1
Private instruction in organ. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1205 Organ Elective Lessons - Lower Division Cr. 1
Private instruction in organ for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1211 Piano Lessons - Lower Division Cr. 1
Private instruction in piano. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1215 Piano Elective Lessons - Lower Division Cr. 1
Private instruction in piano for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1221 Voice Lessons - Lower Division Cr. 1
Private instruction in voice. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1225 Voice Elective Lessons - Lower Division Cr. 1
Private instruction for students who major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1231 Strings Lessons - Lower Division Cr. 1
Private instruction in strings. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1235 Strings Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1241 Woodwinds Lessons - Lower Division Cr. 1
Private instruction in woodwinds. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1245 Woodwinds Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1251 Brasswinds Lessons - Lower Division Cr. 1
Private instruction in brasswinds. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1255 Brasswinds Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1261 Percussion Lessons - Lower Division Cr. 1
Private instruction in percussion. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1265 Percussion Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1271 Harp Lessons - Lower Division Cr. 1
Private instruction in harp. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1275 Harp Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1281 Classical Guitar Lessons - Lower Division Cr. 1
Private instruction in classical guitar. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1285 Classical Guitar Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1311 Jazz Piano Lessons - Lower Division Cr. 1
Private instruction in jazz piano. Offered Fall, Winter.
Repeatable for 4 Credits

MUP 1315 Jazz Piano Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Repeatable for 4 Credits

MUP 1321 Jazz Voice Lessons - Lower Division Cr. 1
Private instruction in jazz voice. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1325 Jazz Voice Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1331 Jazz Strings Lessons - Lower Division Cr. 1
Private instruction in jazz strings. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1335 Jazz Strings Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1341 Jazz Woodwinds Lessons - Lower Division Cr. 1
Private instruction in jazz woodwinds. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1345 Jazz Woodwinds Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1351 Jazz Brasswinds Lessons - Lower Division Cr. 1
Private instruction in jazz brasswinds. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1355 Jazz Brasswinds Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1361 Jazz Percussion Lessons - Lower Division Cr. 1
Private instruction in jazz percussion. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 1365 Jazz Percussion Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 1381 Jazz Guitar Lessons - Lower Division Cr. 1
Private instruction in jazz guitar. Offered Fall, Winter.
Repeatable for 4 Credits

MUP 1385 Jazz Guitar Elective Lessons - Lower Division Cr. 1
Private instruction for students whose major is not music. Offered Fall, Winter.
Repeatable for 4 Credits

MUP 2201 Organ Major Lessons - Lower Division Cr. 3
Private instruction in organ for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2211 Piano Major Lessons - Lower Division Cr. 3
Private instruction in piano for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2221 Voice Major Lessons - Lower Division Cr. 3
Private instruction in voice for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2231 Strings Major Lessons - Lower Division Cr. 3
Private instruction in strings for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2241 Woodwinds Major Lessons - Lower Division Cr. 3
Private instruction in woodwinds for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2251 Brasswinds Major Lessons - Lower Division Cr. 3
Private instruction in brasswinds for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2261 Percussion Major Lessons - Lower Division Cr. 3
Private instruction in percussion for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2271 Harp Major Lessons - Lower Division Cr. 3
Private instruction in harp for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2281 Classical Guitar Major Lessons - Lower Division Cr. 3
Private instruction in classical guitar for students in music performance. Offered Fall, Winter.
Fees: $600
Repeatable for 12 Credits

MUP 2311 Jazz Piano Major Lessons - Lower Division Cr. 3
Private instruction in jazz piano for students in music performance. Offered Fall, Winter.
Repeatable for 12 Credits

MUP 2321 Jazz Voice Major Lessons - Lower Division Cr. 3
Private instruction in jazz voice for students in music performance. Offered Fall, Winter.
Repeatable for 12 Credits

MUP 2331 Jazz Strings Major Lessons - Lower Division Cr. 3
Private instruction in jazz strings for students in music performance. Offered Fall, Winter.
Repeatable for 12 Credits

MUP 2341 Jazz Woodwinds Major Lessons - Lower Division Cr. 3
Private instruction in jazz woodwinds for students in music performance. Offered Fall, Winter.
Repeatable for 12 Credits

MUP 2351 Jazz Brasswinds Major Lessons - Lower Division Cr. 3
Private instruction in jazz brasswinds for students in music performance. Offered Fall, Winter.
Repeatable for 12 Credits

MUP 2361 Jazz Percussion Major Lessons - Lower Division Cr. 3
Private instruction in jazz percussion for students in music performance. Offered Fall, Winter.
Repeatable for 12 Credits

MUP 2381 Jazz Guitar Major Lessons - Lower Division Cr. 3
Private instruction in jazz guitar for students in music performance. Offered Fall, Winter.
Repeatable for 12 Credits

MUP 3201 Organ Lessons - Upper Division Cr. 1
Private instruction in organ. Offered Fall, Winter.
Prerequisites: MUP 1201 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3205 Organ Elective Lessons - Upper Division Cr. 1
Private instruction in organ for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1205 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3211 Piano Lessons - Upper Division Cr. 1
Private instruction in piano. Offered Fall, Winter.
Fees: $500
Repeatable for 4 Credits

MUP 3215 Piano Elective Lessons - Upper Division Cr. 1
Private instruction in piano for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 3221 Voice Lessons - Upper Division Cr. 1
Private instruction in voice. Offered Fall, Winter.
Prerequisites: MUP 1221 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3225 Voice Elective Lessons - Upper Division Cr. 1
Private instruction in voice for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1235 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3231 Strings Lessons - Upper Division Cr. 1
Private instruction in strings. Offered Fall, Winter.
Prerequisite: MUP 1234 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3235 Strings Elective Lessons - Upper Division Cr. 1
Private instruction in strings for students whose major is not music. Offered Fall, Winter.
Fees: $300
Repeatable for 4 Credits

MUP 3241 Woodwinds Lessons - Upper Division Cr. 1
Private instruction in woodwinds. Offered Fall, Winter.
Prerequisites: MUP 1241 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3245 Woodwinds Elective Lessons - Upper Division Cr. 1
Private instruction in woodwinds for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1245 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3251 Brasswinds Lessons - Upper Division Cr. 1
Private instruction in brasswinds. Offered Fall, Winter.
Prerequisites: MUP 1251 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3255 Brasswinds Elective Lessons - Upper Division Cr. 1
Private instruction in brasswinds for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1255 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3261 Percussion Lessons - Upper Division Cr. 1
Private instruction in percussion. Offered Fall, Winter.
Prerequisites: MUP 1261 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3265 Percussion Elective Lessons - Upper Division Cr. 1
Private instruction in percussion for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1265 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3271 Harp Lessons - Upper Division Cr. 1
Private instruction in harp. Offered Fall, Winter.
Prerequisites: MUP 1271 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3275 Harp Elective Lessons - Upper Division Cr. 1
Private instruction in harp for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1275 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3281 Classical Guitar Lessons - Upper Division Cr. 1
Private instruction in classical guitar. Offered Fall, Winter.
Prerequisites: MUP 1281 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3285 Classical Guitar Elective Lessons - Upper Division Cr. 1
Private instruction in classical guitar for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1285 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3311 Jazz Piano Lessons - Upper Division Cr. 1
Private instruction in jazz piano. Offered Fall, Winter.
Prerequisites: MUP 1311 with a minimum grade of C
Repeatable for 4 Credits

MUP 3315 Jazz Piano Elective Lessons - Upper Division Cr. 1
Private instruction in jazz piano for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1315 with a minimum grade of C
Repeatable for 4 Credits

MUP 3321 Jazz Voice Lessons - Upper Division Cr. 1
Private instruction in jazz voice. Offered Fall, Winter.
Prerequisites: MUP 1321 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3325 Jazz Voice Elective Lessons - Upper Division Cr. 1
Private instruction in jazz voice for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1325 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3331 Jazz Strings Lessons - Upper Division Cr. 1
Private instruction in jazz strings. Offered Fall, Winter.
Prerequisites: MUP 1331 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3335 Jazz Strings Elective Lessons - Upper Division Cr. 1
Private instruction in jazz strings for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1335 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3341 Jazz Woodwinds Lessons - Upper Division Cr. 1
Private instruction in jazz woodwinds. Offered Fall, Winter.
Prerequisites: MUP 1341 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3345 Jazz Woodwinds Elective Lessons - Upper Division Cr. 1
Private instruction in jazz woodwinds for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1345 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3351 Jazz Brasswinds Lessons - Upper Division Cr. 1
Private instruction in jazz brasswinds. Offered Fall, Winter.
Prerequisites: MUP 1351 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3355 Jazz Brasswinds Elective Lessons - Upper Division Cr. 1
Private instruction in jazz brasswinds for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1355 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3361 Jazz Percussion Lessons - Upper Division Cr. 1
Private instruction in jazz percussion. Offered Fall, Winter.
Prerequisites: MUP 1361 with a minimum grade of C
Fees: $500
Repeatable for 4 Credits

MUP 3365 Jazz Percussion Elective Lessons - Upper Division Cr. 1
Private instruction in jazz percussion for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 3365 with a minimum grade of C
Fees: $300
Repeatable for 4 Credits

MUP 3381 Jazz Guitar Lessons - Upper Division Cr. 1
Private instruction in jazz guitar. Offered Fall, Winter.
Prerequisites: MUP 1381 with a minimum grade of C
Repeatable for 4 Credits

MUP 3385 Jazz Guitar Elective Lessons - Upper Division Cr. 1
Private instruction in jazz guitar for students whose major is not music. Offered Fall, Winter.
Prerequisites: MUP 1385 with a minimum grade of C
Repeatable for 4 Credits

MUP 4201 Organ Major Lessons - Upper Division Cr. 3
Private instruction in organ for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2201 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4211 Piano Major Lessons - Upper Division Cr. 3
Private instruction in piano for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2211 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4221 Voice Major Lessons - Upper Division Cr. 3
Private instruction in voice for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2221 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4231 Strings Major Lessons - Upper Division Cr. 3
Private instruction in strings for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2231 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4241 Woodwinds Major Lessons - Upper Division Cr. 3
Private instruction in woodwinds for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2241 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4251 Brasswinds Major Lessons - Upper Division Cr. 3
Private instruction in brasswinds for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2251 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4261 Percussion Major Lessons - Upper Division Cr. 3
Private instruction in percussion for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2261 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4271 Harp Major Lessons - Upper Division Cr. 3
Private instruction in harp for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2271 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4281 Classical Guitar Major Lessons - Upper Division Cr. 3
Private instruction in classical guitar for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 4281 with a minimum grade of C
Fees: $600
Repeatable for 12 Credits

MUP 4311 Jazz Piano Major Lessons - Upper Division Cr. 3
Private instruction in jazz piano for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2311 with a minimum grade of C
Repeatable for 12 Credits

MUP 4321 Jazz Voice Major Lessons - Upper Division Cr. 3
Private instruction in jazz voice for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2321 with a minimum grade of C
Repeatable for 12 Credits

MUP 4331 Jazz Strings Major Lessons - Upper Division Cr. 3
Private instruction in jazz strings for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2331 with a minimum grade of C
Repeatable for 12 Credits

MUP 4341 Jazz Woodwinds Major Lessons - Upper Division Cr. 3
Private instruction in jazz woodwinds for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2341 with a minimum grade of C
Repeatable for 12 Credits

MUP 4351 Jazz Brasswinds Major Lessons - Upper Division Cr. 3
Private instruction in jazz brasswinds for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2351 with a minimum grade of C
Repeatable for 12 Credits

MUP 4361 Jazz Percussion Major Lessons - Upper Division Cr. 3
Private instruction in jazz percussion for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2361 with a minimum grade of C
Repeatable for 12 Credits

MUP 4381 Jazz Guitar Major Lessons - Upper Division Cr. 3
Private instruction in jazz guitar for students in music performance. Offered Fall, Winter.
Prerequisites: MUP 2381 with a minimum grade of C
Repeatable for 12 Credits

MUP 4470 Junior Recital Cr. 0
Required recital for junior-year performance majors; minimum of 30 minutes of music. Registration must be completed before recital is scheduled; pre-recital approval jury is required. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the Bachelor of Music program; enrollment limited to students in the Fine, Performing & Comm. Arts.

MUP 4480 Senior Recital Cr. 0
Required recital for senior-year performance or jazz studies majors; minimum of 60 minutes of music. Registration must be completed before recital is scheduled; pre-recital approval jury is required. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the Bachelor of Music program; enrollment limited to students in the Fine, Performing & Comm. Arts.

MUP 6201 Organ Lessons - Graduate Cr. 1
Private instruction in organ. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6211 Piano Lessons - Graduate Cr. 1
Private instruction in piano. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6221 Voice Lessons - Graduate Cr. 1
Private instruction in voice. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6231 Strings Lessons - Graduate Cr. 1
Private instruction in strings. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6241 Woodwinds Lessons - Graduate Cr. 1
Private instruction in woodwinds. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6251 Brasswinds Lessons - Graduate Cr. 1
Private instruction in brasswinds. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6261 Percussion Lessons - Graduate Cr. 1
Private instruction in percussion. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6271 Harp Lessons - Graduate Cr. 1
Private instruction in harp. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6281 Classical Guitar Lessons - Graduate Cr. 1
Private instruction in classical guitar. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Undergraduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6291 Conducting Lessons - Graduate Cr. 1
Private instruction in conducting. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6311 Jazz Piano Lessons - Graduate Cr. 1
Private instruction in jazz piano. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

MUP 6321 Jazz Voice Lessons - Graduate Cr. 1
Private instruction in jazz voice. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6331 Jazz Strings Lessons - Graduate Cr. 1
Private instruction in jazz strings. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6341 Jazz Woodwinds Lessons - Graduate Cr. 1
Private instruction in jazz woodwinds. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $200
Repeatable for 4 Credits

MUP 6351 Jazz Brasswinds Lessons - Graduate Cr. 1
Private instruction in jazz brasswinds. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6361 Jazz Percussion Lessons - Graduate Cr. 1
Private instruction in jazz percussion. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $500
Repeatable for 4 Credits

MUP 6381 Jazz Guitar Lessons - Graduate Cr. 1
Private instruction in jazz guitar. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

MUP 7201 Organ Major Lessons - Graduate Cr. 3
Private instruction in organ for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7211 Piano Major Lessons - Graduate Cr. 3
Private instruction in piano for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7221 Voice Major Lessons - Graduate Cr. 3
Private instruction in voice for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7231 Strings Major Lessons - Graduate Cr. 3
Private instruction in strings for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7241 Woodwinds Major Lessons - Graduate Cr. 3
Private instruction in woodwinds for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7251 Brasswinds Major Lessons - Graduate Cr. 3
Private instruction in brasswinds for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7261 Percussion Major Lessons - Graduate Cr. 3
Private instruction in percussion for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7271 Harp Major Lessons - Graduate Cr. 3
Private instruction in harp for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7281 Classical Guitar Major Lessons - Graduate Cr. 3
Private instruction in classical guitar for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7291 Conducting Major Lessons - Graduate Cr. 3
Private instruction in conducting for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7311 Jazz Piano Major Lessons - Graduate Cr. 3
Private instruction in jazz piano for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MUP 7321 Jazz Voice Major Lessons - Graduate Cr. 3
Private instruction in jazz voice for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7331 Jazz Strings Major Lessons - Graduate Cr. 3
Private instruction in jazz strings for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7341 Jazz Woodwinds Major Lessons - Graduate Cr. 3
Private instruction in jazz woodwinds for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7351 Jazz Brasswinds Major Lessons - Graduate Cr. 3
Private instruction in jazz brasswinds for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7361 Jazz Percussion Major Lessons - Graduate Cr. 3
Private instruction in jazz percussion for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Fees: $600
Repeatable for 12 Credits

MUP 7381 Jazz Guitar Major Lessons - Graduate Cr. 3
Private instruction in jazz guitar for students in music performance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MUP 8290 Recital Cr. 1
Degree recital. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUT - Music Theory

MUT 1100 Introduction to Music Theory Cr. 3
Terminology and standard notation, including intervals, triads, scales, rhythm, correlated ear training, and general musicianship. No degree credit for music majors. Offered Every Term.

MUT 1140 Theory I Cr. 3
Prior knowledge of scales, clefs, and key signatures. Triads, intervals, principles of four-part writing, voice leading and melody harmonization, including all diatonic triads, dominant and super tonic seventh chords, inversions, and nonharmonic tones. Offered Fall, Winter.
Corequisite: MUT 1150
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.

MUT 1150 Ear Training I Cr. 1
An introduction to sight singing, solfeggio, and the basic materials of tonal music including intervals, chords, simple melodies, and basic harmonic progressions. Offered Fall, Winter.
Corequisite: MUT 1140
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.

MUT 1160 Theory II Cr. 3
Further study of diatonic harmony, including idiomatic chord functions and tonal sequences. Offered Winter, Spring/Summer.
Prerequisite: MUT 1140 with a minimum grade of C
Corequisite: MUT 1170

MUT 1170 Ear Training II Cr. 1
A continuation of MUT 1150. Sight-singing and dictation of more advanced diatonic materials. Offered Winter, Spring/Summer.
Prerequisite: MUT 1150 with a minimum grade of C
Corequisite: MUT 1160

MUT 1200 Beginning Composition I Cr. 2
Introduction to creative writing in twentieth and twenty-first century composition. Group composition projects and associated private lessons explore a broad range of contemporary styles and techniques. Topics include melodic studies, process, acoustics, polytonality, free atonality, serialism, timbre, postmodernism. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors. Enrollment is limited to students with a concentration in Composition; enrollment is limited to Undergraduate level students.

MUT 1210 Beginning Composition II Cr. 2
Introduction to creative writing in twentieth and twenty-first century composition. Group composition projects and associated private lessons explore a broad range of contemporary styles and techniques. Topics include rhythmic studies, notational exploration, indeterminacy, extended techniques, minimalism, pitch class sets, electronic music. Offered Winter.
Prerequisite: MUT 1200 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors. Enrollment is limited to students with a concentration in Composition.

MUT 2030 Keyboard Harmony I Cr. 1
First of a two-course sequence. Basic training in score reading, such as practice in various clefs and transpositions found in current instrumental writing. No credit after MUT 2040. Offered Every Other Year.
Prerequisite: MUA 2795 with a minimum grade of C and MUT 1160 with a minimum grade of C

MUT 2040 Keyboard Harmony II Cr. 1
Continuation of MUT 2030. Advanced harmonic progressions applied to the keyboard; figured bass; harmonization of soprano or bass; modulation; transposition, and score reading. Offered Every Other Year.
Prerequisites: MUT 2030 with a minimum grade of C

MUT 2120 Jazz Theory and Harmony Cr. 3
Harmonic, rhythmic and melodic concepts used in jazz including basic chord nomenclature, non-tertian sonorities and advanced improvisation. Offered Winter.
Prerequisite: MUT 1160 with a minimum grade of C

MUT 2140 Theory III Cr. 3
Study of chromatic harmony and voice leading; introduction to complete tonal structures. Offered Fall.
Prerequisite: MUT 1160 with a minimum grade of C
Corequisite: MUT 2150

MUT 2150 Ear Training III Cr. 1
Sight singing and dictation of chromatic materials; more advanced work with rhythm and meter. Offered Fall.
Prerequisite: MUT 1170 with a minimum grade of C
Corequisite: MUT 2140

MUT 2160 Theory IV Cr. 3
Twentieth- and twenty-first century music; impressionistic techniques. Mainstream compositional devices of melody, harmony and rhythm; serial music, electronic music, aleatoric music, contemporary notation. Offered Winter.
Prerequisite: MUT 2140 with a minimum grade of C
Corequisite: MUT 2170

MUT 2170 Ear Training IV Cr. 1
Sight singing and dictation of more advanced chromatic material; introduction to ear training with post-tonal music. Offered Winter.
Prerequisite: MUT 2150 with a minimum grade of C
Corequisite: MUT 2160

MUT 2175 Advanced Ear Training Cr. 1
Achieve fluency with the basic materials of tonal music. Develop the practical skills expected of every professional musician, such as proficiency in sight reading, instantaneous recognition of musical idioms, transcription, ability to communicate musical ideas with your voice, and improvement of your musical memory. Offered Winter.
Prerequisite: MUT 2150 with a minimum grade of C

MUT 2200 Beginning Composition III Cr. 2
Students continue to develop compositional skill and technique. Small groups and associated private lessons explore writing for specific instrument families and larger combinations than those explored in the first year. Offered Fall.
Prerequisite: MUT 1210 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors. Enrollment is limited to students with a concentration in Composition; enrollment is limited to Undergraduate level students.

MUT 2210 Beginning Composition IV Cr. 2
Continuation of MUT 2200. Offered Winter.
Prerequisite: MUT 2200 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors. Enrollment is limited to students with a concentration in Composition; enrollment is limited to Undergraduate level students.

MUT 2885 Jazz Improvisation I Cr. 1
Techniques of individual jazz improvisation. Offered Fall.
Prerequisite: MUT 1160 with a minimum grade of C and MUT 1170 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors.
Repeatable for 2 Credits

MUT 2887 Jazz Improvisation II Cr. 1
Continuation of MUT 2885; emphasis on individual jazz improvisation skills. Offered Winter.
Prerequisite: MUT 2885 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors; enrollment is limited to Undergraduate level students.
Repeatable for 2 Credits

MUT 3000 Orchestration & Arranging Cr. 2
Practical course in arranging music for orchestra, including study of transposition, arrangements from a piano score; general treatment of range, relationship, timbre, balance of orchestral instruments. Offered Fall.
Prerequisite: MUT 2140 with a minimum grade of C and MUT 2150 with a minimum grade of C

MUT 3020 Counterpoint Cr. 2
Overall introduction to counterpoint with some emphasis on the style of J. S. Bach. Offered Fall.
Prerequisite: MUT 2140 with a minimum grade of C and MUT 2150 with a minimum grade of C and MUH 3310 with a minimum grade of C

MUT 3200 Intermediate Composition I Cr. 2
Emphasizes refinement and personalization of student compositional activity through private composition lessons. Offered Fall.
Prerequisites: MUT 2210 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors. Enrollment is limited to students with a concentration in Composition or Jazz Studies; enrollment is limited to Undergraduate level students.

MUT 3210 Intermediate Composition II Cr. 2
Continuation of MUT 3200. Offered Winter.
Prerequisites: MUT 3200 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors. Enrollment is limited to students with a concentration in Composition; enrollment is limited to Undergraduate level students.

MUT 3990 Directed Study Cr. 1-3
Individualized research and work in music theory or composition under the supervision of a faculty member. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.
Repeatable for 6 Credits

MUT 4200 Advanced Composition I Cr. 2
Creative writing in twentieth- and twenty-first century idioms. Aesthetic, stylistic and formal problems in private composition lessons employing contemporary techniques. Offered Fall.
Prerequisite: MUT 3210 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors. Enrollment is limited to students with a concentration in Composition; enrollment is limited to Undergraduate level students.
Repeatable for 4 Credits

MUT 4210 Advanced Composition II Cr. 2
Continuation of MUT 4200. Offered Winter.
Prerequisites: MUT 4200 with a minimum grade of D-
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors. Enrollment is limited to students with a concentration in Composition; enrollment is limited to Undergraduate level students.
Repeatable for 4 Credits

MUT 4990 BA Project Cr. 2
Directed study leading to completion of the B.A. project in music. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Music or Music Honors; enrollment limited to students in a Bachelor of Arts degree.
Equivalent: MUA 4990, MUH 4990

MUT 5085 History of Theory Cr. 3
Theoretical writings from Plato to Rameau to Schenker, in historical contexts. Offered for undergraduate credit only. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

MUT 5110 Jazz Arranging and Composition I Cr. 3
Creative writing for small jazz and pop ensembles. Arranging for three to five pieces including ""head"" arrangements, block chord technique and contrapuntal writing. No credit for M.Mus. in jazz performance degree. Offered Fall.
Prerequisite: MUT 2160 with a minimum grade of C and MUT 2170 with a minimum grade of C

MUT 5120 Jazz Arranging and Composition II Cr. 3
Creative writing for larger jazz and pop ensembles; jazz arranging for six to eighteen pieces combining various textures and timbres. No credit for M.Mus. in jazz performance degree. Offered Winter.
Prerequisite: MUT 5110 with a minimum grade of C

MUT 5130 Jazz Arranging and Orchestration Cr. 3
Arranging pieces with concentration on orchestrating for large jazz ensembles. No credit for M.Mus. in jazz performance degree. Offered Fall.
Prerequisite: MUT 5120 with a minimum grade of C

MUT 5200 Special Topics in Theory Cr. 3
In-depth study of such topics as set or serial theories, aesthetics and philosophies of musics, and recent theoretical developments. Student may repeat course when topic changes. Offered for undergraduate credit only. Offered Intermittently.
Prerequisite: MUT 5997 with a minimum grade of C
Equivalent: MUT 7200
Repeatable for 6 Credits

MUT 5220 Introduction to Schenkerian Analysis Cr. 3
Aesthetic premises and basic analytic procedures of tonal music, viewed from a Schenkerian perspective. Applications of graphic technique to short phrases and to larger forms (e.g., sonata) from a wide repertory (1700-1900). Offered for undergraduate credit only. Offered Every Other Year.
Prerequisite: MUT 5997 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

MUT 5240 Analysis of Twentieth-Century Music Cr. 3
Aesthetic and technical procedures of twentieth-century music. Applications of pitch-class set and interval analysis to short phrases and to large-scale organizational strategies of entire pieces. Offered for undergraduate credit only. Offered Every Other Year.
Prerequisite: MUT 5997 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

MUT 5280 Interactive Electronic Music Composition Cr. 3
Explores basic interactive electronic music composition using computer music software for sound. Offered Yearly.

MUT 5600 Survey of Music Theory Cr. 3
Survey of music theories and practices including diatonic harmony and voice leading, chord functions, harmonic sequences, chromatic harmony and voice leading, and twentieth- and twenty-first-century techniques. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUT 5997 Analytical Techniques Cr. 3
Capstone course for Music Department. Structural analysis of tonal music in historical perspective. Credit not applicable to graduate degrees in music. Offered Winter.
Prerequisite: MUT 2160 with a minimum grade of C and MUT 2170 with a minimum grade of C and MUH 3330 with a minimum grade of C

MUT 7020 Seminar in Schenkerian Analysis Cr. 3
Aesthetic premises and basic analytic procedures of tonal music, viewed from a Schenkerian perspective. Applications of graphic technique to short phrases and to larger forms (e.g., sonata) from a wide repertory (1700-1900). Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUT 7040 Seminar in Twentieth Century Music Cr. 3
Analysis of twentieth-century music using current applications of post-tonal theories. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUT 7050 Seminar in Music Theory Pedagogy Cr. 3
Study of materials, teaching techniques, philosophy and organization of music theory classes. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUT 7070 Advanced Jazz Theory and Analysis Cr. 3
Analysis and application of advanced harmonic, rhythmic and melodic concepts used in jazz improvisation and composition. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUT 7085 History of Theory Cr. 3
Theoretical writings from Plato to Rameau to Schenker, in historical contexts. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Music; enrollment is limited to Graduate level students.

MUT 7100 Graduate Composition Cr. 3
Advanced creative work in all of the idioms of twenty-first century musical composition. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Music. Enrollment is limited to students with a concentration in Composition/Theory; enrollment is limited to Graduate level students.
Repeatable for 12 Credits

MUT 7200 Special Topics in Theory Cr. 3
In-depth study of such topics as set or serial theories, aesthetics and philosophies of musics, and recent theoretical developments. Student may repeat course when topic changes. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Music or Music Honors; enrollment is limited to Graduate level students.
Equivalent: MUT 5200
Repeatable for 6 Credits

MUT 7992 Directed Study in Theory Cr. 1-3
Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

MUT 8999 Master's Thesis Direction Cr. 1-8
Preparation of M.M. thesis project in composition/theory. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment limited to students in the Master of Music program; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Music degree.
Repeatable for 8 Credits

NE - Near Eastern Studies

NE 1900 Comparative Religion Cr. 3
Origins of religion: its social importance, its structure (fetish, totemism, myth, ritual). Pre-historic religion and the major religious traditions. Offered Every Other Year.
Equivalent: PHI 1900

NE 2000 Introduction to Islamic Civilization of the Near East Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
The origin of Islam; growth of Islamic thought and institutions; Islamic revival and reform in modern times. Offered Yearly.

NE 2010 The Bible and Ancient Mythology Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
The Bible and Biblical religion in the context of its antecedents in the ancient world. Offered Yearly.

NE 2030 The Age of Islamic Empires: 600-1600 Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Historical evolution of the Islamic world from birth of Islam to height of Ottoman Empire. Islamic history and civilization in a world-historical context; developments indigenous to specific regions, such as Islamic Spain. Offered Every Term.
Equivalent: HIS 1800

NE 2040 The Modern Middle East Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Survey of Middle East history in modern era, focusing on the nineteenth and twentieth centuries. Ottoman history from 1600: impact of European imperialism and nationalist movements, resulting in development of modern state systems, regional/national conflicts, and Islamic response to modernization. Offered Every Term.
Equivalent: HIS 1810

NE 2060 Trends and Themes in Films of the Middle East Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
This course focuses on major trends and themes in contemporary films of the Middle East. It presents the directors, writers, actors, cinematographers, editors, and composers in representative fictional dramas both serious and comedic based on societal issues of the region while, at the same time, touching upon universal messages. The course is taught in English; films have English subtitles. Offered Every Term.

NE 2170 Islamic and Near Eastern Philosophy Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
An examination of major figures and movements in Islamic and Near Eastern philosophy. Offered Every Other Year.
Equivalent: PHI 2170

NE 2700 Topics in Middle Eastern Studies Cr. 1-8
Specialized topics related to the Middle East: language, literature, etc. Offered Intermittently.
Repeatable for 8 Credits

NE 3010 Jewish History from the Bible to Present Cr. 3
This course will survey the 3000-year history of the Jews from biblical antiquity to the present. The course will explore a wide variety of topics, but will focus around three central themes: the emergence of Judaism and the Jewish life in the diaspora out of the religious and social matrix of ancient Israelite society, in response to the challenges of Hellenistic culture; the disparities between Jewish life under Christianity and Islam; and the challenges of being Jewish in the modern world. Throughout the course, the dual emphasis will be placed on the broader context in which Jews lived as an ethnic and religious minority — the Ancient Near East, the Hellenistic world, the Roman Empire, Christendom, Islam, Europe, Russia, America, and the modern Middle East — and the internal development of Judaism and the Jewish community in these diverse situations. Offered Intermittently.
Equivalent: HIS 3010

NE 3040 Twentieth Century Middle East Cr. 3
The contemporary Middle East; emphasis on social and economic development. Investigation of issues that identify the region, such as oil, gender issues, fundamentalism, and regional conflicts. Offered Every Term.
Equivalent: HIS 3320

NE 3061 Oral History in Middle Eastern Tradition Cr. 3
Methodologies, techniques and applications of oral history used as tools to investigate modern social history of Middle Eastern societies. Offered Every Other Year.
Equivalent: ANT 3061

NE 3225 Modern Israeli Culture: A Pluralistic Perspective Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Minorities in Israel; the Kibbutz; women in public life; the Arab in Israeli literature; the press; education; technology; archaeology; music and dance. Taught in English. Offered Every Term.

NE 3550 Arab Society in Transition Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Distinctive social and cultural institutions and processes of change in the Arab Middle East. Regional variations: background and discussion of current political and economic systems and their relations to international systems. Offered Intermittently.
Equivalent: ANT 3550

NE 3990 Directed Study Cr. 1-3
Readings; consultations and reports. Offered Every Term.
Repeatable for 9 Credits

NE 5000 Globalization, Social History and Gender in the Arabian Gulf Cr. 3
Social history of the Arabian Gulf (especially Bahrain, Qatar, and the UAE) in the age of globalization. Contemporary history with special emphasis on gender relations as an index of current social developments in the region. Offered Every Other Year.
Equivalent: HIS 5960

NE 5100 Teaching of Arabic as a Foreign/Second Language (TAFL) Cr. 3
Theoretical and conceptual framework of second language learning. Proper training in pedagogy as related to learning Arabic as a foreign/second language. Offered Yearly.
Equivalent: ARB 5100

NE 5110 History and Development of Islamic Political Thought Cr. 3
Historical analysis of political Islam through study of the precepts and historical vicissitudes impacting the Islamic world from within and from external forces. Offered Intermittently.
Prerequisites: NE 2030 with a minimum grade of D- and NE 3040 with a minimum grade of D-
Equivalent: PS 5760

NE 5210 Arabic Sociolinguistics Cr. 3
Arabic dialectology; Arabic as a minority language in contact. Theories and techniques developed outside Arabic, and their applicability to Arabic situations. Offered Fall.
Equivalent: ARB 5210, LIN 5210

NE 5220 Muslim Personal Law Cr. 3
Study of Muslim family law, with attention to the status of women and children in the law. Areas include: betrothal, marital contracts, forms of marital dissolution, laws of inheritance, and child custody. Focus on classical interpretation of the law, and its application in modern times. Offered Intermittently.

NE 5230 Structure of Arabic Cr. 3
Survey of historical constitution and theoretical structure of Arabic. Offered Yearly.
Equivalent: ARB 5230, LIN 5230

NE 5300 Quran: History and Interpretation Cr. 3
Traditional and revisionist narratives of the canonization of the Quran; textual features of the Quran; history of quranic hermeneutics and exegesis Offered Yearly.

NE 5700 Topics in Middle Eastern Studies Cr. 1-4
Special topics in Middle Eastern politics, language, and literature. Offered Yearly.
Repeatable for 8 Credits

NE 5710 Islam and the Challenge of Modernity Cr. 3
Influence of Enlightenment values and colonial institutions on the social, political, and ideological structures of the Islamic World. Offered Every Other Year.

NE 5990 Directed Study Cr. 1-3
Offered Every Term.
Repeatable for 9 Credits

NE 5993 Writing Intensive Course in Near Eastern and Asian Studies Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

NE 5999 Internship in Near Eastern Studies Cr. 3
Internship in a public or private organization related to Near Eastern studies. Offered for undergraduate credit only. Offered Every Term.

NE 6031 Methodologies and Research in Oral History: Near Eastern and Asian Societies Cr. 3
Techniques, methodologies and legalities of studying and interpreting alternative data for historical research. Social and cultural sensitivities of Near Eastern and Asian societies and the gathering of historical information through oral research. Offered for graduate credit only. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

NE 6500 Religion and Society Cr. 3
Role of religion in societies from ancient to contemporary times. Religion as related to science, violence, patriarchy, feminism, art, government, ethics, and issues of religious pluralism. Offered Every Other Year.

NE 7300 Qur'an: History and Interpretation Cr. 3
Traditional and revisionist narratives of the canonization of the Qu'ran; textual features of the Qu'ran; history of qur'anic hermeneutics and exegesis Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

NE 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

NE 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

NEU - Neuroscience

NEU 4050 Science Advocacy and Public Engagement Cr. 2
This course will provide students with the opportunity to understand diverse types of science media as well as best practices and strategies for interacting with different kinds of audiences. Offered Fall.
Prerequisites: BIO 2550 with a minimum grade of C-, BIO 2600 with a minimum grade of C-, or COM 3150 with a minimum grade of C-
Equivalent: BIO 4050

NEU 4200 Neurobiology of Addiction Cr. 3
An in-depth examination of the neurobiology of addiction in the context of psychopharmacology. Emphasis is on neurochemical and neuropharmacological aspects of drug and related addictions, using molecular, cellular, and clinical approaches. Offered Fall.
Prerequisites: BIO 3200 with a minimum grade of C-, PSY 3120 with a minimum grade of C-, or PSY 3300 with a minimum grade of C-

NEU 4795 Special Topics in Behavioral and Cognitive Neuroscience Cr. 3
This is an undergraduate seminar course that is designed to be a participatory exploration with a faculty expert on an advanced, emergent, and/or stimulating topic within Neuroscience. This course will provide students with a detailed understanding of contemporary research topics in the broad interdisciplinary field of Behavioral and Cognitive Neuroscience, encompassing behavioral, clinical, cognitive, developmental, and systems neuroscience. Offered Intermittently.
Prerequisites: PSY 3330 with a minimum grade of C- or PSY 3120 with a minimum grade of C-
Repeatable for 9 Credits

NEU 4895 Special Topics in Cellular and Molecular Neuroscience Cr. 3
This is an undergraduate course that is designed to be a participatory exploration with a faculty expert on an advanced, emergent, and/or stimulating topic within Neuroscience. This course will provide students with a detailed understanding of contemporary research topics in the broad interdisciplinary field of Cellular and Molecular Neuroscience. Offered Intermittently.
Prerequisites: BIO 3200 with a minimum grade of C-
Repeatable for 9 Credits

NEU 4990 Introduction to Research Practice Cr. 1
This seminar is an introduction to laboratory safety, research practice and scientific integrity for undergraduate students engaged in independent research. It will be a co-requisite that each student must take with their first enrollment in a NEU directed study course. The course is structured to provide instruction in basic laboratory safety and accepted standards for research conduct. It will also provide professional development and networking opportunities for students interested in careers in research and the biomedical sciences. Instruction will be provided in the form of reading assignments, discussions, lectures and case studies. Offered Fall, Winter.

NEU 4991 Undergraduate Research in Neuroscience Cr. 1
Laboratory or academic research performed under the mentorship of a faculty member. Offered Every Term.
Prerequisites: NEU 4990 with a minimum grade of C- (may be taken concurrently)
Repeatable for 5 Credits

NEU 4992 Undergraduate Research in Neuroscience Cr. 2
Laboratory or academic research performed under the mentorship of a faculty member. Offered Every Term.
Prerequisites: NEU 4990 with a minimum grade of C- (may be taken concurrently)
Repeatable for 6 Credits

NEU 4993 Undergraduate Research in Neuroscience Cr. 3
Laboratory or academic research performed under the mentorship of a faculty member. Offered Every Term.
Prerequisites: NEU 4990 with a minimum grade of C- (may be taken concurrently)
Repeatable for 6 Credits

NEU 4994 Undergraduate Research in Neuroscience Cr. 4
Laboratory or academic research performed under the mentorship of a faculty member. Offered Every Term.
Prerequisites: NEU 4990 with a minimum grade of C- (may be taken concurrently)
Repeatable for 8 Credits

NEU 5470 Preclinical and Clinical Assessments of Neurologic Disease I Cr. 3
An exploration of central and peripheral nervous system diseases from four perspectives: 1) broad disease connections 2) disease mechanisms 3) preclinical animal models 4) clinical trials and outcomes. Diseases covered are from mature research fields, with known molecular mechanisms, animal models and disease-modifying therapies in clinical trials. Students will master communication and teaching skills using: short presentations to the class, active participation in class discussions and peer-performance assessments. Students will research and present material, coordinate information between student groups, and moderate class discussions. Offered Fall.
Prerequisites: (BIO 3200 with a minimum grade of C- and 1 of (STA 1020 with a minimum grade of C-, STA 2210 with a minimum grade of C-, or PSY 2030 with a minimum grade of C-))

NEU 6470 Preclinical and Clinical Assessments of Neurologic Disease II Cr. 3
A continuation of NEU 5470 focusing on diseases from maturing research fields, where disease etiology may be ambiguous for many patients, and there may be relatively few molecular mechanisms, animal models and therapeutics available. Students will gain an appreciation of how translational research develops from pre-clinical models to clinical trials and practice. Offered Winter.
Prerequisites: NEU 5470 with a minimum grade of C-

NEU 6990 Honors Introduction to Research Practice Cr. 1
This seminar is an introduction to laboratory safety, research practice and scientific integrity for undergraduate students engaged in independent research. It will be a co-requisite that each student must take with their first enrollment in a NEU Honors directed study course. The course is structured to provide instruction in basic laboratory safety and accepted standards for research conduct. It will also provide professional development and networking opportunities for students interested in careers in research and the biomedical sciences. Instruction will be provided in the form of reading assignments, discussions, lectures and case studies. Offered Fall, Winter.

NEU 6992 Honors Undergraduate Research in Neuroscience Cr. 2
Laboratory or academic research performed under the mentorship of a faculty member. Offered Every Term.
Prerequisites: NEU 6990 with a minimum grade of C- (may be taken concurrently)
Repeatable for 6 Credits

NEU 6993 Honors Undergraduate Research in Neuroscience Cr. 3
Laboratory or academic research performed under the mentorship of a faculty member. Offered Every Term.
Prerequisites: NEU 6990 with a minimum grade of C- (may be taken concurrently)
Repeatable for 6 Credits

NEU 6994 Honors Undergraduate Research in Neuroscience Cr. 4
Laboratory or academic research performed under the mentorship of a faculty member. Offered Every Term.
Prerequisites: NEU 6990 with a minimum grade of C- (may be taken concurrently)
Repeatable for 8 Credits

NEU 6998 Honors Thesis in Neuroscience Cr. 3
Original laboratory or academic research performed under the guidance of a faculty member for the purpose of completing an Honor's thesis required for the completion of an Honors Degree. Offered Every Term.
Prerequisites: NEU 6990 with a minimum grade of C- (may be taken concurrently)

NFS - Nutrition and Food Science

NFS 2030 Nutrition and Health Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
Food as a carrier of nutrients; food availability; nutrient utilization including digestion, metabolism and excretion. Patterns of food consumption based on biological, psychological and social needs; and anthropological findings. Offered Every Term.

NFS 2130 Introductory Food Science Cr. 3
Chemical, physical and biological properties of foods which affect their keeping quality, nutritional and organoleptic values. For students interested in the scientific study of foods. Offered Every Term.

NFS 2140 Introductory Food Science Laboratory Cr. 1
Experimental study of principles discussed in NFS 2130. For students interested in the scientific study of food. Offered Every Term.
Fees: $90

NFS 2220 Nutrition Laboratory Cr. 1
Laboratory course for introductory nutrition. Meets General Education Laboratory requirement. Offered Every Term.
Prerequisites: NFS 2030 with a minimum grade of C- (may be taken concurrently) or NFS 3230 with a minimum grade of C- (may be taken concurrently)
Fees: $90

NFS 3230 Human Nutrition Cr. 3-4
Principles of the science of nutrition. Emphasis on physiological requirements as well as biochemical and metabolic processes of nutrients for human growth, development and maintenance within the life cycle. Honors students participate in additional reading, discussion and presentations. Offered Every Term.
Prerequisites: NFS 2030 with a minimum grade of C-

NFS 3240 Lifecycle Nutrition Cr. 3
Biological growth and nutritional requirements are considered from the fetal stages of development through aging. Nutritional needs and deficiencies across the lifespan are considered within the context of current epidemiological data and scientific research. Offered Yearly.
Prerequisite: NFS 2030 with a minimum grade of D- and NFS 2130 with a minimum grade of D-

NFS 3270 Eating Disorders Cr. 3
Causes and treatments of anorexia nervosa, bulimia nervosa, binge eating, and overeating, from biological, psychological, and social perspectives. Offered Fall.
Prerequisite: PSY 1010 with a minimum grade of C- or PSY 1020 with a minimum grade of C-

NFS 3300 Science, History, and Culture of Italian Cuisine Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Explores the science, history, and culture of Italian food and the Mediterranean Diet, and how Italian food culture has evolved throughout the centuries. Taught in English. Offered Yearly.
Fees: $15
Equivalent: ITA 3300

NFS 4132 Culinary Nutrition Cr. 1,2
This course integrates the science of nutrition with the art and practice of culinary preparation. Students apply biochemical, nutritional, and food science principles to the preparation and evaluation of foods that promote health and enjoyment. Through lectures, applied cooking labs, and project-based learning, students examine how ingredients, preparation methods, and food systems influence nutrient retention, sensory quality, cultural relevance, and sustainability. The course bridges foundational knowledge from introductory nutrition and food science toward practical applications relevant to health promotion, clinical practice, and the food industry. Offered Yearly.
Prerequisite: NFS 2030 with a minimum grade of D- and NFS 2130 with a minimum grade of D- and NFS 2140 with a minimum grade of D-

NFS 4150 Advanced Food Science Cr. 3
NFS 4150 is a senior level undergraduate course that builds on undergraduate coursework in Food Science, Introductory Chemistry, Biology, and Microbiology. The course includes lecture and lab. The lecture covers major principles in food science, such as chemical ingredients and microbiological concerns of food, food processing and preservation, food product development, and sensory evaluation. Lab sessions provide hands-on experience on chemical and microbial analysis of food and enhance understanding of major issues associated with the overall food quality and safety. Offered Winter.
Prerequisite: NFS 2130 with a minimum grade of C-
Fees: $90

NFS 4160 Food Laws and Regulations Cr. 3
State, federal and international food law; interpretations of regulatory food standards and determination of conformity of food products to them. Methods of food inspection. Role of the food law in assuring food safety, wholesomeness and nutritional quality. Offered Every Term.
Prerequisite: NFS 3230 with a minimum grade of C-

NFS 4230 Macronutrient Metabolism Cr. 3
Focus on normal human nutrition and physiological functions. Biochemical properties of macronutrients and their interrelationships at the cellular and subcellular level. Offered Fall.
Prerequisites: NFS 2130 with a minimum grade of C-, NFS 3230 with a minimum grade of C-, and CHM 1240 with a minimum grade of D
Restriction(s): Enrollment is limited to Undergraduate level students.

NFS 4231 Human Nutrition: Micronutrients Cr. 3
Principles of micronutrient metabolism, including function, toxicity, and deficiency; principles and techniques for assessing micronutrient status. Micronutrients in the physiopathology of chronic disease; sources of micronutrients and factors affecting nutrient bioavailability. Impact of disease and/or genetics on nutrient function and nutrient requirement; role of fortification, enrichment, and/or supplementation of micronutrients in the food supply and on health outcomes. Offered Winter.
Prerequisites: NFS 2130 with a minimum grade of C-, NFS 3230 with a minimum grade of C-, and CHM 1240 with a minimum grade of D

NFS 4990 Directed Study Cr. 1-4
Offered Every Term.
Repeatable for 4 Credits

NFS 5100 Nutrition Care Process I Cr. 2
Introduction to management of nutrition care in both healthy and ill people throughout the life span using the Nutrition Care Process model, developed by the Academy of Nutrition and Dietetics. Emphasis is on the Registered Dietitian's role in in the four steps of the process, nutrition assessment, diagnosis, intervention, and monitoring and evaluation. The process covers identification of nutrition-related problems in patients, planning intervention to solve their nutrition problems and reduce nutrition-related health risks associated with chronic disease. Offered Yearly.
Prerequisites: NFS 2130, NFS 2140, NFS 2030, and NFS 3230
Corequisite: NFS 5510
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 5120 Nutrition Care Process II Cr. 2
Builds on Nutrition Care Process I (NFS 5100). Emphasis is on the RD's role in treating patients with nutrition-related problems by means of planning intervention to assist individuals in meeting nutritional needs and decrease nutrition-related health risks associated with chronic disease. Specific content on medical nutrition therapy includes interpretation of biochemical parameters related to specific disease states (e.g. glucose, lipids, therapeutic diets, drug-nutrient interactions, and diet instruction. Offered Yearly.
Prerequisites: NFS 5100
Corequisite: NFS 5520
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 5130 Food Chemistry Cr. 3
Study of the chemical constituents of foods, their relationship to the biological and physical properties, and overall food quality. Offered Fall, Winter.
Prerequisite: CHM 1240 with a minimum grade of C- and NFS 2130 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

NFS 5140 Laboratory Techniques in Nutrition and Food Science Cr. 3
Basic modern and classical analytical techniques and instruments in nutrition and food science. Background theory to principles of instrumental assays. Procedures for evaluation of macro and micro food components analysis. Physiological functions relevant to nutrition. Offered Fall.
Prerequisites: CHM 1240 with a minimum grade of D, NFS 2130 with a minimum grade of C-, and NFS 2220 with a minimum grade of C-
Fees: $90

NFS 5145 Fundamentals of Fermentation Cr. 3
The role of the microbiome (commensal bacteria) in human health has enjoyed a surge in interest and diet is recognized as one of the most impactful factors influencing the gut microbiome. We are just beginning to understand the impact of specific food constituents, their preparation, processing, and preservation, on gut microbiome and health. This course will introduce the theoretical and practical aspects of fermentation of food products as a means for altering the nutritional and sensory states, preservation, and the potential impacts on human health. Offered Yearly.
Prerequisite: NFS 4150 with a minimum grade of C- or NFS 5140 with a minimum grade of C-

NFS 5150 Food Safety Assurance Cr. 4
This is a senior level undergraduate course that provides students in-depth knowledge and practices of food safety management. Topics include GMP (Good Manufactural Procedures), SSOP (Sanitation Standard Operation Procedures),HACCP, Preventive Controls for Human Food, and Foreign Supplier Verification Program, and PCQI (Preventive control Qualified Individual).Upon successful completion of this course students could earn two certificates: PCQI (for human food) certification by the FSPCA and HACCP certification accredited by the International HACCP alliance. Offered Yearly.
Prerequisites: NFS 2130 with a minimum grade of C-, CHM 1060 with a minimum grade of C-, BIO 2270 with a minimum grade of C-, or BIO 2271 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

NFS 5170 Nutrition, Physical Activity, and the Brain Cr. 3
Neurobehavioral responses and adaptations to dietary constituents and physical activity/inactivity. Offered Fall.
Prerequisite: NFS 3230 with a minimum grade of C- or BIO 3200 with a minimum grade of C- or PSY 3330 with a minimum grade of C-

NFS 5200 Advanced Dietetics Cr. 3
Development and refinement of dietetic practitioner skills through application in critical care and specialty practice areas such as nutrition support, renal, oncology, pulmonary, stress and trauma. Offered Fall.
Prerequisites: NFS 5100, NFS 5120, and NFS 5250
Corequisite: NFS 5530
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.
Fees: $90

NFS 5220 Community Nutrition Cr. 2
Introduction to management of nutritional care in healthy and at-risk persons throughout the lifespan. Identifying problems and planning interventions to meet population nutritional problems and to reduce nutrition-related health risks in community settings. Community assessment; organization and function of community agencies; interventions appropriate to small and large groups, including nutrition education. Offered Fall, Spring/Summer.
Prerequisite: NFS 2130 with a minimum grade of C- and NFS 2140 with a minimum grade of C- and NFS 3230 with a minimum grade of C-

NFS 5231 Nutrition and Physical Performance Cr. 3
How nutrients affect physical fitness and physical performance; how physical performance can be improved by adopting optimal dietary practice and how exercise and optimal nutrition can prevent human diseases. Offered Fall.
Prerequisite: NFS 3230 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

NFS 5240 Nutritional Epidemiology Cr. 3
The purpose of this class is for the students to gain an in-depth Understanding of the relationships between diet, health and diseases: to gain an appreciation for the statistical processes involved in nutritional epidemiologic studies and to examine objectively the collection and use of the nutritional information used in epidemiologic studies. Offered Fall.
Prerequisite: NFS 3230 with a minimum grade of C- or PH 3300 with a minimum grade of C-

NFS 5250 Nutrition and Disease Cr. 4
Application of the principles of biochemistry and physiology in the study of nutrient metabolism as altered by disease. The physio-biochemical basis for diet in the treatment of disease. Offered Winter, Spring/Summer.
Prerequisites: NFS 4230 with a minimum grade of C- and NFS 4231 with a minimum grade of C-

NFS 5350 Organization and Management of Food Service Systems Cr. 4
Survey of food service systems; factors affecting their successful operation. Components of quality assurance supporting well-being of target markets. Identification of operative management skills. Offered Fall.
Prerequisite: NFS 2130 with a minimum grade of C- and NFS 2140 with a minimum grade of C- and NFS 3230 with a minimum grade of C- and MGT 2530 with a minimum grade of C-

NFS 5360 Management in Dietetic Practice Cr. 3
Application of management theory and principles in the three areas of dietetic practice; career planning and professional role development. Offered Winter.
Prerequisites: NFS 5200
Corequisite: NFS 5540
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 5510 Supervised Practice I Cr. 1
Supervised practice is in clinical (acute care), long-term care, food service, community, and an elective setting. Students may be placed in various SP experiences in any for the NFS 5500-5530 courses; each course is not a specific type of SP. Placements will be based on site availability. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 5520 Supervised Practice II Cr. 1
Supervised practice is in clinical (acute care), long-term care, food service, community, and an elective setting. Students may be placed in various SP experiences in any for the NFS 5500-5530 courses; each course is not a specific type of SP. Placements will be base on site availability. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 5530 Supervised Practice III Cr. 1
Supervised practice is in clinical (acute care), long-term care, food service, community, and an elective setting. Students may be placed in various SP experiences in any for the NFS 5510-5530 courses; each course is not a specific type of SP. Placements will be based on site availability. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 5540 Supervised Practice IV Cr. 1
Supervised practice is in clinical (acute care), long-term care, food service, community, and an elective setting. Students may be placed in various SP experiences in any for the NFS 5500-5530 courses; each course is not a specific type of SP. Placements will be based on site availability. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 5820 Capstone: Science Communication in Nutrition and Food Science Cr. 3
Nutrition information has never been more visible or more confusing. This course introduces students to the art and science of communicating evidence-based nutrition to the public. Students will learn how to evaluate scientific research, identify misinformation, and convey accurate nutrition information through written, oral, and digital media. The course emphasizes clear, ethical, and creative communication strategies that help restore public trust in science. Students will work individually and collaboratively to translate complex nutrition topics into formats the public is likely to encounter: articles, videos, social media posts, and community presentations. The unifying goal is to prepare students to become credible, compassionate, and effective nutrition communicators. Offered Yearly.
Prerequisite: NFS 3230 with a minimum grade of D-

NFS 5990 Honors Directed Study Cr. 1-4
Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Nutrition and Food Science Hon; enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

NFS 5992 Supervised Field Experience Cr. 2-4
Supervised field experience designed to correlate classroom theory with practical work. Offered Every Term.

NFS 5996 Research in Food Science and Nutrition Cr. 1-4
Research projects under direction of faculty active in research. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Unranked Undergrad, Freshman, Sophomore, Junior or Senior; enrollment is limited to Undergraduate level students.
Repeatable for 6 Credits

NFS 6000 Nutritional Biochemistry Cr. 4
Biochemical effects of nutrients at cellular and organ levels. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

NFS 6020 Nutrient and Gene Interaction Cr. 3
Introduction to molecular genetics concepts, terminology and molecular methodologies, with emphasis on nutrition and food science. Overview of nutrition and gene interaction in onset and progression of disease, cancer, and aging. Offered for graduate credit only. Offered Every Other Year.
Prerequisites: NFS 5130 with a minimum grade of C-, NFS 5140 with a minimum grade of C-, and NFS 5230 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

NFS 6030 Microbiological Safety of Foods Cr. 3
Food-borne microorganisms as causes of human illnesses, including bacteria, mold, viruses and parasites. Microbial toxins and their mode of action. Antimicrobial agents in food. Means of prevention and protection. Offered Fall.
Prerequisites: NFS 4150 with a minimum grade of C- and NFS 5130 with a minimum grade of C-

NFS 6150 Functional Foods for Health Cr. 3
Introduction to functional foods (those with specific health benefits) and nutraceuticals, as well as a variety of functional food ingredients and extracts, their chemical and potential health promoting properties, processing, production, safety and regulation. Offered Winter.
Prerequisite: NFS 2030 with a minimum grade of D- and NFS 2130 with a minimum grade of D- and NFS 3230 with a minimum grade of D-
Restriction(s): Enrollment is limited to Graduate level students.

NFS 6210 Nutrition through the Life Cycle Cr. 3
Biological growth and nutritional requirements from fetal stages of development through aging. Nutritional standards in light of current epidemiological data and scientific research. Offered for graduate credit only. Offered Intermittently.
Prerequisites: NFS 5230 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

NFS 6270 Eating Behavior and Body Weight Regulation Cr. 3
Central and peripheral regulation of food intake, normal and abnormal eating behavior, physiological and psychological regulation of body weight, different models of obesity, etiology of treatment of obesity. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

NFS 6850 Controversial Issues Cr. 2
Topics to be announced in Schedule of Classes. Offered Fall.
Prerequisite: NFS 3230 with a minimum grade of C

NFS 6860 Controversial Issues in Clinical Nutrition and Dietetics Cr. 2
Current controversial topics; differing points of view will be debated; discussion of modes of communication of nutrition information. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 7000 Nutritional Metabolomics and Bioinformatics Cr. 3
Introduction to and application of the ""omics"" technologies to nutrition: genomics, proteomics, and metabolomics. Examples and exercises using bioinformatic software for multivariate data analyses. Offered Winter.
Prerequisite: NFS 6000 with a minimum grade of C- and STA 1020 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $90
Equivalent: PSL 7180

NFS 7060 Research Problems in Nutrition and Food Science Cr. 2
Research orientation: acquaintance with published data, principles of design, methods of collecting data, and basic statistical analysis. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

NFS 7170 Nutrition, Physical Activity, and the Brain Cr. 3
Neurobehavioral responses and adaptations to dietary constituents and physical activity/inactivity. Offered Winter.
Prerequisite: NFS 6000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

NFS 7230 Nutrition and Physical Performance Cr. 3
How nutrients affect physical fitness and physical performance; how physical performance can be improved by adopting optimal dietary practice and how exercise and optimal nutrition can prevent human diseases. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

NFS 7240 Nutritional Epidemiology Cr. 3
Introduction to epidemiology concepts and terminology. Emphasis on examining the associations between nutrition and chronic disease. Offered Intermittently.
Prerequisites: NFS 2210 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

NFS 7800 Master's Capstone Seminar in Dietetics Cr. 2
The capstone is designed for the dietetics student to demonstrate the foundational knowledge acquired in the didactic coursework, as well as the practical skills, problem-solving and critical thinking gained during the supervised practice rotations of the Coordinated Program in Dietetics. It include intensive writing through an original clinical case study, food service case study, community planning presentation, a cumulative examination, and national registration examination review modules. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Dietetics; enrollment is limited to Graduate level students.

NFS 7820 Master's Capstone: Science Communication Cr. 3
The capstone course is designed to allow the graduate student to assimilate foundational knowledge and critical thinking gained during the didactic graduate program into effective science communication. The primary objective of this course is to help develop communication skills required in today's world of algorithms and polarizing opinions that fuel misconceptions about the science of nutrition. A uniting thread throughout the course will be in identifying misinformation and disinformation in the public domain and developing strategies to help correct the public narrative. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Nutrition and Food Science.

NFS 7850 Graduate Seminar Cr. 1
Presentations by graduate students, graduate faculty, and visiting scientists. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 2 Credits

NFS 7990 Directed Study Cr. 1-4
Offered for each area of specialization. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

NFS 7991 Lab Rotation Cr. 1
For new graduate students; students spend at least two weeks in all research labs. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

NFS 7996 Research Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 20 Credits

NFS 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

NFS 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

NFS 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

NFS 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

NFS 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: NFS 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

NFS 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: NFS 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

NFS 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: NFS 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

NFS 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

NUR - Nursing

NUR 2010 Health Assessment Cr. 3
This course provides foundational learning experiences for understanding and performing the health assessment of the individual. Students learn health assessment skills including systematic history taking and physical examination. Holistic health assessment is viewed from health promotion, cultural, nutritional, mental health, and developmental perspectives. Developmental stages of the adult and older adults are explored within a family and environmental context. Students are introduced to the assessment approaches of a variety of theorists. Students utilize critical reasoning and begin to apply the nursing process in determining nursing diagnoses with a focus on assessment. Offered Fall, Spring/Summer.
Prerequisites: BIO 2870 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Nursing.
Fees: $25

NUR 2030 Pathophysiology in Nursing Cr. 3
This course examines alterations in normal physiological functioning that occur because of a disease process. An understanding of the functional basis for a disease will enable the student nurse to critically examine and understand clinical manifestations of diseases and pathophysiologic processes. Offered Fall, Winter.
Prerequisites: BIO 2870 with a minimum grade of C

NUR 2050 Fundamentals of Nursing Care Cr. 5
This course provides the student with an opportunity to provide fundamental nursing care for individuals within the context of the family and community. Student will develop basic nursing skills in a clinical practice setting while utilizing critical thinking and the nursing process. Students will explore the influence of culture and therapeutic communication with the patient and their families. Offered Fall, Winter.
Prerequisites: NUR 2010 with a minimum grade of C, NUR 2030 with a minimum grade of C, and NUR 2060 with a minimum grade of C
Corequisite: NUR 2995
Restriction(s): Enrollment limited to students in the College of Nursing.
Fees: $85

NUR 2060 Pharmacology in Nursing Cr. 3
This course is designed to provide the student with the basic concepts of pharmacology. Individual drug responses related to human physiological processes, are examined. Students explore the roles and responsibilities of the nurse for safe, legal, ethical, and therapeutic drug therapy. Stages of growth and development are examined throughout the course and steps of the nursing process regarding drug therapy are emphasized. Offered Fall, Spring/Summer.
Prerequisite: BIO 2870 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Nursing.

NUR 2070 Professional Nursing in the Future: Strategies for Health Promotion Cr. 3
Preparation for professional practice; emphasis on developing knowledge and skills for health promotion within the context of groups and the community. Impact of nursing theories and research on practice, directed toward health promotion issues. Strategies for health promotion; focus on group process and teaching/learning. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the College of Nursing.

NUR 2995 Foundations of Professional Nursing Practice Cr. 3
This course explores the foundation of professional nursing practice such as nursing science, clinical practice and regulation of nursing practice. Students will explore the historical development of nursing as a profession, including the science of nursing (nursing theory) and the non-nursing theories that are foundational to nursing practice. Students will begin developing critical clinical thinking and communication skills necessary for clinical reasoning and judgement as a professional nurse across multiple health care settings. The course will also discuss health promotion concepts and health determinates as it relates to various populations. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Nursing.

NUR 3010 Comprehensive Nursing Care of the Adult I Cr. 5
This course focuses on the nursing perspective of the physiologic universal needs of the human, specifically focusing on basic needs (e.g., cardiac, respiratory, digestive and elimination disorders). The course is designed to assist students in providing safe, holistic care to adults and elderly experiencing acute and chronic health disruptions. Emphasis is on students' synthesis and application of knowledge from multiple disciplines, and their use of the nursing process to develop a comprehensive, evidence-based plan of nursing care for patients across various healthcare settings. Offered Fall, Winter.
Prerequisites: NUR 2050 with a minimum grade of C and ((BIO 2270 with a minimum grade of C and BIO 2271 with a minimum grade of C) or BIO 2200 with a minimum grade of C)
Fees: $50

NUR 3015 Psychiatric Mental Health Nursing Cr. 5
This course prepares student nurses to provide mental health care to individuals and populations in acute, primary and community settings. Social determinants and developmental aspects of mental health across the lifespan are explored. This course also discusses other determinants of mental health/illness and prevention strategies. Emphasis is on students' synthesis and application of knowledge from multiple disciplines, and their use of the nursing process to develop a holistic mental health care plan. Offered Fall, Winter.
Prerequisite: NUR 2050 with a minimum grade of C
Restriction(s): Enrollment limited to students in the College of Nursing.
Fees: $50

NUR 3020 Comprehensive Nursing Care of the Adult II Cr. 5
This course focuses on the nursing perspective of the physiologic universal needs of the human, specifically focusing on complex processes (e.g., neurological, sensory, and endocrine disorders). The course is designed to assist students in providing safe, holistic care to adults and elderly experiencing acute and chronic health disruptions. Emphasis is on students' synthesis and application of knowledge from multiple disciplines, and their use of the nursing process to develop a comprehensive, evidence-based plan of nursing care for patients across various healthcare settings. Offered Winter, Spring/Summer.
Prerequisite: NUR 3010 with a minimum grade of C
Fees: $50

NUR 3200 Global Healthcare Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Explores health care challenges worldwide while examining intercultural beliefs systems. Examines issues related to health disparities among vulnerable populations in urban environments nationally and globally. Students will travel abroad during spring break to experience first-hand the healthcare issues and disparities internationally. Students must have valid passports and pay the Office of Study Abroad required travel fees prior to course start date. Offered Winter.

NUR 3405 Introduction to Research and Evidence-Based Practice Cr. 3
Provides basic information about nursing research problems; principles of evidence-based nursing research, access and retrieval of research literature and databases; reading and critiquing research reports; ethical issues related to research; and individual strategies and organizational mechanisms to promote research-based practice. The research process is examined as a foundation for critical thinking and scholarship. Offered Fall, Winter.
Prerequisites: ENG 3010 with a minimum grade of C or ENG 3020 with a minimum grade of C

NUR 4010 Integrative Care of Children and Their Families Cr. 5
This course is designed to prepare students to provide nursing care to children in various states of health within the context of their families. Nursing care will be emphasized from a primary and acute care perspective with the goal of health promotion. By applying knowledge of age-appropriate growth and development, students will implement nursing practices with children of all ages and their families. Students will examine how pediatric development includes biological, physical, psychosocial, cognitive, moral, spiritual, and social determinants. Offered Winter, Spring/Summer.
Prerequisites: NUR 3010 with a minimum grade of C and NUR 3015 with a minimum grade of C
Fees: $50

NUR 4020 Integrative Care of the Perinatal Family Cr. 5
This course focuses on care of the perinatal family including the woman, fetus, newborn, and other family members during the period from pre-conception to postpartum. Women's health topics including health promotion and primary care throughout the lifespan are included. The course emphasizes effective communication, genetics and genomics, health and risk assessment, and supportive and restorative care of the woman and family. Ethical, cultural, societal, and consumer movement effects on women's health and perinatal care form an integral part of the learning experience. Offered Fall, Winter.
Prerequisites: NUR 2050 with a minimum grade of C
Fees: $50

NUR 4040 Leadership and Management in Nursing Cr. 4
Students develop leadership skills necessary to become nurse leaders and managers in complex and diverse healthcare settings. Current theories of management, leadership and change are examined and related to nursing practice. Students develop self-awareness, critical thinking, decision-making, ethics, legal and professional regulations, time management, change, team building, communication, safety, quality, and functions of management. Principles of evidence-based practice (EBP) are applied to the nursing process in addressing clinical problems and needs from a nursing leadership role. Offered Fall, Spring/Summer.
Prerequisites: NUR 2995 with a minimum grade of C, NUR 2050 with a minimum grade of C, and NUR 3405 with a minimum grade of C

NUR 4044 Leadership and Management in Nursing Cr. 3
This course focuses on assisting students to develop leadership skills necessary to become a nurse leader and manager in complex and diverse healthcare settings. Current theories of management, leadership and change are examined and related to nursing practice within the institution. An emphasis is placed on developing self-awareness, critical thinking, decision-making, ethics, legal and professional regulations, time management, change, team building, communication, safety, quality and functions of management. Offered Fall, Spring/Summer.
Restriction(s): Enrollment limited to students in the College of Nursing.

NUR 4050 Theory of Caring for Complex, Critically Ill Patients Cr. 3
In this course, students are given the opportunity to integrate knowledge of anatomy, physiology, pathophysiology, and pharmacology in the care of patients with complex acute illnesses. The course fosters the advancement of critical reasoning, clinical knowledge, and clinical judgment through case studies, lecture, and group discussions. Offered Fall, Winter.
Prerequisites: NUR 3020 with a minimum grade of C
Fees: $50

NUR 4060 Transition of Nursing Knowledge into Practice Cr. 5
In this course, students transition to nursing practice. The course integrates the knowledge of ethics, standards, and expectations of professional nursing roles with an emphasis on critical thinking. The student will practice skills and develop behaviors for entry into the profession of nursing while synthesizing their nursing knowledge in a precepted clinical environment. Offered Fall, Winter.
Prerequisites: NUR 3020 with a minimum grade of C, NUR 4010 with a minimum grade of C, and NUR 4020 with a minimum grade of C
Corequisite: NUR 4050
Fees: $50

NUR 4120 Community/Public Health Nursing: Care of Populations Cr. 5
In this course, students apply nursing science to communities and populations in interprofessional and collaborative community settings. The students explore and evaluate current and historical population-level interventions and policies, as they apply to health equity and health promotion. Students assess resources for diverse populations and use information technology in the care of populations. Students examine their commitment to lifelong learning and professional growth for nursing excellence. The nursing process at the population level is demonstrated with diverse communities, and vulnerable population groups, families, and individuals. Students explore all levels of prevention to address a wide variety of challenges and health disparities in urban environments. Offered Fall, Winter.
Prerequisites: NUR 2050 with a minimum grade of C, NUR 2995 with a minimum grade of C, and NUR 3405 with a minimum grade of C

NUR 4135 Capstone Project RN-BSN Cr. 3
This practicum course will build on the concepts and knowledge gained from the student's professional experiences as well as previous nursing courses and use them to build an evidence-based capstone. The course will allow for the application of theories and concepts associated with population health, nursing leadership, and nursing research. Offered Winter.
Prerequisites: NUR 4044 with a minimum grade of C and NUR 4320 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment limited to students in the College of Nursing.

NUR 4300 Nursing Informatics Cr. 3
This course introduces students to the specialty of nursing informatics. Emphasis is on theories and models that explain how information is gathered and used in healthcare. Different software programs used for professional and personal healthcare records are discussed. Ethical issues in use of electronic healthcare records and social media use are addressed. Students will also demonstrate competency in examining information technologies needed for a professional career. Offered Fall, Winter.

NUR 4320 Public/Community Health Nursing Cr. 3
This course prepares the student to apply nursing science to communities and populations in interprofessional and collaborative community settings. The student explores and evaluates current and historical population-level interventions and policies, as they apply to population-health equity and health promotion. The student assesses resources for diverse populations, as well as uses information and communication technology in the care of communities and populations. Students are given the opportunity to examine their commitment to lifelong learning and professional growth for nursing excellence. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Nursing.

NUR 4400 Disaster Preparedness Cr. 3
This course is an introduction of emergency planning and disaster management for interprofessional teams at the local, state, national and global levels. Various types of public health and environmental disasters including natural, biological, chemical, radiological, nuclear and other human caused disasters will be explored. Consequences of the event, and roles of public health agencies in preparedness, response, and recovery are outlined to improve population health outcomes following a disaster or public health emergency. The student will apply these concepts to real-world disasters to identify, evaluate and synthesize the public health response, and form recommendations. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Nursing.

NUR 4505 Professional Nursing in the Future: Current Issues for Professional Practice RN-BSN Cr. 3
The course provides students the opportunity to describe, examine, and discuss issues related to professional nursing practice (RN to BSN). The current professional practice of nurses transitioning to a BSN encompasses a role change and exposure to the political process (micro to national issues), bioethical issues in U.S. health care, educational pathways in nursing and related policy implications, the importance of interprofessional education for nurses, and the various levels of legal responsibility for the practicing professional nurses. These discussions will assist the new graduate in becoming an informed and politically active professional, an ethically sound provider and consumer of health care services, as well as an informed citizen capable of providing leadership to those who are not health care professionals. Offered Fall.

NUR 4600 Gerontological Nursing Perspectives in Health and Illness Cr. 3
Knowledge from the fields of gerontology and geriatrics used to enhance the student's nursing perspective when providing nursing care to meet the complex health care needs of healthy and frail older adults and their families. As students learn about the physical and psychosocial problems encountered with aging, they will be engaged in discussions about the contributions that can be brought forth from nursing and multiple disciplines to enhance the health of older adults. Offered Winter.

NUR 4650 Complimentary and Integrative Medicine Cr. 3
This course will introduce the philosophical, theoretical, physiological, and cultural foundation of Complementary and Integrative Medicine (CIM). The student will be introduced to a wide range of complementary and integrative medicine therapies. This course will also introduce how to evaluate the safety and efficacy of CIM therapies, for the treatment of human response, based on the evidence. The student will then employ beginner level integration CIM therapies into their current practice. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Nursing.

NUR 4680 Curricular Practical Training (CPT)/Internship in Nursing for International Students Cr. 1
This course is designed to provide students the opportunity to obtain hands-on clinical experiences in diverse health care settings. This course offers a practical platform for students to apply their health care skills and cultivate professionalism within the healthcare context. The students will engage in direct and/or indirect patient care, collaborate with health care teams, and explore the nuances of professional health care practice. Through self-reflection and guided learning, students will emerge from this course with preparedness for the responsibilities of nursing practice. Students must receive authorization from the Office of International Students and Scholars (OISS) before they can begin CPT and enroll. Students must meet all requirements as determined by OISS prior to and during course enrollment. Students must also complete all requirements in ACEMAPP and possess current BLS, liability insurance, and health clearance. Offered Every Term.

NUR 4800 Transcultural Health Through the Life Cycle Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Transcultural health differences and similarities in selected Western and non-Western cultures, from birth through old age. Use of theories and research methods from the health and social sciences and humanities in study and analysis of different cultures. Offered Fall, Spring/Summer.

NUR 4990 Directed Study Cr. 1-4
Independent study between faculty and students. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Nursing.
Repeatable for 6 Credits

NUR 4995 Writing for the Health Care Professional Cr. 3
Building on students' earlier course work, this course prepares students to utilize a variety of professional writing styles including writing for publication; clinical policies, guidelines, and procedures; and poster development. The ability to communicate effectively in the written form is an essential skill for the health care professional. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Nursing.

NUR 6510 Health Economics, Policy, and Professional Issues for APNs Cr. 3
Examination of the major health policy and professional issues relevant to the advanced-practice nurse. Students will be assisted in the synthesis of theoretical and pragmatic aspects of issues of concern in order to develop confidence in their skills and establish an APN practice. Offered for graduate credit only. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7000 Statistics in Nursing Cr. 3
This course provides an introduction to statistical analysis in nursing research. Topics will include measurement, probability, descriptive statistics, inferential statistics, correlation, and regression. An introduction to the use of the computer in computing the statistics will also be included. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7030 Advanced Nursing Assessment Cr. 4
This course focuses on the development of advanced physical and psychosocial assessment skills. It also focuses on the development of critical thinking skills in relation to differential diagnoses and decision-making required in the performance of advanced practice nursing. The focus is on holistic assessment that recognizes the importance of a continuum of care, illness cycle, and assessment implications. This course will be subdivided into three specialty tracts of learning: Across the Lifespan/Adult, Pediatric, and Neonatal. Offered Spring/Summer.
Prerequisites: NUR 7444 with a minimum grade of B- and (NUR 7555 with a minimum grade of B-, NUR 7200 with a minimum grade of B-, or NUR 7207 with a minimum grade of B-)
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $100

NUR 7035 Family Centered Health Promotion and Risk-reduction Cr. 3
The purpose of this course is to facilitate student's understanding and application of family systems approach to the theoretical foundation for health promotion and risk reduction across the lifespan. The emphasis is on family theory, health promotion theories and research to promote and preserve wellness lifestyles in client populations using epidemiological principles, disease risk appraisal and reduction and other tools. Offered Winter, Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7105 Theoretical Foundations for Nursing Cr. 3
In this theory course, the focus is on the foundations for practice by nurses in advanced practice and leadership roles. Discussion will include diverse perspectives that influence knowledge development in nursing. The course will analyze and critique selected nursing and non-nursing theories for their applicability in advanced practice. Diverse perspectives include systems, communication, developmental, health promotion, stress and coping theories. The role of APNs in the advancement of the nursing discipline will be articulated. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7115 Special Topics: Interprofessional Education Cr. 2
This interprofessional course is for health professional student learners in the areas of advanced practice. The course allows health professional students to learn about, from and with each other, how each discipline contributes to the healthcare team, the importance of effective communication, the role of team collaboration and preparing health care professionals for collaborative practice with a focus on clinical decision making in interdisciplinary teams. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate, Medical or Professional level students.
Equivalent: MD4 8115, PAS 7115, PPR 7115, SW 7115

NUR 7200 Advanced Neonatal Pharmacology Cr. 3
Basic concepts of pharmacology; application and integration of content to advanced practice nursing with high-risk neonate. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7207 Advanced Pediatric Pharmacology Cr. 3
Preparation of advanced practice nurses to apply concepts of pediatric pharmacology when assessing, managing and treating the pediatric patient in a variety of environments, including acute/critical and primary care. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7222 Leadership in Health Policy, Ethics and Change Cr. 3
Examines health systems and health policy within evolving sociopolitical contexts from a national and international perspective. Content includes human diversity, social issues, systems theory, health systems analysis, ethics, health policy analysis, and policy formulation. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7415 Physical and Psychosocial Issues in Aging Cr. 3
This course prepares the student to analyze the predominant physical and psychosocial aspects of aging encountered by older adult clients. The course also prepares students to understand the interdisciplinary functioning of the gerontological specialist (nurse practitioner, case manager, social worker, etc.). Normal age-related changes and an interdisciplinary approach to adaptive responses are emphasized. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Adult Gero Nur Prac - Acute, Adult Gero Nur Prac - Primary or Gerontology; enrollment is limited to Graduate level students.

NUR 7425 Advanced Public Health Nursing: Community Based Participatory Research - Didactic Cr. 2
This course explores common issues and methods involved in conducting community based participatory research (CBPR). Students engage in building the necessary skills and support for community based participatory work for change. Offered Fall.
Prerequisites: NUR 7222 with a minimum grade of B-, NUR 7105 with a minimum grade of B-, and NUR 8895 with a minimum grade of B-
Corequisite: NUR 7426
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7426 Advanced Public Health Nursing: Community Based Participatory Research - Clinical Cr. 1
This course explores common issues and methods involved in conducting community based participatory research (CBPR). Students learn how to collaborate across interdisciplinary perspectives to engage in research that leads to community change, the improvement of public health, and enhances the quality of life. Offered Fall.
Prerequisites: NUR 7222 with a minimum grade of B-, NUR 7105 with a minimum grade of B-, and NUR 8895 with a minimum grade of B-
Corequisite: NUR 7425
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7427 Adult-Gerontology ACNP: Management of Neurological, Endocrine & Musculoskeletal Problems - Didactic Cr. 2
This didactic course is meant to develop clinical expertise to manage patient populations across the entire spectrum of adults, including young adults, adults, and older adults. The AG-ACNP scope of practice encompasses the provision of care to patients who are characterized as "physiologically unstable, technologically dependent and/or highly vulnerable to complications." The emphasis is on patients challenged with neurological, endocrine, and musculo-skeletal problems across the continuum of care from wellness to illness, with differing and unique developmental needs. Offered Fall.
Corequisite: NUR 7428
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7428 Adult-Gerontology ACNP: Management of Neurological, Endocrine & Musculoskeletal Problems - Clinical Cr. 4
This clinical course is meant to develop clinical expertise to manage patient populations across the entire spectrum of adults, including young adults, adults, and older adults. The AG-ACNP scope of practice encompasses the provision of care to patients who are characterized as "physiologically unstable, technologically dependent and/or highly vulnerable to complications." This course emphasis is on patients challenged with neurological, endocrine, and musculo-skeletal problems across the continuum of care from wellness to illness, with differing and unique developmental needs. Offered Fall.
Corequisite: NUR 7427
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7435 Advanced Public Health Nursing: Comprehensive Community Assessment - Didactic Cr. 2
This course provides opportunities for students to develop knowledge and skills essential to conducting comprehensive community assessments. Offered Winter.
Prerequisites: NUR 7425 with a minimum grade of B, NUR 7426 with a minimum grade of B, NUR 7000 with a minimum grade of B-, and NUR 8625 with a minimum grade of B-
Corequisite: NUR 7436
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7436 Advanced Public Health Nursing: Comprehensive Community Assessment - Clinical Cr. 3
This course provides opportunities for students to engage with interprofessional team members, community agencies, and diverse populations to conduct a comprehensive assessment. Offered Winter.
Prerequisites: NUR 7425 with a minimum grade of B, NUR 7426 with a minimum grade of B, NUR 7000 with a minimum grade of B-, and NUR 8625 with a minimum grade of B-
Corequisite: NUR 7435
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7437 Adult-Gerontology Acute Care NP: Management of Cardiopulmonary and Renal Problems - Didactic Cr. 2
This clinical course is meant to develop clinical expertise to manage patient populations across the entire spectrum of adults, including young adults, adults, and older adults. The AG-ACNP scope of practice encompasses the provision of care to patients who are characterized as "physiologically unstable, technologically dependent and/or highly vulnerable to complications." with illness trajectories related to pulmonary, cardiovascular and renal systems across the continuum of care from wellness to illness, with differing and unique developmental needs. In addition, common problems in acute care such as, pain, infections and discharge barriers are also addressed. Emphasis is placed on use of strong differential diagnoses skills, interpretation of normal and abnormal physical assessment and diagnostic test results, clinical decision making, family-patient-nurse psychosocial interactions, and other evidence-based interventions. Offered Winter.
Prerequisites: NUR 7370 with a minimum grade of B
Corequisite: NUR 7438
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7438 Adult-Gerontology Acute Care NP: Management of Cardiopulmonary and Renal Problems - Clinical Cr. 4
This clinical course is meant to develop clinical expertise to manage patient populations across the entire spectrum of adults, including young adults, adults, and older adults. The AG-ACNP scope of practice encompasses the provision of care to patients who are characterized as "physiologically unstable, technologically dependent and/or highly vulnerable to complications." with illness trajectories related to pulmonary, cardiovascular and renal systems across the continuum of care from wellness to illness, with differing and unique developmental needs. In addition, common problems in acute care such as, pain, infections and discharge barriers are also addressed. Emphasis is placed on use of strong differential diagnoses skills, interpretation of normal and abnormal physical assessment and diagnostic test results, clinical decision making, family-patient-nurse psychosocial interactions, and other evidence-based interventions. Offered Winter.
Prerequisites: NUR 7370 with a minimum grade of B
Corequisite: NUR 7437
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7444 Advanced Physiology and Pathophysiology Across the Lifespan for APRNs Cr. 4
General physiology and pathologic principles for promoting health and treating disease across the lifespan. This course builds upon previous courses in anatomy and physiology and is a core competency that provides the basis for critical thinking in the role as an advanced practice nurse. Further, it provides an in-depth study of principles of advanced physiology and pathophysiology applicable across the lifespan, including enhancement of knowledge of human physiology of organ systems as well as the etiology, developmental considerations, pathogenesis, morphology, and clinical manifestations of common disease processes. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7445 Advanced Public Health Nursing: Health Promotion and Prevention with Diverse Populations - Didactic Cr. 2
The course focuses on the development of advanced public health nursing knowledge and collaborative practice skills essential to integrating theoretical frameworks. Offered Spring/Summer.
Prerequisites: NUR 7435 with a minimum grade of B and NUR 7436 with a minimum grade of B
Corequisite: NUR 7446
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7446 Advanced Public Health Nursing: Health Promotion and Prevention with Diverse Populations - Clinical Cr. 3
The course focuses on the development of advanced public health nursing knowledge and collaborative practice skills essential to integrating comprehensive community assessments and diverse perspectives when designing and implementing health promotion and prevention programs. Offered Spring/Summer.
Prerequisites: NUR 7435 with a minimum grade of B and NUR 7436 with a minimum grade of B
Corequisite: NUR 7445
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7447 AG-ACNP: Management of Patients with Oncology, Hematology, Mental Health & Life Changes - Didactic Cr. 2
This didactic course prepares the APN student to synthesize the experience of providing care to manage patient populations across the entire spectrum of adults, including young adults, adults, and older adults. The AG-ACNP scope of practice encompasses the provision of care to patients who are characterized as "physiologically unstable, technologically dependent and/or highly vulnerable to complications." This course emphasis is on patients challenged with oncological, hematological, mental health and life style changes across the continuum of care from wellness to illness, with differing and unique developmental needs. In addition, common problems and skills required in acute care such as, pharmacologic and non-pharmacologic management strategies to ameliorate physical and behavioral symptoms are also addressed. Offered Spring/Summer.
Corequisite: NUR 7448
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7448 AG-ACNP: Management of Patients with Oncology, Hematology, Mental Health & Life Changes - Clinical Cr. 4
This clinical course prepares the APN student to synthesize the experience of providing care to manage patient populations across the entire spectrum of adults, including young adults, adults, and older adults. The AG-ACNP scope of practice encompasses the provision of care to patients who are characterized as "physiologically unstable, technologically dependent and/or highly vulnerable to complications." This course emphasis is on patients challenged with oncological, hematological, mental health and life style changes across the continuum of care from wellness to illness, with differing and unique developmental needs. In addition, common problems and skills required in acute care such as, pharmacologic and non-pharmacologic management strategies to ameliorate physical and behavioral symptoms are also addressed. Offered Spring/Summer.
Corequisite: NUR 7447
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7455 Adv Public Health Nursing: Program Planning, Quality Improvement and Evaluation Residency - Didactic Cr. 2
This residency course focuses on the development of knowledge, skills and leadership strategies essential for advanced public health nurses to transform complex systems, and to improve the health of communities and diverse populations. Offered Fall.
Prerequisites: NUR 7445 with a minimum grade of B and NUR 7446 with a minimum grade of B
Corequisite: NUR 7456
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7456 Adv Public Health Nursing: Program Planning, Quality Improvement and Evaluation Residency - Clinical Cr. 3
This residency course focuses on the development of knowledge, skills that emphasizes the application of concepts and theories germane to planning, improving, and evaluating health programs to advance public health, and enhance quality of life. Offered Fall.
Prerequisites: NUR 7445 with a minimum grade of B and NUR 7446 with a minimum grade of B
Corequisite: NUR 7455
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7460 Family Psychiatric Mental Health NP: Adv Practice Nursing with Individuals and Communities -Didactic Cr. 3
This didactic course is designed to give Family Psychiatric Mental Health Nurse Practitioner students opportunities to integrate content about individuals and communities within cultural contexts. Advanced theoretical knowledge and critical thinking skills in relation to the nursing process will be demonstrated. Concepts of individual and community interventions will be applied in a wide range of service environments. Evidence based practice will be highlighted. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7444 with a minimum grade of B-, NUR 7615 with a minimum grade of B-, NUR 7625 with a minimum grade of B-, and NUR 7650 with a minimum grade of B-
Corequisite: NUR 7465
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7465 Family Psychiatric Mental Health NP: Adv Practice Nursing with Individuals and Communities -Clinical Cr. 5
This clinical course is designed to give Family Psychiatric Mental Health Nurse Practitioner students opportunities to integrate content about individuals and communities within cultural contexts. Advanced theoretical knowledge and critical thinking skills in relation to the nursing process will be demonstrated. Concepts of individual and community interventions will be applied in a wide range of service environments. Evidence based practice will be highlighted. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7444 with a minimum grade of B-, NUR 7615 with a minimum grade of B-, NUR 7625 with a minimum grade of B-, and NUR 7650 with a minimum grade of B-
Corequisite: NUR 7460
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7470 Family Psychiatric Mental Health Nurse Practitioner: Advanced Practice Nursing with Groups -Didactic Cr. 3
This didactic course provides the student with advanced knowledge to use group psychotherapy to intervene clients experiencing dysfunctional interpersonal patterns. The clinical portion of this course assists students to develop group therapy clinical skills to treat with clients across the lifespan experiencing acute and chronic psychiatric disorders and mental health issues. Emphasis is on utilization of theoretical and conceptual models for assessing, planning, treating and evaluating dysfunctional patterns in groups, including promotion, maintenance, and restoration of mental health in age-appropriate groups. Additionally, promoting and maintaining effective communication patterns in a variety of groups is addressed. Offered Winter.
Prerequisites: (NUR 7460 with a minimum grade of B and NUR 7465 with a minimum grade of B) or NUR 7885 with a minimum grade of B
Corequisite: NUR 7475
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7475 Family Psychiatric Mental Health Nurse Practitioner: Advanced Practice Nursing With Groups -Clinical Cr. 5
This clinical course provides the student with advanced knowledge to use group psychotherapy to intervene clients experiencing dysfunctional interpersonal patterns. The clinical portion of this course assists students to develop group therapy clinical skills to treat with clients across the lifespan experiencing acute and chronic psychiatric disorders and mental health issues. Emphasis is on utilization of theoretical and conceptual models for assessing, planning, treating and evaluating dysfunctional patterns in groups, including promotion, maintenance, and restoration of mental health in age-appropriate groups. Additionally, promoting and maintaining effective communication patterns in a variety of groups is addressed. Offered Winter.
Prerequisites: (NUR 7460 with a minimum grade of B and NUR 7465 with a minimum grade of B) or NUR 7885 with a minimum grade of B
Corequisite: NUR 7470
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7480 Family Psychiatric Mental Health NP: Advanced Practice Nursing with Families - Didactic Cr. 3
This didactic course provides the student with the advanced knowledge base and clinical skills necessary to use family therapy to intervene with clients experiencing dysfunctional intrafamily patterns. Emphasis is placed on utilization of family theoretical and conceptual models for assessing, planning, and treating dysfunctional patterns and for assessing, promoting, maintaining, and restoring mental health to families and individuals. The impact of political, legal, economic, social, cultural, and technological factors on families, and the mental health care system are also addressed. Offered Spring/Summer.
Prerequisites: NUR 7470 with a minimum grade of B and NUR 7475 with a minimum grade of B
Corequisite: NUR 7485
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7485 Family Psychiatric Mental Health NP: Advanced Practice Nursing with Families - Clinical Cr. 5
This clinical course provides the student with the advanced knowledge base and clinical skills necessary to use family therapy to intervene with clients experiencing dysfunctional intrafamily patterns. Emphasis is placed on utilization of family theoretical and conceptual models for assessing, planning, and treating dysfunctional patterns and for assessing, promoting, maintaining, and restoring mental health to families and individuals. The impact of political, legal, economic, social, cultural, and technological factors on families, and the mental health care system are also addressed. Offered Spring/Summer.
Prerequisites: NUR 7470 with a minimum grade of B and NUR 7475 with a minimum grade of B
Corequisite: NUR 7480
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7555 Pharmacotherapeutics for Advanced Practice Cr. 3
This is a foundational course for the Advanced Practice Nurse programs that addresses, across-the-lifespan, fundamental principles of pharmacodynamics and pharmacokinetic in major drug classes and the organ systems they impact. Students will develop the necessary foundational knowledge to prescribe appropriate medications for major disease and illnesses in a safe and evidence-based manner. Offered Winter.
Prerequisites: NUR 7444 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7615 Psychopathology and Therapeutic Frameworks Across the Lifespan for PMHMP Cr. 2
This course provides an overview of psychopathology and common theoretical frameworks utilized in the treatment of psychiatric disorders. Emphasis will be placed on contemporary therapeutic frameworks, theoretical models and selected current research pertinent to psychopathology across the lifespan. The professional, ethical, and cultural issues related to psychopathology and its treatment will also be discussed. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7625 Psychopharmacology Cr. 2
The course will focus on pharmacokinetics and pharmacodynamics of psychotropic and neurologic medications used across the life span. Emphasis will be on the neuroscience and neurobiology of pharmacological treatments, safety and efficacy of medications, selection of individualized plans, and titration of dosages. Offered Winter.
Prerequisite: NUR 7444 with a minimum grade of B-
Corequisite: NUR 7555
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7650 Advanced Psychiatric Assessment and Diagnostic Reasoning Cr. 1
This course provides students with a knowledge base in mental health assessment of clients across the life span within the context of the advanced psychiatric mental health nursing role. Emphasis is on the acquisition and analysis of relevant data for the development of a comprehensive and holistic mental health assessment and subsequent diagnoses. Focus is on history taking, analysis, data categories, and specific techniques used to identify mental health problems and differential diagnoses in clients across the life span. Offered Spring/Summer.
Prerequisite: NUR 7444 with a minimum grade of B- and NUR 7555 with a minimum grade of B- and NUR 7615 with a minimum grade of B- and NUR 7625 with a minimum grade of B-
Corequisite: NUR 7030
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7670 Pediatric Nurse Practitioner Primary Care: Pathophysiology, Clinical Care & Management I - Didactic Cr. 4
This course provides students with the foundational knowledge and skills necessary to manage the health care needs of the infant, children, and adolescent while providing the conceptual basis for advanced nursing. Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, prescription of therapeutic management/interventions, and outcomes assessment. Health promotion/wellness models, bio-psychosocial and cultural theories are integrated throughout the course. Nurse practitioner management models of care are used in the provision of care to clients. Emphasis is placed on the knowledge necessary to care for infants, children, and adolescents from a variety of cultural, ethnic and racial backgrounds. The specialty seminar component focuses on beginning application of the specialty knowledge of the infant, child, and adolescent health within a broad social context. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7207 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 7675
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7675 Pediatric Nurse Practitioner Primary Care: Pathophysiology, Clinical Care & Management I - Clinical Cr. 4
This clinical course focuses on the application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on incorporating and using diagnostic reasoning, roles of advanced practice nurses, and interventions to promote and/or restore health within this specialty area. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7207 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 7670
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7680 Pediatric Nurse Practitioner Primary Care: Pathophysiology, Clinical Care & Management II - Didactic Cr. 3
This course is designed to provide the student with the opportunity to further develop and demonstrate use of a model of advanced practice nursing. The specialty seminar focuses on strengthening and further development of the application of the specialty knowledge of children's health within a broad social context. Students manage the care of children while assessing for deviations from normal, which may result in collaboration or referral. Development of the advanced practice role, provision of a supportive clinical practice environment, and examination of factors that contribute to the vulnerability of children are included. Offered Winter.
Prerequisites: NUR 7670 with a minimum grade of B and NUR 7675 with a minimum grade of B
Corequisite: NUR 7685
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7685 Pediatric Nurse Practitioner Primary Care: Pathophysiology, Clinical Care & Management II - Clinical Cr. 5
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on strengthening and further development of the nurse practitioner management model, roles of advanced practice nurses and interventions to promote and/or restore health within this specialty area. Offered Winter.
Prerequisites: NUR 7670 with a minimum grade of B and NUR 7675 with a minimum grade of B
Corequisite: NUR 7680
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7690 Pediatric Nurse Practitioner Primary Care: Pathophysiology, Clinical Care & Management III -Didactic Cr. 2
This course is designed to provide the student with opportunities to further develop and demonstrate the use of a model of advanced practice nursing. The specialty seminar aims to strengthen and further develop the application of specialty knowledge of infant, child, and adolescent health within a broad social context. Students manage the care of infants, children, and adolescents while assessing for deviations from normal, which may result in collaboration or referral. Development of the advanced practice role, provision of a supportive clinical practice environment, and examination of factors that contribute to the vulnerability of infants, children, and adolescents are included. Offered Spring/Summer.
Prerequisites: NUR 7680 with a minimum grade of B and NUR 7685 with a minimum grade of B
Corequisite: NUR 7695
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7695 Pediatric Nurse Practitioner Primary Care: Pathophysiology, Clinical Care & Management III -Clinical Cr. 6
This clinical course component focuses on the continued application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on the strengthening and further development of the nurse practitioner management model, roles of advanced practice nurses, and interventions to promote and/ or restore health within this specialty area. Offered Spring/Summer.
Prerequisites: NUR 7680 with a minimum grade of B and NUR 7685 with a minimum grade of B
Corequisite: NUR 7690
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7710 Theoretical Perspectives of Teaching in Nursing Cr. 3
Theories of learning and teaching, critical thinking, value development, and psychomotor skill development as basis for teaching in nursing. Teaching methods in nursing for classroom and clinical practice. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7720 Evaluation and Testing in Nursing Education Cr. 3
Development of educational program in nursing. Test construction, clinical and performance evaluation, and grading. Offered Spring/ Summer.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7730 Practice Teaching in Nursing Cr. 3
Application experience in educational setting appropriate to student's needs and goals. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 7865 Foundations of Complementary and Alternative Medicine (CAM) Cr. 3
Philosophical, historical, physiological basis of CAM; use in advanced practice nursing. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7920 Pediatric Nurse Practitioner Acute Care: Pathophysiology, Clinical Care and Management I - Didactic Cr. 4
This course provides students with the foundational knowledge and skills necessary to manage the health care needs of the infant, children, and adolescent while providing the conceptual basis for advanced nursing. Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, prescription of therapeutic management/interventions, and outcomes assessment. Health promotion/wellness models, bio-psychosocial and cultural theories are integrated throughout the course. Nurse practitioner management models of care are used in the provision of care to clients. Emphasis is placed on the knowledge necessary to care for infants, children, and adolescents from a variety of cultural, ethnic and racial backgrounds. The specialty seminar component focuses on beginning application of the specialty knowledge of the infant, child, and adolescent health within a broad social context. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7207 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 7925
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7925 Pediatric Nurse Practitioner Acute Care: Pathophysiology, Clinical Care and Management I - Clinical Cr. 4
This clinical course focuses on the application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on incorporating and using diagnostic reasoning, roles of advanced practice nurses, and interventions to promote and/or restore health within this specialty area. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7207 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 7920
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7930 Pediatric Nurse Practitioner Acute Care: Pathophysiology, Clinical Care, and Management II -Didactic Cr. 3
This course is designed to provide the student with the opportunity to further develop and demonstrate use of a model of advanced practice nursing. The specialty seminar focuses on strengthening and further development of the application of the specialty knowledge of children's health within a broad social context. Students manage the care of children while assessing for deviations from normal, which may result in collaboration or referral. Development of the advanced practice role, provision of a supportive clinical practice environment, and examination of factors that contribute to the vulnerability of children are included. Offered Winter.
Prerequisites: (NUR 7920 with a minimum grade of B and NUR 7925 with a minimum grade of B) or NUR 7225 with a minimum grade of B
Corequisite: NUR 7935
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7935 Pediatric Nurse Practitioner Acute Care: Pathophysiology, Clinical Care and Management II -Clinical Cr. 5
The clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on strengthening and further development of the nurse practitioner management model, roles of advanced practice nurses and interventions to promote and/or restore health within this specialty area. Offered Winter.
Prerequisites: (NUR 7920 with a minimum grade of B and NUR 7925 with a minimum grade of B) or NUR 7225 with a minimum grade of B
Corequisite: NUR 7930
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7940 Pediatric Nurse Practitioner Acute Care: Pathophysiology, Clinical Care and Management III- Didactic Cr. 2
This course is designed to provide the student with opportunities to further develop and demonstrate the use of a model of advanced practice nursing. The specialty seminar aims to strengthen and further develop the application of specialty knowledge of infant, child, and adolescent health within a broad social context. Students manage the care of infants, children, and adolescents while assessing for deviations from normal, which may result in collaboration or referral. Development of the advanced practice role, provision of a supportive clinical practice environment, and examination of factors that contribute to the vulnerability of infants, children, and adolescents are included. Offered Spring/Summer.
Prerequisites: NUR 7930 with a minimum grade of B and NUR 7935 with a minimum grade of B
Corequisite: NUR 7945
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7945 Pediatric Nurse Practitioner Acute Care: Pathophysiology, Clinical Care and Management III -Clinical Cr. 6
This clinical course component focuses on the continued application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on the strengthening and further development of the nurse practitioner management model, roles of advanced practice nurses, and interventions to promote and/or restore health within this specialty area. Offered Spring/Summer.
Prerequisites: NUR 7930 with a minimum grade of B and NUR 7935 with a minimum grade of B
Corequisite: NUR 7940
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7950 Neonatal Nurse Practitioner: Pathophysiology, Clinical Care, and Management I - Didactic Cr. 4
This course provides students with the foundational knowledge and skills necessary to manage the health care needs of well, low- and high-risk neonates while providing the conceptual basis for advanced nursing. Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. The nurse practitioner management model of care is used in the provision of care to clients. Emphasis is placed on the knowledge necessary to care for neonates from a variety of cultural, ethnic and racial backgrounds. The specialty seminar component focuses on beginning application of the specialty knowledge of normal and high-risk neonatal care within a broad social context. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7200 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 7955
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7955 Neonatal Nurse Practitioner: Pathophysiology, Clinical Care, and Management I - Clinical Cr. 4
This clinical course focuses on the application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on incorporating and using diagnostic reasoning, roles of advanced practice nurses, and interventions to promote and/or restore health within this specialty area. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7200 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 7950
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7960 Neonatal Nurse Practitioner: Pathophysiology, Clinical Care, and Management II - Didactic Cr. 3
This course is designed to provide the student with the opportunity to further develop and demonstrate use of a model of advanced practice nursing. The specialty seminar focuses on strengthening and further development of the application of the specialty knowledge of high-risk neonatal care within a broad social context. Students manage the care of high-risk neonates while assessing for deviations from normal which may result in collaboration or referral. Development of the advanced practice role, provision of a supportive clinical practice environment, and examination of factors that contribute to the vulnerability of neonates are included. Offered Winter.
Prerequisites: NUR 7950 with a minimum grade of B and NUR 7955 with a minimum grade of B
Corequisite: NUR 7965
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7965 Neonatal Nurse Practitioner: Pathophysiology, Clinical Care, and Management II - Clinical Cr. 5
This course is designed to provide the student with the opportunity to further develop and demonstrate use of a model of advanced practice nursing. The specialty seminar focuses on strengthening and further development of the application of the specialty knowledge of high-risk neonatal care within a broad social context. Students manage the care of high-risk neonates while assessing for deviations from normal which may result in collaboration or referral. Development of the advanced practice role, provision of a supportive clinical practice environment, and examination of factors that contribute to the vulnerability of neonates are included. Offered Winter.
Prerequisites: NUR 7950 with a minimum grade of B and NUR 7955 with a minimum grade of B
Corequisite: NUR 7960
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7970 Neonatal Nurse Practitioner: Pathophysiology, Clinical Care, and Management III - Didactic Cr. 2
This course focuses on synthesis of an advanced practice nursing model for the care of high-risk neonates. Emphasis is on health promotion, development, and long term care of vulnerable populations within a broad social context. The specialty seminar component focuses on strengthening and applying the specialty knowledge of high-risk neonatal care within a broad social context. Offered Spring/Summer.
Prerequisites: NUR 7960 with a minimum grade of B and NUR 7965 with a minimum grade of B
Corequisite: NUR 7975
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7975 Neonatal Nurse Practitioner: Pathophysiology, Clinical Care, and Management III - Clinical Cr. 6
This course focuses on synthesis of an advanced practice nursing model for the care of high-risk neonates. Emphasis is on health promotion, development, and long term care of vulnerable populations within a broad social context. The specialty seminar component focuses on strengthening and applying the specialty knowledge of high-risk neonatal care within a broad social context. Offered Spring/Summer.
Prerequisites: NUR 7960 with a minimum grade of B and NUR 7965 with a minimum grade of B
Corequisite: NUR 7970
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 7990 Directed Study in Nursing Cr. 1-8
Individually designed courses of study in nursing. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 16 Credits

NUR 8011 Scientific Writing in Nursing Cr. 1
This seminar assists students in becoming more effective scientific writers in order to be successful nurse scholars and scientists. Students will conduct a mini-review of the literature related to a specific aspect of urban health. After identifying a precise statement to focus their review, students will synthesize the literature and write iterative drafts of their review. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree; enrollment limited to students in the College of Nursing.

NUR 8012 Philosophical Basis of Nursing Cr. 3
This course focuses on the philosophical underpinnings of the discipline in order to assist students in understanding the tripartite role of a PhD-prepared nurse as scholar, scientist, and steward of the discipline. Students will explore the interaction of historical, theoretical, and philosophical contexts within which nursing science has developed, discuss the role each has played in the process of developing nursing as an academic research discipline, and examine these for congruence with contemporary thinking. Emphasis is on analyzing epistemological and ontological assumptions underlying the discipline, the science, and the practice of nursing. Debates arising from philosophy and the history of science and nursing inform discussions about the nature of science and nursing's past, present, and future directions in theory and knowledge development. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree; enrollment limited to students in the College of Nursing.

NUR 8014 Health Interventions Cr. 3
This seminar evaluates of intervention research to create nursing knowledge to improve health outcomes for urban populations. Students will examine select intervention designs to evaluate the effectiveness of therapeutic interventions related to their phenomenon of interest. The course also addresses important considerations of measurement, feasibility, fidelity, and data safety monitoring plans when conducting intervention research. Ethical concerns related to intervention research are discussed. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8020 Theoretically-Based Nursing Inquiry Cr. 3
This course provides students with an opportunity to synthesize and apply knowledge from the theoretical and empirical literature to a phenomenon of interest. It will assist students in translating philosophical and theoretical perspectives into research methodologies. Concept analysis and construction, theory development, and relationships among conceptual frameworks, theories, and empirical referents are critically analyzed. The course will enable students to develop or further explicate a theoretical framework to guide a study within an emerging program of research in urban health. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8040 Quantitative Research Methods Cr. 3
This is the first of a two-part sequence research methods course. The course focuses on the fundamental principles of research as a foundation to prepare PhD educated nurses in their scientific endeavors. Concepts related to reliability and validity, sampling theory, measurement strategies, data collection strategies, and ethical conduct in research are discussed. Strategies for maintaining data quality and integrity are also discussed. The emphasis of this course is on research principles as it relates to a quantitative approach. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8060 Qualitative Research Methods Cr. 3
The emphasis of this course is on the relevance of qualitative approaches to the advancement of knowledge and practice in nursing and healthcare. An overview of qualitative traditions will be covered. Sampling, measurement, data collection, data management, and analysis will be discussed relative to various qualitative approaches. Strategies to maintain data quality and integrity are also discussed. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8065 Health Economics and Policy Evaluation of Nursing Care for Vulnerable Populations Cr. 3
The intersection of vulnerable populations and their health care needs will be explored from a health economics and health policy approach. The course will promote discourse on the economic structure of the American health system as it relates to disparities. Further, it will explore the economic analytical evaluation of health care through current economic models of analysis. Offered Spring/Summer.
Prerequisites: FPH 7240 with a minimum grade of C and NUR 8630 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Nursing Practice degree.

NUR 8085 Pilot Study - Part I Cr. 3
This individually-tailored course is designed to provide BSN-PhD students with additional opportunity to gain experience in applying all aspects of the research process. The Pilot study is separate from, and may not replace, the one semester of required Research Residency. Part I of the Pilot Study focuses on the preliminary work and proposal development needed to implement a small study. The Pilot Study is done with the permission and direction of the student's academic/research advisor. Offered Every Term.
Prerequisites: NUR 8040 with a minimum grade of B, NUR 8060 with a minimum grade of B, NUR 8610 with a minimum grade of B, and NUR 8612 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

NUR 8185 Pilot Study - Part II Cr. 3
This individually-tailored course is designed to provide BSN-PhD students with additional opportunity to gain experience in applying all aspects of the research process. The Pilot study is separate from, and may not replace, the one semester of required Research Residency. Part II of the Pilot Study focuses on the implementation of a small study developed in Part I, including analysis of the data collected, and preparation of a report of the findings. Part II of the Pilot Study is done with the permission and direction of the student's academic/research advisor, and with required IRB approval. Offered Every Term.
Prerequisites: NUR 8040 with a minimum grade of B, NUR 8060 with a minimum grade of B, NUR 8610 with a minimum grade of B, NUR 8612 with a minimum grade of B, and NUR 8085 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

NUR 8210 Determinants of Health and Health Disparities Cr. 3
This course examines multiple determinants of health and issues related to health disparities among vulnerable populations in urban environments. Course content addresses biophysiological, genetic, behavioral, cultural, environmental (social and physical), economic, and health policy factors that affect health and contribute to health disparities. It prepares students to generate questions of concern to health and health outcomes; and to collaborate in interdisciplinary research teams regarding determinants of health and health disparities. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8335 Grant Writing Cr. 3
This course focuses on writing a research grant application. In-class content will address essential aspects of research grant application and development. Out-of-class time will be spent on writing a grant proposal. The course provides students with an iterative process to develop their grant writing skills. Offered Spring/Summer.
Prerequisites: NUR 8040 with a minimum grade of B- (may be taken concurrently), NUR 8060 with a minimum grade of B- (may be taken concurrently), NUR 8610 with a minimum grade of B- (may be taken concurrently), and NUR 8612 with a minimum grade of B- (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

NUR 8340 Family Nurse Practitioner I: Foundations Cr. 3
This course will address the foundational knowledge and skills, from a family centered physiological systems-based approach, necessary to diagnose, treat and manage 1) common acute and chronic health care problems across the lifespan and 2) pregnancy and fertility issues for women of child-bearing age. Focus on refinement and further development of basic clinical diagnostic reasoning, diagnostic skills, including physical examination, diagnosis, treatment, management, and outcomes assessment. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7035 with a minimum grade of B-, NUR 7444 with a minimum grade of B-, and NUR 7555 with a minimum grade of B-
Corequisite: NUR 8345
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8345 Family Nurse Practitioner Clinical I: Foundations Cr. 5
This clinical course will address the application of foundational knowledge and skills, from a family centered physiological systems-based approach, necessary to make complete an appropriate history and physical exam, differential diagnosis and development of treatment and management plan for selected acute and chronic diseases across the lifespan and care of the childbearing female. Focus will be on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment across the lifespan within the social context. Offered Fall.
Prerequisite: NUR 7030 with a minimum grade of B and NUR 7035 with a minimum grade of B
Corequisite: NUR 8340
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8350 Family Nurse Practitioner II: Intermediate Cr. 3
This course will address the synthesis of knowledge and skills, from a family centered physiological systems-based approach, necessary to diagnose, treat and manage 1) chronic health care problems based on selected systems across the lifespan and 2) problems of pregnancy 3) non-pharmacological and pharmacological approaches 4) common psychiatric issues, and 5) Gerontologic approaches. Focus on continued refinement and further development of clinical diagnostic reasoning, diagnostic skills, including physical examination, diagnosis, treatment, management, and outcomes assessment in the systems covered. Offered Winter.
Prerequisites: (NUR 8340 with a minimum grade of B and NUR 8345 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8355
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8355 Family Nurse Practitioner Clinical II: Intermediate Cr. 5
The clinical (lab) component focuses on the continued application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on strengthening and further development of the nurse practitioner management model, roles of Family Nurse Practitioner. Knowledge and skills, from a family centered systems-based approach, necessary to diagnose, treat and manage, and interventions to promote and/or restore health will be applied. The lab component includes 225 hours of clinical practice. Offered Winter.
Prerequisites: (NUR 8340 with a minimum grade of B and NUR 8345 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8350
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8360 Family Nurse Practitioner III: Advanced Cr. 3
This course will address the synthesis of knowledge and skills, from a family centered increasing complexity physiological systems-based approach, necessary to diagnose, treat and manage 1) chronic health care problems based on selected systems across the lifespan and 2) non-pharmacological and pharmacological approaches; 3) office emergencies 4) Gerontologic disease; and 5) professional and transition into practice issues. Focus on continued refinement and further development of clinical diagnostic reasoning, diagnostic skills, including physical examination, diagnosis, treatment, management, and outcomes assessment in the systems covered. Offered Spring/Summer.
Prerequisites: NUR 8350 with a minimum grade of B and NUR 8355 with a minimum grade of B
Corequisite: NUR 8365
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8365 Family Nurse Practitioner Clinical III: Advanced Cr. 5
The clinical component focuses on the continued synthesis and application of specialty knowledge foundational to the Family Nurse Practitioner. Emphasis is placed on preparation for transition into practice based on the nurse practitioner management model, roles of Family Nurse Practitioner. Knowledge and skills, from a family centered systems-based approach, necessary to diagnose, treat and manage, and interventions to promote and/or restore health will be applied. The clinical component includes 225 hours of clinical practice. Offered Spring/Summer.
Prerequisites: NUR 8350 with a minimum grade of B and NUR 8355 with a minimum grade of B
Corequisite: NUR 8360
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8370 Pediatric Primary Care Nurse Practitioner I: Foundations Cr. 4
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7207 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 8375
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8375 Pediatric Primary Care Nurse Practitioner Clinical I: Foundations Cr. 4
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. The lab component includes 180 hours of clinical practice. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7207 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 8370
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8380 Pediatric Primary Care Nurse Practitioner II: Intermediate Cr. 3
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Winter.
Prerequisites: NUR 8370 with a minimum grade of B and NUR 8375 with a minimum grade of B
Corequisite: NUR 8385
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8385 Pediatric Primary Care Nurse Practitioner Clinical II: Intermediate Cr. 5
This clinical course component focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. The lab component includes 225 hours of clinical practice. Offered Winter.
Prerequisites: NUR 8370 with a minimum grade of B and NUR 8375 with a minimum grade of B
Corequisite: NUR 8380
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8390 Pediatric Primary Care Nurse Practitioner III: Advanced Cr. 2
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Spring/Summer.
Prerequisites: NUR 8380 with a minimum grade of B and NUR 8385 with a minimum grade of B
Corequisite: NUR 8395
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8395 Pediatric Primary Care Nurse Practitioner Clinical III: Advanced Cr. 6
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Spring/Summer.
Prerequisites: NUR 8380 with a minimum grade of B and NUR 8385 with a minimum grade of B
Corequisite: NUR 8390
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8410 Psychiatric Mental Health Nurse Practitioner I: Foundations Cr. 3

This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Fall.

Prerequisites: NUR 7030 with a minimum grade of B, NUR 7444 with a minimum grade of B-, NUR 7555 with a minimum grade of B-, NUR 7615 with a minimum grade of B-, NUR 7625 with a minimum grade of B-, and NUR 7650 with a minimum grade of B-

Corequisite: NUR 8415

Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8415 Psychiatric Mental Health Nurse Practitioner Clinical I: Foundations Cr. 5

This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. The PMHNP specialty content is designed to give Family Psychiatric Mental Health Nurse Practitioner students opportunities to integrate content about individuals and communities within cultural contexts. Advanced theoretical knowledge and critical thinking skills in relation to the nursing process will be demonstrated. Concepts of individual and community interventions will be applied in a wide range of service environment. Evidence based practice will be highlighted. Offered Fall.

Prerequisites: NUR 7030 with a minimum grade of B, NUR 7444 with a minimum grade of B-, NUR 7555 with a minimum grade of B-, NUR 7615 with a minimum grade of B-, NUR 7625 with a minimum grade of B-, and NUR 7650 with a minimum grade of B-

Corequisite: NUR 8410

Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8420 Psychiatric Mental Health Nurse Practitioner I: Intermediate Cr. 3

This course is designed to provide the student with the knowledge and opportunity to further develop and demonstrate use of a model of advanced practice across the developmental lifespan. The specialty seminar focuses on strengthening and further development of the application of the specialty knowledge of acute care, children, community, neonates, primary care, psychiatric and women's health within a broad social context. Students manage the care of clients in their designated specialty area while assessing for deviations from normal which may result in collaboration or referral. Development of the advanced practice role, provision of a supportive clinical practice environment, and examination of factors that contribute to the vulnerability of clients across the developmental lifespan are included. Offered Winter.

Prerequisites: (NUR 8410 with a minimum grade of B and NUR 8415 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)

Corequisite: NUR 8425

Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8425 Psychiatric Mental Health Nurse Practitioner Clinical II: Intermediate Cr. 5

This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Winter.

Prerequisites: (NUR 8410 with a minimum grade of B and NUR 8415 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)

Corequisite: NUR 8420

Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8430 Psychiatric Mental Health Nurse Practitioner III: Advanced Cr. 3

This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the adult developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. The APN management models of care are used in the provision of care to clients. Emphasis is placed on the knowledge necessary to care for clients across the adult developmental spectrum from a variety of cultural, ethnic, and racial backgrounds. Offered Spring/Summer.

Prerequisites: NUR 8420 with a minimum grade of B and NUR 8425 with a minimum grade of B

Corequisite: NUR 8435

Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8435 Psychiatric Mental Health Nurse Practitioner Clinical III: Advanced Cr. 5

The clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Spring/Summer.

Prerequisites: NUR 8420 with a minimum grade of B and NUR 8425 with a minimum grade of B

Corequisite: NUR 8430

Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8440 Adult Gerontology Primary Care Nurse Practitioner I: Foundations Cr. 3

This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Fall.

Prerequisites: NUR 7030 with a minimum grade of B, NUR 7444 with a minimum grade of B-, and NUR 7555 with a minimum grade of B-

Corequisite: NUR 8445

Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8445 Adult Gerontology Primary Care Nurse Practitioner Clinical I: Foundations Cr. 5
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7444 with a minimum grade of B-, and NUR 7555 with a minimum grade of B-
Corequisite: NUR 8440
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8450 Adult Gerontology Primary Care Nurse Practitioner II: Intermediate Cr. 3
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Winter.
Prerequisites: (NUR 8440 with a minimum grade of B and NUR 8445 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8455
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8455 Adult Gerontology Primary Care Nurse Practitioner Clinical II: Intermediate Cr. 5
This clinical course component focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Winter.
Prerequisites: (NUR 8440 with a minimum grade of B and NUR 8445 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8450
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8460 Adult Gerontology Primary Care Nurse Practitioner III: Advanced Cr. 3
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Spring/Summer.
Prerequisites: NUR 8450 with a minimum grade of B and NUR 8455 with a minimum grade of B
Corequisite: NUR 8465
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8465 Adult Gerontology Primary Care Nurse Practitioner Clinical III: Advanced Cr. 5
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Spring/Summer.
Prerequisites: NUR 8450 with a minimum grade of B and NUR 8455 with a minimum grade of B
Corequisite: NUR 8460
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8470 Pediatric Acute Care Nurse Practitioner I: Foundations Cr. 4
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7207 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 8475
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8475 Pediatric Acute Care Nurse Practitioner Clinical I: Foundations Cr. 4
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7207 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 8470
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8480 Pediatric Acute Care Nurse Practitioner II: Intermediate Cr. 3
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Winter.
Prerequisites: (NUR 8470 with a minimum grade of B and NUR 8475 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8485
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8485 Pediatric Acute Care Nurse Practitioner Clinical II: Intermediate Cr. 5
This clinical course component focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Winter.
Prerequisites: (NUR 8470 with a minimum grade of B and NUR 8475 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8480
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8490 Pediatric Acute Care Nurse Practitioner III: Advanced Cr. 2
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Spring/Summer.
Prerequisites: NUR 8480 with a minimum grade of B and NUR 8485 with a minimum grade of B
Corequisite: NUR 8495
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8495 Pediatric Acute Care Nurse Practitioner Clinical III: Advanced Cr. 6
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Spring/Summer.
Prerequisites: NUR 8480 with a minimum grade of B and NUR 8485 with a minimum grade of B
Corequisite: NUR 8490
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8540 Adult Gerontology Acute Care Nurse Practitioner I: Foundations Cr. 3
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7444 with a minimum grade of B-, and NUR 7555 with a minimum grade of B-
Corequisite: NUR 8545
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8545 Adult Gerontology Acute Care Nurse Practitioner Clinical I: Foundations Cr. 5
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7444 with a minimum grade of B-, and NUR 7555 with a minimum grade of B-
Corequisite: NUR 8540
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8550 Adult Gerontology Acute Care Nurse Practitioner II: Intermediate Cr. 3
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Winter.
Prerequisites: (NUR 8540 with a minimum grade of B and NUR 8545 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8555
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8555 Adult Gerontology Acute Care Nurse Practitioner Clinical II: Intermediate Cr. 5
This clinical course component focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Winter.
Prerequisites: (NUR 8540 with a minimum grade of B and NUR 8545 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8550
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8560 Adult Gerontology Acute Care Nurse Practitioner III: Advanced Cr. 3
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Spring/Summer.
Prerequisites: NUR 8550 with a minimum grade of B and NUR 8555 with a minimum grade of B
Corequisite: NUR 8565
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8565 Adult Gerontology Acute Care Nurse Practitioner Specialty III: Advanced Cr. 5
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Spring/Summer.
Prerequisites: NUR 8550 with a minimum grade of B and NUR 8555 with a minimum grade of B
Corequisite: NUR 8560
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8570 Neonatal Nurse Practitioner I: Foundations Cr. 4
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7200 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 8575
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8575 Neonatal Nurse Practitioner Clinical I: Foundations Cr. 4
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Fall.
Prerequisites: NUR 7030 with a minimum grade of B, NUR 7200 with a minimum grade of B-, and NUR 7444 with a minimum grade of B-
Corequisite: NUR 8570
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8580 Neonatal Nurse Practitioner II: Intermediate Cr. 3
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Winter.
Prerequisites: (NUR 8570 with a minimum grade of B and NUR 8575 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8585
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8585 Neonatal Nurse Practitioner Clinical II: Intermediate Cr. 5
This clinical course component focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Winter.
Prerequisites: (NUR 8570 with a minimum grade of B and NUR 8575 with a minimum grade of B) or (NUR 8670 with a minimum grade of B and NUR 8675 with a minimum grade of B)
Corequisite: NUR 8580
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8590 Neonatal Nurse Practitioner III: Advanced Cr. 2
This course provides students with the foundational knowledge and skills necessary to manage the health care needs across the developmental spectrum, while providing the conceptual basis for advanced practice nursing (APN). Course content focuses on refinement and further development of basic clinical diagnostic skills, including physical examination, diagnosis, management, interventions, and outcomes assessment. Health promotion/wellness models, biopsychosocial and cultural theories are integrated throughout the course. Offered Spring/Summer.
Prerequisites: NUR 8580 with a minimum grade of B and NUR 8585 with a minimum grade of B
Corequisite: NUR 8595
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8595 Neonatal Nurse Practitioner Clinical III: Advanced Cr. 6
This clinical course focuses on the continued application of specialty knowledge foundational to advanced practice nursing or nurse-midwifery. Emphasis is placed on strengthening and further development of the nurse practitioner/nurse-midwifery management model, roles of advanced practice nurses, and interventions to promote and/or restore health within each specialty area. Offered Spring/Summer.
Prerequisites: NUR 8580 with a minimum grade of B and NUR 8585 with a minimum grade of B
Corequisite: NUR 8590
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8610 Applied Statistical Analysis for Health Care Research I Cr. 3
The purpose of this course is to provide students with the application of selected univariate statistical procedures commonly used in nursing and health research. Topics will include descriptive and inferential statistics such as measures of central tendency and variability, sampling, estimation, hypothesis testing, analysis of variance, regression and correlation, analysis of covariance, analysis of frequency and nonparametric procedures. Emphasis is on the utilization and interpretation of basic univariate procedures applied in nursing and health research. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8612 Applied Statistical Analysis for Health Care Research II Cr. 3
This course provides students with an opportunity to apply advanced multivariate statistical procedures. It will cover a range of advanced quantitative techniques, such as discriminant analysis, logistic regression analysis: dichotomous response, logistic regression analysis: polytomous response, principal component analysis, factor analysis, cluster analysis and survival analysis. It also addresses statistical analysis for advanced quantitative designs such as analysis of variance for some unbalanced designs, analysis of variance for some fixed-, random-, and mixed- effects models, nested or hierarchical designs, multivariate repeated-measures analysis of variance and power analysis and sample size determination. An introduction to psychometric theory for instrument development also will be addressed. Offered Winter.
Prerequisites: NUR 8610 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8615 Informatics Innovations in Nursing Cr. 3
Development of understanding of concepts in health care informatics relevant to the advanced practice nurse. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 8620 Foundations of Nursing as a Discipline Cr. 3
Students will critically examine factors that have contributed to the development of the discipline of nursing, including the impact of philosophical, epistemological, and historical factors on the development of nursing science and its translation. Relevant theories and models from nursing and related disciplines for applicability to Doctor of Nursing practice role will be explored. Strategies for evaluating theory as a foundation for the DNP project will be developed. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Nursing Practice program; enrollment is limited to Graduate level students.

NUR 8625 Evidence Based Nursing Practice: Theoretical and Methodological Issues Cr. 3
Scientific foundation for integration of evidence based knowledge into clinical practice. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 8650 Advanced Professional Leadership Cr. 3
Preparation of advanced nurses and others to effectively transition into the role of leader and change agent. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 8653 Healthcare Analytic Methods, Data Management, Evaluation, and Outcomes Cr. 4
This course prepares students to appraise data for use in design, delivery, and evaluation of evidence-based care. This appraisal includes use of mechanisms for securing data and use of properly designed data collection instruments to assist with making practical conclusions about empirical data using clinical judgement to set clinical benchmarks and assess organizational culture with the goal of improving patient, population, and health system. Offered Spring/Summer.
Prerequisites: NUR 7000 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

NUR 8665 Health Policy, Economics, Ethics and Evaluation in Advanced Practice Nursing Cr. 4
Upon completion of this course, students will attain knowledge and skills that will allow them to critically analyze problems, assess feasibility of policy and program implementation, and to propose policy initiatives, that are integral competencies for practice in the heavily regulated discipline of nursing. Students will engage in discourse on the economic structure of the American health system as it relates to disparities. The focus will be on the role of the Advanced Practice Nurse in setting a policy agenda that identifies the gaps in policy and economics impacting vulnerable populations. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 8890 Special Topics in Nursing Cr. 1-8
Exploration and analysis of topics significant to the development of nursing science and professional practice at the doctoral level. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.
Repeatable for 8 Credits

NUR 8895 Population Health for Nursing Cr. 3
Introduction to the basic concepts of epidemiology as tools that will promote understanding of the complexity of local, national, and global healthcare systems. Emphasis is on the use of epidemiologic reasoning in deriving inferences about the etiology of health outcomes from population data and in guiding the design of health service programs. Discussion of behavioral and contextual factors that converge to impact the health of individuals, families, and communities in relationship to strategies that advanced practice nurses use to mitigate these factors. Students will be challenged to develop approaches for using epidemiology to influence, create, and lead change. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 8990 Directed Study Cr. 1-8
Individually designed courses in nursing for doctoral students whose needs and interests are not met in scheduled classes. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

NUR 9508 DNP Project Proposal Development Practicum I Cr. 4
This course requires the student to engage faculty and community leaders in the development of their translation of science into practice through application of theory, evidence-based practice, leadership, and DNP focused methods. The students will utilize the required core courses to develop a project proposal ready for implementation at completion of the semester. The student will establish working relationships with community or organizational leaders and develop a broader perspective of their specific practice change topic. Offered Every Term.
Prerequisites: NUR 7000 with a minimum grade of B-, NUR 8620 with a minimum grade of B-, NUR 8625 with a minimum grade of B-, NUR 8650 with a minimum grade of B-, (NUR 8653 with a minimum grade of B- or (NUR 8635 with a minimum grade of B- and NUR 8604 with a minimum grade of B-)), and (NUR 8665 with a minimum grade of B- or (NUR 8630 with a minimum grade of B- and NUR 8065 with a minimum grade of B-))
Restriction(s): Enrollment is limited to Graduate level students.

NUR 9510 DNP Project Practicum III Cr. 4
This is an individualized practicum supervised and approved by the DNP Project Chair. This course builds on the knowledge and skills developed in the core courses. The student, working with their DNP Project Chair, will implement the project as approved by the student's DNP Project Committee. The DNP student will meet with relevant organizational leaders as it relates to the development and implementation of the DNP Project. The DNP Project will be implemented in a setting approved by the DNP Project Committee. Offered Every Term.
Prerequisites: NUR 9505 with a minimum grade of B- or NUR 9508 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 9520 DNP Project Cr. 4
This is an individualized practicum supervised and approved by the DNP Project Chair. This course builds on the knowledge and skills developed in the core courses. The student, working with their DNP Project Committee, will prepare the final DNP Product as required by the DNP Program. The course provides the student with the opportunity to demonstrate their ability to analyze, synthesize and apply clinical inquiry knowledge and competencies through written and public presentation. Offered Fall, Winter.
Prerequisites: NUR 9510 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Nursing.

NUR 9530 DNP Project Proposal Development Practicum Cr. 3
The purpose of this course is to facilitate development of a comprehensive, approved DNP Project Proposal endorsed by the DNP Project Team Chair and Reader. Students will actively engage with faculty & community leaders (institutional, community, and political spheres) to translate scientific evidence into practice through application of relevant theories, evidence-based practices, leadership principles, DNP-focused methodologies. Students will build collaborative relationships with community and organizational leaders to gain a broader perspective on their specific practice change topics. The Chair, with these leaders and subject matter experts, will provide guidance and support to ensure the proposal is both relevant and feasible. This course requires a minimum of 135 practicum hours, with at least 24 hours dedicated to direct engagement with identified leaders. By the end of the semester, students will have developed a project proposal ready for implementation. Offered Every Term.
Prerequisites: NUR 7000 with a minimum grade of B-, NUR 8620 with a minimum grade of B-, NUR 8625 with a minimum grade of B-, NUR 8650 with a minimum grade of B-, 1 of (NUR 8653 with a minimum grade of B- or (NUR 8604 with a minimum grade of B- or NUR 8635 with a minimum grade of B-)), and 1 of (NUR 8665 with a minimum grade of B- or (NUR 8630 with a minimum grade of B- or NUR 8065 with a minimum grade of B-))
Restriction(s): Enrollment is limited to Graduate level students.

NUR 9540 DNP Project Implementation Practicum Cr. 3
In this individualized, supervised practicum, the DNP student will implement their project as approved by the DNP Project Team, under the guidance of their DNP Project Chair. Building on the knowledge and skills developed in core courses and NUR 9508, students will engage with key leaders in institutional, community, and political settings to support the successful implementation of their DNP Project. The project will be carried out in a setting approved by the DNP Project Team, providing students with practical experience in translating evidence-based research into practice. Offered Every Term.
Prerequisites: NUR 9530 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

NUR 9550 DNP Project Cr. 2
This individualized practicum is supervised and approved by the DNP Project Team. Building on the knowledge and skills developed in core courses, students will collaborate with their DNP Project Team to prepare their final DNP project, as required by the DNP program. The course provides students with the opportunity to demonstrate their ability to analyze, synthesize, and apply evidence-based knowledge and competencies through both written and public presentations of their project outcomes. Offered Fall, Winter.
Prerequisites: NUR 9540 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.

NUR 9980 Qualifying Exam Cr. 3
The Qualifying Exam is to test the student's knowledge of nursing science, assess familiarity with published research in the field, and determine if the student has the critical, analytical, and writing skills necessary to complete the PhD dissertation research. Further, the purpose is to demonstrate attainment of the WSU College of Nursing's Terminal Behaviors for PhD Candidacy. The preparation for this exam gives a student the opportunity to integrate studies completed during graduate school in nursing science and other research disciplines (concentrations) for a proposed research area. Prior to registering, students must have completed 50 credits of the plan of work (including transfer credits). Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

NUR 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

NUR 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Students must conduct a piece of original research approved by the dissertation committee. In this course a student begins work on the approved research study. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

NUR 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Students must conduct a piece of original research approved by the dissertation committee. In this course, a student works on the completion and final defense of the approved research study. Offered Every Term.
Prerequisite: NUR 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

NUR 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: NUR 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

NUR 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: NUR 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

NUR 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

OT - Occupational Therapy

OT 4990 Directed Study Cr. 1-2
Offered Every Term.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 5 Credits

OT 5010 Foundations of Occupational Therapy and Occupational Science Cr. 4
Provides an introduction to occupation, the history and philosophy of occupational therapy, evidence and theoretical models that guide the profession, the sociocultural forces that influence occupation, and the processes and procedures utilized by the occupational therapist. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $50

OT 5030 Health Conditions II: Mental Health Cr. 4
Major categories of psychiatric conditions throughout the lifespan are presented. Diagnostic criteria and treatment strategies in traditional and community settings are presented with fieldwork requirements. Guest lectures from medical and community settings present on mental health conditions and implications. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5045 Therapeutic Media Cr. 2
The performance, adaptation and utilization of processes involved in selected creative and manual tasks and activities, which have therapeutic value for individuals across the lifespan. Included are principles and methods of teaching appropriate to the role of the occupational therapist. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5055 Life Occupations I Cr. 3
The first of two life occupations courses across the lifespan focuses on self care based on the Occupational Therapy Practice Framework III. Students will examine areas of occupation and develop assessment and intervention strategies while refining documentation skills. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5065 Life Occupations II Cr. 3
Role of leisure in health, wellness, prevention and rehabilitation; focus: across the life span. Explores and develops assessment tools, treatment plans for diverse populations; includes experiential learning. Second of two courses. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $50

OT 5150 Cognition and Visual Perception Cr. 3
Offers further information regarding control of movement, forms of learning, sensory-perceptual processing, and cognitive processing for engagement in meaningful occupation. Offered Yearly.

OT 5220 Therapeutic Media Cr. 2
The performance, adaptation and utilization of processes involved in selected creative and manual tasks and activities, which have therapeutic value for individuals across the lifespan. Included are principles and methods of teaching appropriate to the role of the occupational therapist. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $20

OT 5300 Surface Anatomy for Occupational Therapy Cr. 2
Students will: 1) practice and develop palpation skills, 2) locate bony landmarks, muscles, tendons, joints, ligaments, nerves, and arteries on the living human body, 3) appreciate differences of a variety of tissue types. Offered Fall.
Prerequisites: OT 5505 (may be taken concurrently) and OT 5510 (may be taken concurrently)

OT 5310 Movement Assessment and Intervention Cr. 4
Emphasizes theory and motor skill learning related to movement assessment including range of motion, strength, sensation, and coordination. While upper limb assessment is emphasized, it is expected that the student will be able to use available resources to assess the lower limb, trunk, neck and head as needed. Principles of and motor skills for intervention in each area will also be addressed. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $30

OT 5400 Neurosciences for Health Care Professionals Cr. 3
Study of the human central nervous system; emphasis on sensory and motor systems and structures that contribute to normal movement. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $50
Equivalent: PT 5400

OT 5410 Health Conditions I: Physical Disabilities Cr. 4
A series of interdisciplinary presentations on the clinical manifestations and management of selected problems due to disease states or injury; includes etiology, assessment, course and medical specialty management of the problems. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5420 Health Conditions II: Mental Health Cr. 4
Major categories of psychiatric conditions throughout the lifespan are presented. Diagnostic criteria and treatment strategies in traditional and community settings are presented with fieldwork requirements. Guest lectures from medical and community settings present on mental health conditions and implications. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5500 Aging: From Community to Longterm Care Cr. 3
The goal of the course is to strengthen knowledge and skills in aging and geriatric rehabilitation. Content includes: successful aging, age-related health conditions, gerontology research for OTs, at risk older adults, assisted living and long term care, policy and legislation. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Occupational Therapy; enrollment is limited to Graduate or Undergraduate level students.

OT 5505 Clinical Applications of Human Anatomy Cr. 3
Knowledge of basic human anatomy for students in health science professional programs; foundation for further study in clinical sciences. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Occupational Therapy or Physical Therapy.
Equivalent: PT 5505

OT 5510 Clinical Applications of Human Anatomy: Laboratory Cr. 1
Examination of prosections, dissection of human cadavers; didactic study. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $200
Equivalent: PT 5510

OT 5520 Foundations of Occupational Therapy and Occupational Science Cr. 3
An introduction to occupation, the history and philosophy of occupational therapy, evidence and theoretical models that guide the profession, the sociocultural forces that influence occupation, and the processes and procedures utilized by the occupational therapist. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5530 Health Conditions I: Physical Disabilities Cr. 4
This course introduces students to clinical manifestations and management of selected problems due to disease states or injury; includes etiology, assessment, course, and medical specialty management of the problems using the lens of occupational therapy practice framework. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5540 Health Conditions II: Mental Health Cr. 4
Major categories of psychiatric conditions throughout the lifespan are presented. Diagnostic criteria and treatment strategies in traditional and community settings are presented with fieldwork requirements. Guest lectures from medical and community settings present on mental health conditions and implications. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5550 Therapeutic Media Cr. 2
The performance, adaptation and utilization of processes involved in selected creative and manual tasks and activities, which have therapeutic value for individuals across the lifespan. Included are principles and methods of teaching, appropriate to the role of the occupational therapist Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $20

OT 5560 Surface Anatomy for Occupational Therapy Cr. 2
Laboratory based course featuring surface anatomy. The students will 1) practice and develop palpation skills, 2) locate bony landmarks, muscles, tendons, joints, ligaments, nerves, and arteries on the living human body, and 3) appreciate differences of a variety of tissue types. Offered Spring/Summer.
Prerequisites: OT 5570 (may be taken concurrently) and OT 5580 (may be taken concurrently)

OT 5570 Clinical Applications of Human Anatomy Cr. 3
Examination of the human body using online applications including: Acland's anatomy, Visible bodies app, Gary's Anatomy, NetAnatomy and AnatomyTV. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Occupational Therapy or Physical Therapy.

OT 5580 Clinical Applications of Human Anatomy: Laboratory Cr. 1
Examination of prosections, dissection of human cadavers; didactic study. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5610 Group Dynamics Cr. 5
Experiential approach to learning group dynamics and achieving skills necessary for conducting effective therapeutic groups for a variety of clinical and community settings. Development of self awareness and social skills necessary in building practical group skill in occupational therapy intervention. Level I fieldwork experiences. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $50

OT 5620 Life Occupations Self Care Cr. 3
The first of two life occupations courses across the lifespan focuses on self care based on the Occupational Therapy Practice Framework III. Students will examine areas of occupation and develop assessment and intervention strategies while refining documentation skills. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5625 Life Occupations Self Care Lab Cr. 1
The life occupations lab course provides students the opportunity to practice assessments and interventions for patient self care based on the Occupational Therapy Practice Framework. Students will examine areas of occupation and develop assessment and intervention strategies while refining documentation skills. Offered Spring/Summer.

OT 5630 Movement Assessment and Intervention Cr. 4
This course is taken during the third semester of the first year of the OTD program, and centers on frames of references applicable to assessments involving principles of kinesiology and application of these principles with preliminary interventions. Core concepts and major assumptions of the biomechanical frame of reference are specifically reviewed. Students then learn assessment procedures involving sensation, range of motion, manual muscle testing, and coordination. Students are required to perform and pass competencies for each of the main areas of assessment explored. Finally, students are required to create an online-module for case managers in a specific setting and peers are required to work through classmates' modules to learn both instructional design skillset and knowledge of the role of a case manager. Offered Fall.
Prerequisite: OT 5570 with a minimum grade of C and OT 5580 with a minimum grade of C

OT 5640 Neuroscience for Health Care Professionals Cr. 3
This is a course on Neuroscience for health care professionals that will cover fundamentals of neuroanatomy and neurophysiology. We will explore the structure and function of the human nervous system in the context of clinical conditions of relevance to occupational therapy. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 5650 Pathophysiology for Health Sciences Cr. 3
Fundamental knowledge of the nature of disease for the health sciences student; physiologic and morphologic changes accompanying disease processes; mechanisms of repair and recovery. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Equivalent: PT 5650, RT 5650

OT 5993 Writing Intensive Seminar in Occupational Therapy Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with designated corequisite; consult Schedule of Classes for corequisites available each term. Satisfies University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisite: OT 3000 (may be taken concurrently) with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 6060 Occupational Therapy Research I Cr. 3
Introduces graduate level students to the logic of scientific research. In particular, students will learn about the process of scientific inquiry in the health sciences in general and occupational therapy specifically. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 6065 Occupational Therapy Research II Cr. 1
The second course in the three-course research thread, Research II is taken with the support of OT faculty members conducting research in an area of interest to the student. Students will work with the faculty member to further refine their literature review (completed in Research I) and develop a problem statement and research questions. Students will also work with a faculty mentor to submit or review IRB for the study/area of interest. Offered Spring/Summer.
Prerequisite: OT 6060
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 6070 Occupational Therapy Research III Cr. 2
Application of research principles and methods to solving occupational therapy problems. Offered Fall.
Prerequisite: OT 6060 and OT 6065
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $15

OT 6090 Directed Research Cr. 1-4
Opportunity to conduct supervised research and to participate in research activities of a mentor. Offered Every Term.
Prerequisite: OT 6070
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 8 Credits

OT 6100 Occupational Therapy Assessments and Interventions I (Ortho) Cr. 5
Examines OT assessments and interventions and how they impact an individual's life occupations. The emphasis of this course in on musculoskeletal and orthopedic diagnoses. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 6140 Environment, Occupation and Health Cr. 3
Through this course, we bring the study of environments and places to the forefront and examine their dynamic relationship with occupation and health. The foci of the course are several. We will develop an understanding of the importance and complexity of " environment" and "place" as concepts. We will use that understanding to examine some key types of environments and places through which occupation occurs. We also will assess the role of environments and places in occupation, disability, therapy, and well-being. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 6160 Occupational Therapy Research I Cr. 4
Introduces graduate level students to the logic of scientific research. In particular, students will learn about the process of scientific inquiry in the health sciences in general and occupational therapy specifically. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 6200 Occupational Therapy Assessments and Interventions II Cr. 5
This course offers didactic and practical learning experience designed to bridge the gap between physical disabilities, theory and practice focused on assessments and interventions for neurological diagnoses with a specialized section on hand therapy. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $67

OT 6210 Occupational Therapy Practice in Aging Cr. 3
Covers the concepts and the process of aging and the role of occupational therapy with adults impacted by changing physical health and cognitive capacities and environments. Focuses on the effects of major late life transitions including, for example, retirement from paid employment, driving cessation, household downsizing and caregiving. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 6230 Motor Control Cr. 3
Current theories of motor control and motor learning; recovery of function and normal movement across the lifespan. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 6250 Motor Control Cr. 3
Current theories of motor control and motor learning; recovery of function and normal movement across the lifespan. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 6260 Occupational Therapy Research II Cr. 1
The second course in the three-course research thread, Research II is taken with the support of OT faculty members conducting research in an area of interest to the student. Students will work with the faculty member to further refine their literature review (completed in Research I) and develop a problem statement and research questions. Students will also work with a faculty mentor to submit or review IRB for the study/area of interest. Offered Winter.
Prerequisite: OT 6160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

OT 6265 Occupational Therapy Research II Lab Cr. 1
Application of research principles and methods to solving occupational therapy problems. Creation of posters, infographics for research dissemination. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

OT 6270 Cognition and Visual Perception Cr. 3
This course covers information regarding control of movement, forms of learning, sensory-perceptual processing, and cognitive processing required for occupational engagement and participation for individuals across the life span. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

OT 6280 Occupational Therapy Assessments and Interventions I Cr. 5
Examines OT assessments and interventions and how they impact an individual's life occupations. The emphasis of this course in on musculoskeletal and orthopedic diagnoses. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

OT 6300 Occupational Therapy Assessments and Interventions III (Pediatric) Cr. 5
Occupation-based therapeutic activities, intervention strategies, documentation skills, and discharge planning that promotes client-centered outcome; the focus is on development birth through young adulthood. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $65

OT 6400 Occupational Therapy Research III Cr. 1
Application of research principles and methods to solving occupational therapy problems. Offered Spring/Summer.
Prerequisite: OT 6160 with a minimum grade of C and OT 6260 with a minimum grade of C and OT 6265 with a minimum grade of C
Corequisite: OT 6405
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 6405 Occupational Therapy Research III Lab Cr. 1
The course is intended to give students hands-on experience with scientific research projects conducted by faculty in the OT program. Students will learn what research is, gain experience doing it, and also learn how to effectively share research findings with others. Offered Spring/Summer.
Corequisite: OT 6400
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 6410 Occupational Therapy Leadership and Management Cr. 3
This course presents an overview of issues related to administration and management in varied environments and roles in which occupational therapy practitioners practice. Topics include management functions, service planning, leadership styles and skills, quality control and quality improvement, financial management, and accreditation processes, among others. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

OT 6420 Life Occupations Adult, Work, Leisure Cr. 2
Role of leisure in health, wellness, prevention and rehabilitation; focus: across the life span. Explores and develops assessment tools, treatment plans for diverse populations; includes experiential learning. Second of two courses. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 6430 Life Occupations Play/Pediatric Cr. 1
This course focuses on the role of work, leisure, and play in childhood and how it impacts their health, wellness, prevention, and rehabilitation. Explores evaluation and treatment planning for populations from diverse socioeconomic and cultural backgrounds; includes experiential learning. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 6440 Group Dynamics Cr. 5
Through lecture, discussions, written assignments, group activities and experiential exercises, the student will gain knowledge of group dynamics and effective group skills. This course will explore the roles and functions of the occupational therapist in program planning and conducting treatment groups. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 6450 Occupational Therapy Educator Cr. 2
This course examines the role of occupational therapist as academic educators in an entry-level occupational therapy program from the perspectives of the instructor, the institution, and professional organizations. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

OT 6460 Occupational Therapy Assessments and Interventions (Pediatric) Cr. 5
Occupation-based therapeutic activities, intervention strategies, documentation skills, and discharge planning that promote client-centered outcome; focus is on young adult, adult years, life span. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

OT 7120 Topics in Assistive Technology Cr. 3
Theories of assistive technology; their application in health care and community settings. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 7200 Occupational Therapy Practice in Aging Cr. 3
Covers the concepts and the process of aging and the role of occupational therapy with adults impacted by changing physical health and cognitive capacities and environments. Focuses on the effects of major late life transitions including, for example, retirement from paid employment, driving cessation, household downsizing and caregiving. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 7300 Professional Lit Cr. 3
Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 7410 Pediatrics Special Topics Cr. 3
This advanced pediatric course will provide an in-depth view of specialized pediatrics topics with hands-on opportunities. Specialty topics covered in this course: Models of Practice for children and families, Feeding and Oral Motor Intervention, Sensory Processing/ Self-Regulation, Vision Therapy, Psychotropic Medications for Pediatric Diagnosis, Research and Intervention for children with Developmental Disorders and Psychosocial Dysfunction, Behavior management, Adjunct Modalities for Pediatric Diagnosis (i.e. Splinting, Casting, Kineseotaping, Pressure garments, etc). Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

OT 7500 Occupational Therapy Synthesis Cr. 3
Synthesizes learning from all previous coursework while preparing the student to take the National Board Certification of Occupational Therapy (NBCOT) examination and business and management fundamentals. This course will include blended learning methodology to enhance learning and peer interaction. Students will complete a review of previously learned content and apply that content into practical clinical scenarios and gain knowledge to successfully pass the NBCOT exam. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 9 Credits

OT 7700 Research Dissemination Cr. 3
Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 7750 Professional Field Experience Cr. 1-4
Supervised placement in area of specialization. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 7800 Occupational Therapy Capstone Cr. 3
Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Occupational Therapy; enrollment is limited to Graduate level students.

OT 7898 Level II Fieldwork A: Medical Cr. 8
Supervised field work experience in affiliated health care agencies. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 7899 Level II Fieldwork B: Community Cr. 8
Supervised field work experience in affiliated health care agencies. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 7990 Directed Study Cr. 1-3
Opportunities for study and experience in areas of special interest in occupational therapy. Written report and oral presentation required. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 5 Credits

OT 7999 Masters Essay Dir Cr. 1-2
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 8000 Capstone Development Cr. 2
This course introduces students to the doctoral capstone process through in-person instruction, mentorship, and structured activities that support exploration of capstone topics, identification of a focus area, and early project development. Students will collaborate with a faculty mentor and content expert, conduct a comprehensive literature review, and complete a needs assessment to inform the direction of their individualized capstone experience and project. Emphasis is placed on synthesizing evidence, identifying population or programmatic needs, and aligning goals with one of the designated capstone focus areas: clinical practice skills, research skills, administration, program and policy development, advocacy, education, or leadership. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

OT 8100 Capstone Planning Cr. 2
Capstone Planning is the second course in the Capstone thread of the Doctor of Occupational Therapy (OTD) curriculum. This two-credit course guides students through the development of individualized goals and a comprehensive evaluation plan for their upcoming capstone experience and project. Building on the foundational work completed in OT 8000, students apply critical thinking and collaborative planning skills to design clear, measurable objectives that align with identified needs within their focus area. Students will also develop a detailed strategy for evaluating capstone outcomes, including metrics, methods, and benchmarks for success. Emphasis is placed on synthesizing literature, aligning objectives with site and community needs, and ensuring plans reflect the mission, philosophy, and curricular design of the program. Throughout the course, students will engage in activities that promote knowledge, application, analysis, and evaluation, as described in Bloom's Taxonomy. Offered Winter.
Prerequisite: OT 8000 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

OT 8990 Masters Project Dir Cr. 1-5
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

OT 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Prerequisite: OT 7700
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 8 Credits

PAA - Pathologists' Assistant

PAA 5020 Applied General Pathology Cr. 3
Fundamental principles of pathology with a focus on their practical application in clinical settings. Students will develop a comprehensive understanding of disease mechanisms, including cellular injury, inflammation, neoplasia, genetic and hemodynamic disorders, infectious diseases and systemic disorders involving the immune and cardiovascular systems as well as those resulting from environmental influences. Emphasis will be placed on the integration of histopathological techniques, diagnostic tools, and clinical correlations. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

PAA 5050 Clinical Terminology and Methodology I for the Pathologists' Assistant Cr. 2
Clinical and medical terminology specific to the pathologists' assistant practice along with associated methodologies used in surgical and autopsy pathology in the second year of the program. Introduction to laboratory grossing methodologies of human organ system of simple pathologic and non-pathologic specimens. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.
Fees: $100

PAA 5051 Clinical Terminology and Methodology II for the Pathologists' Assistant Cr. 2
Clinical and medical terminology specific to the pathologists' assistant practice along with associated methodologies used in surgical and autopsy pathology in the second year of the program. The laboratory component of the course is designed to familiarize students with surgical procedures, the most common surgical specimens received at the bench, and the manner in which such specimens are grossed, inked, sectioned, dictated, and submitted to histology. The use of simulation laboratory sessions for practice of grossing techniques and methodologies of simple to medium complexity specimen(s) will emphasize the step-wise grossing, safety, and dictation of given pathological specimens. Offered Fall.
Prerequisite: PAA 7060 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.
Fees: $100

PAA 5052 Clinical Terminology and Methodology III for the Pathologists' Assistant Cr. 2
Clinical and medical terminology specific to the pathologists' assistant practice along with associated methodologies used in surgical and autopsy pathology in the second year of the program. The laboratory component continues to familiarize students with surgical procedures, grossing methodologies, and procedural inking, sectioning, and sampling of medium to high complexity of human organ tissues in a simulation gross room laboratory environment, emphasizing the step-wise grossing, safety, and dictation of given pathological specimens. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.
Fees: $100

PAA 5100 Medical Photography and Techniques in Pathology Cr. 2
Theory of the behavior of light and selection of appropriate lenses; principles of exposure, color, and filters; macro- and microphotography. Adjustment of clinical photographs and student photographs corrected by Adobe Photoshop Professional resulting in a student Eportfolio. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.
Fees: $100

PAA 6060 Human Embryology and Pediatric Pathology Cr. 2
Embryological basis of pediatric and childhood diseases along with adult presentations. Human embryological correlations to clinical settings: case study analysis specific to the pathologists' assistant and clinical evaluation of pediatric pathology. Recognition of anatomical presentations with embryological development in normal and diseased states. Offered Fall.
Prerequisite: PAA 7060 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Pathologists'Assistant Program.

PAA 6150 Histochemistry for the Pathologists' Assistant Cr. 4
Study of techniques specific to the Pathologists' Assistant involved in the preparation of tissues prior to microscopic examination and processing inclusive of embedding, sectioning, preparing frozen sections and performing routine and special stain on a variety of tissues. Offered Winter.
Prerequisites: PAA 6560 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.
Fees: $200

PAA 6420 Laboratory Management and Quality Management in Anatomic Pathology Cr. 2
Interpersonal and technical management techniques for the clinical and anatomic pathology laboratory settings. Quality management techniques, policies, protocols and best practices for the pathologists' assistant. Safety mandates and protocols as applied to anatomic and surgical pathology. Discussion and analysis of governmental mandates covering laboratory improvement (CLIA). Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.

PAA 6560 Human Histology and Clinical Correlations Cr. 4
Comprehensive study of human tissue microanatomy with an emphasis on the identification and functional interpretation of normal and abnormal microscopic structures. Students will be introduced to tissue classification, frozen section techniques, and the evaluation of stained tissue sections from a wide range of organ systems. Through progressive development of histologic diagnostic skills, learners will differentiate normal from pathological findings while integrating clinical correlations to support patient case presentations. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program.
Fees: $100

PAA 7060 Human Anatomy and Physiology for Pathologists' Assistants Cr. 3
Detailed comprehensive review of human anatomy and physiology as it pertains to the pathologists' assistant practice. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.
Fees: $350

PAA 7061 Human Anatomy and Physiology II for the Pathologists' Assistant Cr. 3
Part two of a detailed comprehensive review of human anatomy and physiology as it pertains to the pathologists' assistant practice with comprehensive examination of anatomical organs and organ systems through the use of human cadaveric prosections, 3D models, computer software applications, medical imaging, and clinical correlations as it pertains to the pathologists' assistant scope of practice. Offered Fall.
Prerequisite: PAA 7060 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.
Fees: $100

PAA 7062 Neuroanatomy for the Pathologists' Assistant Cr. 2
Comprehensive review of human central nervous system anatomy linking structure to function at the clinical and neurobiological level. Integration of neurocranium and viscerocranium structures with clinical presentations as it pertains to the Pathologists' Assistant practice will be reviewed in detail in the cadaver laboratory. Offered Winter.
Prerequisite: PAA 7061 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $100

PAA 7063 Advanced Human Gross Anatomy Cr. 3
Laboratory based course with hands-on dissection of the human body organized around a regional approach to anatomy for the current, or prospective, applied and/or health science student. Students should have completed a previous Anatomy lecture and laboratory course. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $400

PAA 7200 Introduction to Forensic Pathology Cr. 2
This introductory graduate-level course provides a foundational understanding of forensic pathology, focusing on the principles and practices involved in determining cause and manner of death. Students will explore the role of forensic pathology within the medicolegal system, key concepts in death investigation, and the classification of natural and unnatural deaths. Emphasis is placed on understanding the interplay between clinical pathology and forensic investigation, including the integration of toxicology, histology, and imaging in forensic casework. Offered Fall.
Prerequisites: PAA 7060 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.
Fees: $350

PAA 7205 Forensic Pathology and Autopsy Techniques for the Pathologists' Assistant Cr. 2
This course is the second in a three-part series designed to provide an in-depth understanding of forensic pathology and autopsy techniques. It emphasizes the theoretical foundations and practical applications of postmortem examination processes in clinical and forensic pathology settings. Students will explore advanced topics in external examination, evisceration, and organ block removal, with a focus on identifying, analyzing, and interpreting findings in various medico-legal contexts. Offered Winter.
Prerequisite: PAA 7060 with a minimum grade of C and PAA 7061 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PAA 7210 Introduction to Autopsy Pathology Techniques Laboratory Cr. 1
This laboratory-based course provides comprehensive hands-on training in the application of autopsy techniques essential for performing postmortem examinations in both hospital and medical examiner settings. The curriculum emphasizes hands-on experience with external examinations, evisceration, and block dissection procedures tailored to adult, perinatal, and pediatric decedents. Students will develop skills in identifying anatomic pathology, documenting findings, and correlating gross observations with clinical and forensic contexts. Offered Winter.
Prerequisites: PAA 7060 with a minimum grade of B, PAA 7061 with a minimum grade of B, and PAA 7251 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7250 Clinical Pathology I Cr. 2
In-depth exploration of systemic pathologies impacting various organs and organ systems. Topics include disorders of red blood cells and bleeding, diseases of the blood vessels and heart, as well as conditions affecting the skin, bones, head and neck, eyes, joints, and soft tissue tumors. The course integrates advanced concepts in molecular diagnostics, infectious diseases, and pathological microscopy, offering a comprehensive understanding of the mechanisms and diagnostic approaches to these conditions. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7251 Clinical Pathology II Cr. 3
Continuation of PAA 7250. This graduate-level clinical pathology course examines systemic diseases affecting the lung, gastrointestinal tract, liver and gallbladder, endocrine system, and pancreas. The curriculum emphasizes the integration of molecular diagnostics, infectious disease mechanisms, and pathologic microscopy to provide a comprehensive understanding of these organ systems and their pathological processes. Offered Fall.
Prerequisite: PAA 7060 with a minimum grade of B and PAA 7250 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7252 Clinical Pathology III Cr. 3
Continuation of 7251. This graduate-level clinical pathology course explores systemic diseases impacting the peripheral nerves and skeletal muscles, central nervous system (CNS), kidneys, lower urinary tract, male and female genital systems, breast, and placenta. The course integrates advanced concepts of molecular diagnostics, infectious diseases, and pathologic microscopy to provide a comprehensive understanding of the pathology and diagnostic approaches for these organ systems. Offered Winter.
Prerequisite: PAA 7060 with a minimum grade of B and PAA 7061 with a minimum grade of B and PAA 7251 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7300 Elective Independent Study in Clinical, Core and Forensic Pathology Cr. 1-4
Remedial independent study in a core subject area involving clinical pathology and/or forensic autopsy pathology that fulfills cognitive assessments, content specific assignments or projects, indicative of pre-clinical entry-level expectations of the program. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

PAA 7420 Future Trends in Pathology Practice and Education Methodology Cr. 1
Group discussion of trends associated with healthcare, patient care, technology, legal issues, education methodology, licensure and accreditation issues; medical ethics, safety, medicolegal, and quality management in anatomic, surgical and autopsy pathology are covered. Presentations lead to recommendations for future best practices in a variety of pathology settings. Students present research findings via PowerPoint and in a seminar format. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7650 Surgical Pathology I Cr. 8
Application of principles, theories, and clinical practices related to grossing (simple) surgical dissections that address NAACLS competency levels associated with adult and pediatric surgical pathology techniques, specimen photomicrography, as well as develop techniques in the proper handling of specimens for histological processing through varied techniques within a modern instrumental histology laboratory by following quality management techniques, safety mandates, and protocols as applied to anatomic and surgical pathology. Offered Spring/Summer.
Prerequisite: PAA 5050 with a minimum grade of B and PAA 7060 with a minimum grade of B and PAA 7250 with a minimum grade of B and PAA 7251 with a minimum grade of B and PAA 7252 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.
Fees: $250

PAA 7651 Surgical Pathology II Cr. 10
Application of principles, theories, and clinical practices related to grossing (simple to complex) surgical dissections that address NAACLS competency levels associated with adult and pediatric surgical pathology techniques, specimen photomacrography and photomicrography, as well as develop techniques in the proper handling of specimens for frozen sectioning and histological processing through varied techniques within a modern instrumental histology laboratory, by following quality management techniques, safety mandates, and protocols as applied to anatomic and surgical pathology. Offered Winter.
Prerequisite: PAA 5050 with a minimum grade of B and PAA 7060 with a minimum grade of B and PAA 7250 with a minimum grade of B and PAA 7251 with a minimum grade of B and PAA 7252 with a minimum grade of B and PAA 7650 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.
Fees: $250

PAA 7652 Surgical Pathology III Cr. 9
Application of principles, theories, and clinical practices related to grossing (medium to high complexity) surgical dissections that address NAACLS competency levels associated with adult and pediatric surgical pathology techniques, specimen photomacrography and photomicrography, as well as develop techniques in the proper handling of specimens for frozen sectioning and histological processing through varied techniques within a modern instrumental histology laboratory, by following quality management techniques, safety mandates, and protocols as applied to anatomic and surgical pathology. Offered Winter.
Prerequisite: PAA 7651 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.
Fees: $250

PAA 7700 Forensic and Clinical Autopsy Pathology Cr. 5
Application of principles and technical procedures that address NAACLS competency levels associated with adult and pediatric autopsy as it relates to postmortem examination, dissection and evisceration techniques, toxicology specimen collection and processing, photomicrography of the body and of pertinent findings during the external and internal examination, as well as approaches associated with determining, and reporting, the cause, manner, and mechanism of death. Offered Every Term.
Prerequisite: PAA 6060 with a minimum grade of B and PAA 7060 with a minimum grade of B and PAA 7200 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.
Fees: $150

PAA 7890 Surgical and Forensic Pathology Seminar I Cr. 1
Clinically based seminar course that integrates principles, theories, clinical practices and techniques relevant to grossing simple to mid-complexity surgical specimens. The course integrates evidence of ethical considerations to the pathologists' assistant practice, interprofessional activity, professional development and activism attained in the course of the program. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7891 Surgical and Forensic Pathology Seminar II Cr. 2
Clinically based capstone seminar course reviewing clinical and anatomical pathology and the application of principles, theories, clinical practices as it relates to surgical and forensic pathology, and in the research project of a clinical-based surgical specimen that highlights the complexity of the specimen and addresses contemporary issues to the pathologists' assistant practice as a result of said research. The course culminates with portfolio evidence of entry-level skills in the grossing of simple to complex surgical specimens, in the performance of clinical and forensic autopsies and with a board-style competency examination. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Pathologists'Assistant Program; enrollment is limited to Graduate level students.

PAA 7900 Elective Clinical in Surgical and/or Forensic Pathology Cr. 1-5
Remedial clinical rotation in surgical pathology or forensic autopsy pathology that fulfills cognitive assessments, content specific assignments or projects, and entry-level expectations of the program. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

PAA 7901 Elective Independent Study in Surgical and/or Forensic Pathology Cr. 1-5
Remedial independent study in surgical pathology and/or forensic autopsy pathology that fulfills cognitive assessments, content specific assignments or projects, indicative of entry-level expectations of the program. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

PAS - Physician Assistant Studies

PAS 7000 Anatomy for Physician Assistants I Cr. 2
Structural and functional anatomy of the human body relevant to physician assistant responsibilities. All major regions of body will be studied. Regional dissections; programmed instruction; lectures and demonstrations with emphasis on use of gross anatomy in physical diagnosis. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $376

PAS 7001 Anatomy for Physician Assistants II Cr. 1
Continuation of PAS 7000. Structural and functional anatomy of the human body relevant to physician assistant responsibilities. All major regions of body will be studied. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $31

PAS 7010 Clinical Medicine I Cr. 3
Introduction to etiology, manifestation, diagnosis, prevention and treatment of disease; includes: all major organ systems and disease entities. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

PAS 7020 Clinical Medicine II Cr. 3
Continuation of PAS 7010. Offered Yearly.
Prerequisite: PAS 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

PAS 7030 Clinical Medicine III Cr. 4
Continuation of PAS 7020. Offered Yearly.
Prerequisite: PAS 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85

PAS 7040 Patient Evaluation I Cr. 2
The elicitation and recording of complete medical history, including a complete and comprehensive physical examination. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $441

PAS 7050 Patient Evaluation II Cr. 2
Continuation of PAS 7040. Offered Yearly.
Prerequisite: PAS 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $395

PAS 7060 Patient Evaluation III Cr. 3
Continuation of PAS 7050. Offered Yearly.
Prerequisite: PAS 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $840

PAS 7070 Health Care Issues I Cr. 1
Specialized topics in the care of patients, medical research, as well as issues concerning the delivery of health care to the public. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $60

PAS 7080 Health Care Issues II Cr. 1
Continuation of PAS 7070. Offered Yearly.
Prerequisite: PAS 7070 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $60

PAS 7090 Health Care Issues III Cr. 1
Continuation of PAS 7080. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $60

PAS 7100 Pharmacology I Cr. 2
Principles of pharmacologic action followed by review of major therapeutic agents in each clinical area. Major systems of the body as related to drugs and diseases. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $52

PAS 7110 Pharmacology II Cr. 2
Continuation of PAS 7100, Offered Yearly.
Prerequisite: PAS 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $55

PAS 7115 Special Topics: Interprofessional Education Cr. 2
This interprofessional course is for health professional student learners in the areas of advanced practice. The course allows health professional students to learn about, from and with each other, how each discipline contributes to the healthcare team, the importance of effective communication, the role of team collaboration and preparing health care professionals for collaborative practice with a focus on clinical decision making in interdisciplinary teams. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate, Medical or Professional level students.
Equivalent: MD4 8115, NUR 7115, PPR 7115, SW 7115

PAS 7500 Pathophysiology I Cr. 1
Dynamics of alterations in function in response to disease. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PAS 7510 Pathophysiology II Cr. 1
Continuation of PAS 7500. Offered Yearly.
Prerequisite: PAS 7500 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PAS 7520 Pathophysiology III Cr. 1
Continuation of PAS 7510. Offered Winter.
Prerequisite: PAS 7510 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physician Assistant Studies; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PAS 7900 Physician Assistant Studies Directed Study Remediation Cr. 1-8
This course serves to help students remediate for deficient academic or clinical competencies in the Physician Assistant Studies Program. It is student-driven with guidance and definitive expectations determined by the instructor. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 24 Credits

PAS 8100 Clinical Practicum I Cr. 7
Students will rotate through one or two of the nine possible clinical modules (internal medicine, family practice, pediatrics, women's health, surgery, behavioral medicine, emergency medicine, elective I or elective 2). These modules will be composed of didactic course work along with preceptor-guided hands-on learning experiences in the clinical setting. Students will be educated on the evaluation, diagnosis, management and treatment of acute and chronic medical problems encountered in the inpatient and/or outpatient clinical setting. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $446
Repeatable for 14 Credits

PAS 8200 Clinical Practicum II Cr. 7
In this continuation of PAS 8100, the student will continue to rotate through one or two of the nine possible clinical modules (internal medicine, family practice, pediatrics, women's health, surgery, behavioral medicine, emergency medicine, elective I and elective 2). These modules will be composed of didactic course work along with preceptor-guided hands-on learning experiences in the clinical setting. Students will be educated on the evaluation, diagnosis, management and treatment of acute and chronic medical problems encountered in the inpatient and/or outpatient clinical setting. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $302
Repeatable for 14 Credits

PAS 8250 Physician Assistant Studies Senior Seminar I Cr. 1
The primary goal of the clinical year senior seminar is to provide the physician assistant student with resources and experiences in addition to clinical rotations. The additional work will help strengthen and augment the knowledge, skills, and behaviors students have acquired during the didactic and clinical phases of their education. The activities will serve as stepping stones towards the successful management of patients in a competent, comprehensive, and compassionate manner across varied disciplines, patient populations, and clinical settings. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

PAS 8300 Clinical Practicum III Cr. 14
Clinical Practicum III is a continuation of the required clinical modules during the student's clinical year. During this clinical practicum, students will experience 2 to 4 of the nine required modules (internal medicine, family practice, pediatrics, women's health, surgery, behavioral medicine, emergency medicine, elective I or elective 2). These modules will be composed of didactic course work along with preceptor-guided hands-on learning experiences in the clinical setting. Students will be educated on the evaluation, diagnosis, management and treatment of acute and chronic medical problems encountered in the inpatient and/or outpatient clinical setting. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $547

PAS 8350 Physician Assistant Studies Senior Seminar II Cr. 1
The primary goal of the clinical year senior seminar is to provide the physician assistant student with resources and experiences in addition to clinical rotations. The additional work will help strengthen and augment the knowledge, skills, and behaviors students have acquired during the didactic and clinical phases of their education. The activities will serve as stepping stones towards the successful management of patients in a competent, comprehensive, and compassionate manner across varied disciplines, patient populations, and clinical settings. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PAS 8400 Clinical Practicum IV Cr. 14
Clinical Practicum IV is a continuation of the required clinical modules during the student's clinical year. During this clinical practicum, students will experience 2 to 3 of the nine required modules (internal medicine, family practice, pediatrics, women's health, surgery, behavioral medicine, emergency medicine, elective I or elective 2) plus a 4 week preceptorship. These modules will be composed of didactic course work along with preceptor-guided hands-on learning experiences in the clinical setting. Students will be educated on the evaluation, diagnosis, management and treatment of acute and chronic medical problems encountered in the inpatient and/or outpatient clinical setting. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $697

PAS 8450 Physician Assistant Studies Senior Seminar III Cr. 1
The primary goal of the clinical year senior seminar is to provide the physician assistant student with resources and experiences in addition to clinical rotations. The additional work will help strengthen and augment the knowledge, skills, and behaviors students have acquired during the didactic and clinical phases of their education. The activities will serve as stepping stones towards the successful management of patients in a competent, comprehensive, and compassionate manner across varied disciplines, patient populations, and clinical settings. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

PCS - Peace and Conflict Studies

PCS 2000 Introduction to Peace and Conflict Studies Cr. 3
Introduction to the peace and conflict studies co-major. Survey, ranging from biology and conflict among animals to disputes involving the individual, the family, the neighborhood and region, the nation and global or international community. Definitions and approaches to peace. (Some sections linked to Peace and Justice Learning Community.) Offered Yearly.
Equivalent: HIS 2500, PS 2820

PCS 2010 Topics in Peace and Conflict Studies Cr. 1-4
Special topics relating to peace and conflict studies. Offered Every Term.
Equivalent: HIS 2520, PS 2830
Repeatable for 12 Credits

PCS 2020 Science, Technology, and War Cr. 4
Modern weapons, nuclear and otherwise are becoming increasingly available and dangerous; people with grievances seem eager to use them. Science and technology, as well as constraints of bureaucracy and society underpin weapons development and use, as technologies affect prospects and results of war and peace. History of humanity and its tools of war. Offered Yearly.
Equivalent: HIS 2510, PHY 2020, PS 2440

PCS 2050 The Study of Non-Violence Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Intellectual and social roots of non-violence and the practice of non-violence in various societies and people's life styles. Historical and political forces and movements related to non-violence. (Some sections linked to Peace and Justice Learning Community.) Offered Every Term.
Equivalent: HIS 2530, PS 2550, SOC 2050

PCS 3100 Human Trafficking and Modern Slavery Cr. 3
Utilizing a participatory interdisciplinary format, the course examines contemporary issues in globalization with particular focus on human trafficking. These are epic times, when the call for racial, gender and economic equity has never been more pronounced. As human rights come center stage, human trafficking becomes a core concern throughout the world. The class highlights the pertinent social, cultural, political, and economic causes, with an eye towards the anthropology and sociology of slavery and sex work. The class will consider evidence that inequalities, especially structural poverty, exacerbate modern slavery worldwide. Students will develop insight in policy analysis, history and forms of slavery, policy impact monitoring, and ethnographic skills. Offered Every Term.

PCS 5000 Dispute Resolution Cr. 3
Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. Offered Yearly.
Equivalent: CRJ 5994, PS 5890, PSY 5710

PCS 5010 Community or International Internship Cr. 3
Internship in dispute resolution, research, social service or international agencies in Detroit area, nationally, or abroad. Offered Every Term.
Prerequisites: PCS 2000 with a minimum grade of D-

PCS 5100 Advanced Special Topics Cr. 3-4
Topics may include: study of negotiating organizations and processes, advanced theory to practice applications, in-depth specialization. Offered for undergraduate credit only. Offered Intermittently.

PCS 5999 Special Readings/Research Cr. 1-4
Intensive study with faculty member on peace-related topic; may include study abroad projects. For co-majors and non-majors. Offered Every Term.
Repeatable for 4 Credits

PCS 6000 Senior Seminar in Peace and Conflict Studies Cr. 3
Students work with faculty on a semester research or creative project relevant to concepts studied in the program; serves as capstone program evaluative course. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to Undergraduate level students.

PCS 6100 Introduction to Graduate Peace and Security Studies Cr. 3
Survey of the peace and security studies fields at the graduate level. Offered for graduate credit only. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PS 6100

PCS 7100 Peace Making: Regional, Technological, Transnational Perspectives Cr. 3
The prerequisites for peaceful and secure borders and peace settlements. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

PCS 7800 Graduate Practicum in Peace and Security Studies Cr. 3-4
Field work or applied research in Peace and Security Studies. Offered Every Term.
Prerequisite: PCS 6100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PH - Public Health

PH 2100 Introduction to Public Health Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
This course introduces the core principles of public health. Students begin to develop the knowledge and skills needed to analyze health challenges at both individual and population levels. Using real-world examples, you'll learn how biological, social, environmental, political, and cultural factors shape health outcomes in the United States, and around the world. You'll also explore strategies to create healthier communities, from disease surveillance to community-based interventions. No previous public health coursework is required. Offered Every Term.

PH 2500 Race and Ethnic Disparities in Public Health Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
In this course, students examine how personal, social, and institutional structures contribute to poorer health outcomes and shorter life expectancy for racial and ethnic minority communities. Students explore the historical, political, and economic factors that shape health disparities, and learn professional skills, intervention techniques, and the role of policy to promote health equity. Students will learn the importance of community-based interventions and policy change, developing skills to become effective advocates and leaders in today's changing public health landscape. Offered Every Term.

PH 2550 MENA Public Health Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
In this global health course, you will investigate health problems impacting Middle East and North African (MENA) populations in the US and abroad. Students identify how history, culture, and geography shape health risks and outcomes in global, national, and local contexts. You will explore how social determinants of health, such as immigration history, geopolitical factors, and stigma, influence the health and well-being of MENA communities, including those in Metro Detroit. By learning how cultural, religious, and social influences intersect, you'll gain practical skills to develop effective, culturally responsive strategies to improve health here and abroad. Offered Winter.

PH 3000 Public Health Administration Cr. 3
In this course you will be introduced to the US healthcare delivery and financing system, as well as health care reform and current policy issues. Through case-based learning, group work and a semester-long project, students will gain experience critically evaluating health care problems and explore policy and quality improvement options to address healthcare delivery issues. Students will be prepared to enter the health care workforce, navigate intricate systems, develop innovative solutions, and manage creative responses to new challenges. Sophomore standing or higher recommended. Offered Every Term.

PH 3050 Mental Health and Crime Cr. 3
Provides a comprehensive overview of the issues and challenges located at the intersection of mental health/illness and the criminal justice system. Attention will be focused on a range of topics, including, but not limited to, the definition of mental illness, deinstitutionalization and criminalization of the mentally ill, the impact of mental illness on criminal proceedings, treatment/intervention effectiveness, and the reentry/reintegration of mentally ill individuals. Offered Intermittently.
Equivalent: CRJ 3050

PH 3100 Social and Behavioral Aspects of Public Health Cr. 3
Satisfies General Education Requirement: Social Inquiry
In this course, you'll discover the importance of social and behavioral factors in shaping health outcomes. Health outcomes and health disparities have more to do with interconnected social, behavioral, and environmental factors than just biology or genetics. You will learn theories of health behavior and decision-making needed to design public health interventions and inform health policies. By engaging in a service-learning project, you'll master skills in the use of theories, tailoring interventions, and culturally responsive public health practice. Offered Every Term.

PH 3200 Introduction to Biostatistics Cr. 3
Students learn biostatistical methods used to analyze quantitative health and medical data. Students will learn key concepts and techniques including probability and sampling, statistical inference, hypothesis testing, correlation methods and linear regression. By working with real datasets and practical health applications, students develop the skills needed to confidently collect, analyze, and interpret data in medicine, epidemiology, public health and the life sciences. Offered Every Term.
Prerequisites: PH 2100 with a minimum grade of C- and (MAT Permit to Reg ACT/SAT with a test score minimum of 4, Math Permit to Reg - (L1-L4) with a test score minimum of 4, STA 1020 with a minimum grade of C-, MAT 1800 with a minimum grade of C-, MAT 2010 with a minimum grade of C-, MAT 2020 with a minimum grade of C-, or STA 2210 with a minimum grade of C-)

PH 3300 Epidemiology Cr. 3
In this course, you will be introduced to strategies used by public health professionals to track, assess, and prevent diseases. This course offers hands-on experiences that allow students to analyze real-world public health challenges, from emerging infectious diseases to chronic conditions. Students will learn the essentials of study design, how to use statistics to measure and interpret health data, and shape public health policy, ethical standards, and professional practice. Offered Every Term.
Prerequisites: PH 2100 with a minimum grade of C- and (MAT Permit to Reg ACT/SAT with a test score minimum of 4, Math Permit to Reg - (L1-L4) with a test score minimum of 4, STA 1020 with a minimum grade of C-, MAT 1800 with a minimum grade of C-, MAT 2010 with a minimum grade of C-, MAT 2020 with a minimum grade of C-, or STA 2210 with a minimum grade of C-)

PH 3400 Health in All Policies Cr. 3
In this course, students will be introduced to the Health in All Policies (HiAP) framework, a global strategy that integrates health considerations into policy decisions across diverse sectors. Students will examine case studies at the federal, state, and local levels to understand how policies related to housing, education, transportation, and the economy can improve health outcomes, reduce disparities, and foster health equity. Students will gain knowledge and skills to effectively collaborate with multiple sectors to design, advocate for, and implement policies that promote health and well-being for all. Offered Fall.

PH 3410 Global Health Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Introduces students to problems of disease and disorder worldwide and looks at various efforts to define and address these problems through a social science perspective. Offered Every Term.
Equivalent: ANT 3410, GLS 3410

PH 3450 Advocating for Change in Public Health Cr. 3
In this course, students will learn how public health professionals influence meaningful change through advocacy and civic engagement. Students will explore effective strategies for informing populations and policies across a variety of settings to advocate for health improvements. You will learn the importance of coalition building, effective messaging, and leveraging public platforms to advance equitable health policies. Students gain the knowledge and skills needed to advocate for public health-related policies and change at the local, state, and federal levels. Offered Winter.
Prerequisites: PH 2100 with a minimum grade of C- and PH 3100 with a minimum grade of C-

PH 3500 Environmental Health Cr. 3
Using a public health perspective, this course explores the complex relationship between people and their environments. Students will discover how chemical, physical, social, and biological factors in the environment impact human health. Examining a range of environmental challenges, students will gain insights into how various systems intersect to influence health outcomes. In this course, students will develop essential skills to assess environmental risks, navigate regulatory frameworks, and facilitate community engagement as public health professionals. Offered Every Term.

PH 3550 Public Health and the City Cr. 3
Introduces the field of medical geography, or the study of geographic aspects of health and disease. Students will also be introduced to the impact that city life has on health and healthcare in the US and internationally. They will gain an understanding of how geography as a discipline contributes to an understanding of health and health care in urban environments, and how social and economic contexts impact urban health. Mapping techniques will be utilized to examine the spatial patterns of disease and risk factors that may contribute to disease. Offered Yearly.
Equivalent: US 3550

PH 3600 Special Topics in Public Health Cr. 3
Topics may include but are not limited to an examination of health in families, health in the workplace, health across the life course, health of urban communities, community health interventions, access to health care, and health services administration. Offered Intermittently.
Repeatable for 6 Credits

PH 3700 Funding Public Health Cr. 3
This course introduces core concepts in funding public health programs, focusing on government agencies, private foundations, and the development activities of non-profit organizations. Students learn how to acquire the resources needed to tackle important health issues and serve diverse communities. This course will explain how organizations identify, apply for, and manage grants. Students will also explore creative fundraising strategies that can be used to fill critical funding gaps, expand existing services, and address emerging health challenges. Students gain practical knowledge and tools to secure resources necessary to effectively address the needs of the populations they serve. Offered Fall.
Prerequisites: PH 2100 with a minimum grade of C- and PH 3100 with a minimum grade of C-

PH 3750 Reproductive Health Cr. 3
This course explores how gender, race, class, and sexuality intersect to create disparities in reproductive healthcare access and outcomes. Applying an interdisciplinary approach, students explore issues of reproductive justice and examine the impacts of reproductive healthcare policies and practices. Students will examine public health interventions focused on reproductive health in local communities, gaining the practical skills to inform equitable reproductive health policies and practices. Offered Winter.

PH 3800 Law and Public Health Cr. 3
This course examines how the law shapes health outcomes and influences our everyday lives. Using a competency-based approach developed by the CDC's Public Health Law Program, students explore the legal foundations of public health. Students learn how constitutional principles, statutes, and regulations can be powerful tools to promote and maintain community health. From medical malpractice and hospital governance to abortion laws and gun control, students gain a deeper understanding of the broad spectrum of legal and ethical issues affecting the health of populations. Focusing on contemporary applications, students will understand the role of public health laws and regulation in promoting improved health outcomes and equity. Offered Fall.
Prerequisite: PH 2100 with a minimum grade of C- and PH 3100 with a minimum grade of C-

PH 3900 LGBTQ Health Cr. 3
This course centers LGBTQ+ voices and uses an intersectional socioecological lens to reveal the diverse factors that influence health. Students will explore key frameworks for understanding LGBTQ health disparities across the lifespan while examining implications for public health research, policy, and practice. Students will learn how tailored public health efforts can more effectively promote equity and address the unique challenges faced by LGBTQ+ individuals. Offered Fall.
Equivalent: SOC 3900

PH 4100 Public Health Principles and Practice Cr. 2
This required course examines practice-based approaches to improve public health. The focus will be on learning methods for community health improvement, from assessment to finding and implementing evidence-based public health interventions. Offered Every Term.
Prerequisites: PH 3100 with a minimum grade of C-, PH 3200 with a minimum grade of C-, PH 3300 with a minimum grade of C-, and PH 3500 with a minimum grade of C-
Corequisite: PH 4150
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Public Health or Public Health Honors.

PH 4250 Interprofessional Education and Public Health Cr. 3
This course introduces the foundations of Interprofessional Education and Collaborative Practice, guided by four core competencies established by the Interprofessional Education Collaborative (IPEC). Students will examine how groups of professionals in public health, medicine, nursing, pharmacy, dentistry, etc. can come together to address complex health challenges and improve patient outcomes. By exploring the unique roles and responsibilities of diverse healthcare providers, students will develop effective interprofessional communication strategies and develop the skills necessary to build and lead high-functioning multidisciplinary teams. Offered Every Term.
Prerequisites: PH 3100 with a minimum grade of C-, PH 3200 with a minimum grade of C-, PH 3300 with a minimum grade of C-, and PH 3500 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Public Health or Public Health Honors.

PH 4400 Quantitative Methods in Public Health Cr. 3
In this quantitative methods course, students further develop the skills needed to design research projects as well as analyze, interpret and communicate statistical research findings. Students will explore the strengths and limitations of different quantitative approaches. They also learn how to evaluate scientific literature critically, preparing them to confront real-world public health challenges. Through readings, interactive discussions, and hands-on exercises, students develop core competencies in study design, data collection, analysis, and results dissemination, preparing them for success in the Capstone (PH 5100) and Practicum (PH 5150) courses. Offered Every Term.
Prerequisites: PH 3100 with a minimum grade of C-, PH 3200 with a minimum grade of C-, PH 3300 with a minimum grade of C-, and PH 3500 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Public Health or Public Health Honors.

PH 4500 Qualitative Methods in Community Public Health Cr. 3
This course introduces students to qualitative methods in public health, centering the experiences of community members, patients, populations, and/or partner organizations. Students explore how researchers build equitable, reciprocal partnerships that foster meaningful engagement in public health projects. Students will be introduced to essential qualitative approaches, including one-on-one interviews, focus groups, ethnographic observations, motivational interviewing, and Photovoice, and learn how these methods can provide valuable insights into health challenges. Offered Every Term.
Prerequisites: PH 3100 with a minimum grade of C-, PH 3200 with a minimum grade of C-, PH 3300 with a minimum grade of C-, and PH 3500 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major in Public Health or Public Health Honors.

PH 4600 Special Topics in Health Disparities Cr. 3
Topics may include but are not limited to an examination of health disparities by race or ethnicity, gender, income, age, nationality, or residential location. Offered Intermittently.
Repeatable for 6 Credits

PH 4650 Health Data Visualization Cr. 3
This course introduces students to the art and science of data visualization, equipping them with the tools to transform data into interesting and meaningful visuals to effectively communicate important information to diverse audiences. Students will learn how to combine epidemiological insights, biostatistical methods, and aesthetic principles to create clear, impactful visuals that can influence attitudes, behaviors, and policies. From highlighting disparities to demonstrating intervention or policy impacts, students will gain hands-on experience to effectively illustrate and evaluate data visualizations to communicate complex findings in public health, non-profit, health care, governmental, and other settings. Offered Winter.
Prerequisites: PH 3100 with a minimum grade of C-, PH 3200 with a minimum grade of C-, and PH 3300 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

PH 4900 Directed Study in Public Health Cr. 1-3
This directed study course allows students to earn academic credit while engaging in hands-on, directed research under the guidance of a faculty supervisor. Students collaborate with experienced faculty researchers, complete directed readings, and participate in data collection, analysis, and dissemination of research findings. Once students have secured a mentored research position with a faculty member, this course enables them to gain real-world experience tackling important public health problems and research under expert guidance. Offered Every Term.
Repeatable for 3 Credits

PH 5100 Capstone Course in Public Health Cr. 3
In this culminating Capstone course, students formulate a research question tied to pressing public health issues, conduct comprehensive literature reviews, and critically evaluate scientific evidence. Students will apply their existing public health knowledge and skills to complete a variety of research and practice-oriented tasks. This work has students critically evaluate and synthesize data relevant to their chosen research question. Students evidence essential communication skills, presenting work through writing, visuals, and oral presentations, preparing them for graduate school and professional settings. Offered Every Term.
Prerequisites: PH 2100 with a minimum grade of C-, PH 3000 with a minimum grade of C-, PH 3100 with a minimum grade of C-, PH 3200 with a minimum grade of C-, PH 3300 with a minimum grade of C-, PH 3500 with a minimum grade of C-, and (PH 4400 with a minimum grade of C- or PH 4500 with a minimum grade of C-)
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Public Health or Public Health Honors.

PH 5150 Public Health Practicum Cr. 3
This practicum course offers students a structured, mentored opportunity to see public health in action. Students immerse themselves in real-world public health settings where they can practically apply their knowledge and skills. Emphasis is placed on working collaboratively with healthcare providers, public health professionals, and community members. By completing individual and group assignments, students showcase their ability to navigate real-world challenges, communicate effectively, and adapt evidence-based practices to local contexts. Through ongoing reflection, students identify their strengths and areas for growth, deepening their understanding of best practices in public health. Offered Every Term.
Prerequisites: PH 2100 with a minimum grade of C-, PH 3000 with a minimum grade of C-, PH 3100 with a minimum grade of C-, PH 3200 with a minimum grade of C-, PH 3300 with a minimum grade of C-, PH 3500 with a minimum grade of C-, and (PH 4400 with a minimum grade of C- or PH 4500 with a minimum grade of C-)
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Public Health or Public Health Honors.

PHA - Pharmacy

PHA 4105 Pathophysiology 1 Cr. 3
Advanced pathophysiologic concepts affecting the adult human using a research-based, system-focused approach, including etiology, pathogenesis and clinical manifestations of commonly found/seen altered health states. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 4125 Drug Literature Evaluation and Foundations of Research Cr. 3
Critical evaluation of the medical literature and provision of foundational research skills. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 4205 Pathophysiology II Cr. 2
Advanced pathophysiologic concepts affecting the adult human using a research-based, system-focused approach, including etiology, pathogenesis and clinical manifestations of commonly found/seen altered health states. Offered Winter.
Prerequisite: PHA 4105
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 4225 Principles of Pharmacotherapy I: Respiratory, Gastroenterology, Allergy, Ophthalmology Cr. 4
Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of gastroenterologic, pulmonary, ophthalmologic, and allergic disorders, and basic self-care. Offered Winter.
Prerequisite: PHA 4105
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $70

PHA 4235 Pharmacotherapeutic Problem Solving I: Respiratory, Gastroenterology, Allergy, Ophthalmology Cr. 2
Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of respiratory, gastroenterologic, allergic, and ophthalmologic disorders, and basic self-care. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $85

PHA 4395 Research Scholars: Research Development Cr. 2
Development of basic foundations of research practices for students pursuing the Research Scholars path. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 5110 Pharmacogenomics Cr. 2
Principles and applications of human genetics and genomics in drug therapy optimization, patient care, and counseling. Offered Spring/Summer.
Restriction(s): Enrollment limited to students with a class of PharmD Yr 2 or PharmD Yr 3; enrollment is limited to Professional level students.

PHA 5115 Principles of Pharmacotherapy II: Cardiology, Nephrology Cr. 5
Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of cardiovascular and renal disease. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 5125 Principles of Pharmacotherapy III: Endocrinology, Gynecology, Urology Cr. 4
Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of endocrinologic, gynecologic, and urologic disorders. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 5135 Pharmacotherapeutic Problem Solving II :Nephrology, Cardiology, Endocrinology, Gynecology, Urology Cr. 2
Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of nephrologic, cardiologic, endocrinologic, and gynecologic conditions. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 5195 Research Scholars: Research Conduct Elective Cr. 1-4
Conducting research project for students pursuing the Research Scholars path. Offered Every Term.
Prerequisite: PHA 4395
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Repeatable for 4 Credits

PHA 5215 Principles of Pharmacotherapy IV: Infectious Diseases Cr. 4
The chemistry, pharmacology, and toxicology of anti-infective agents and the pathophysiology, microbiology, and therapeutics of infectious diseases. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 5225 Principles of Pharmacotherapy V: Neurology, Psychiatry Cr. 4
Medicinal chemistry, pharmacology and therapeutics of neurologic and psychiatric disorders. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $70

PHA 5235 Pharmacotherapeutic Problem Solving III: Infectious Diseases, Neurology, Psychiatry Cr. 2
Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of infectious, neurologic, and psychiatric diseases. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $85

PHA 6125 Principles of Pharmacotherapy VI: Oncology, Advanced Immunology Cr. 3
Principles of medicinal chemistry, pharmacology, and therapeutics as applied to the treatment of oncologic and immunologic disorders Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $70

PHA 6135 Pharmacotherapeutic Problem Solving IV: Oncology and Advanced Pharmacotherapeutics Cr. 3
Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics of neoplastic disorders and advanced pharmacotherapeutics. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PHA 6235 Pharmacotherapeutic Problem Solving V: Drug Induced Diseases Cr. 2
Problem-based learning focusing on pathophysiology, pharmacology, medicinal chemistry, and pharmacotherapeutics of drug-induced diseases. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $85

PHC - Pharmacology

PHC 5030 Individual Research in Pharmacology Cr. 2-5
Direct participation in laboratory research into the ways drugs affect cell processes, under the supervision of a departmental faculty advisor. Introduction to experimental protocol and current related scientific literature. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

PHC 6500 Drugs and the Addictive Process Cr. 3
Introduction to general principles of drug action; specific pharmacologic, toxicologic, and pathologic effects of abused drugs; bio-psycho-social bases for addiction. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PHC 7005 Fundamentals of Human Physiology Cr. 2
Students will gain a general understanding of human anatomy, of human physiology, and of the workings of each major organ system in the human body; and students will be able to utilize this information in future courses that discuss and detail the pharmacological targeting/treatment of various organs and organ systems. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PHC 7010 Pharmacology Lecture Cr. 4
Introductory presentation of drug actions on living tissue. Offered Winter.
Corequisite: PHC 7011
Restriction(s): Enrollment is limited to Graduate level students.

PHC 7011 Pharmacology Workshop Cr. 1
This add-on course provides an in-depth treatment of Pharmacology for PhD graduate students. It builds on the foundation laid by PHC 7010 and extends it to address advanced concepts and techniques in Pharmacological research. Each week, this course will explore advanced topics related to the material covered in PHC 7010 through lectures, paper discussions and student presentations in a manner that enriches the contents provided by PHC 7010. The course will focus on a critical approach to pharmacological research and highlight key conceptual advances, experimental strategies, and fruitful controversies, spanning from historical background to current concepts. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

PHC 7021 Advanced Health Assessment and Clinical Diagnosis Cr. 4
This course will provide the registered nurse anesthesia student with the knowledge and advanced systematic focus on various body systems while completing a comprehensive health assessment for patients across the lifespan, including but not limited to adult, pediatric, geriatric, and obstetric patients. Students utilize critical thinking as well as diagnostic procedure results to interpret, analyze and provide differential diagnosis of common patient problems, while utilizing common assessment techniques for each body system. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10
Equivalent: AN 7010

PHC 7031 Advanced Pharmacology I Cr. 3
Discuss the chemistry, pharmacokinetics and pharmacodynamics of medications as pertaining to nurse anesthesia. Major drug categories pertaining to anesthesia practice, as well as drug therapies and classes pertinent to acute and chronic responses to anesthesia; indications, mechanisms, effects. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $15
Equivalent: AN 7100

PHC 7032 Advanced Pharmacology II Cr. 3
Discuss the chemistry, pharmacokinetics and pharmacodynamics of medications as pertaining to nurse anesthesia. Major drug categories covered include drug therapies and classes pertinent to acute and chronic responses to anesthesia, including indications, mechanisms, and effects. Also discuss effects of anesthetics in specialized populations such as geriatrics, obesity, obstetric, substance abuse and pediatric populations. Offered Winter.
Prerequisites: AN 7100 with a minimum grade of B or PHC 7031 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $15
Equivalent: AN 7110

PHC 7221 Advanced Physiology I Cr. 3
Discuss aspects of anatomy and physiology that are relevant to the science and practice of anesthesia. Topics are covered from cellular, tissue, organ, and systems perspective, and related to issues of advance nurse anesthesia practice. The focus of this course is to impart concepts of advanced physiology which are elemental to the safe practice of anesthesia. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: AN 7220

PHC 7241 Advanced Physiology II Cr. 3
Continuation of AN7240. Discuss further aspects of anatomy and physiology that are relevant to the science and practice of anesthesia, as well as pathologic processes. Topics are covered from cellular, tissue, organ, and systems perspective, and related to issues of advance nurse anesthesia practice. The focus of this course is to impart concepts of advanced physiology and pathophysiology which are elemental to the safe practice of anesthesia. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10
Equivalent: AN 7240

PHC 7242 Pathophysiology Cr. 3
Discuss the pathophysiologic changes associated with various disease processes. The focus of this course is to impart concepts of pathophysiology in the framework of the various body systems and disruptions in normal body functioning for individuals across the lifespan. Offered Winter.
Prerequisite: AN 7240 with a minimum grade of B or PHC 7241 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: AN 7241

PHC 7300 Storytelling in Science Cr. 2
This course investigates how writers and storytellers construct narratives in ways that keep readers reading. Students will examine fiction writing techniques like plot, structure, and story beats and experiment with how these techniques transfer to the page of their scientific research articles and grant applications. Ultimately, students will gain experience structuring and revising components of dynamic storytelling into narratives that capture their science writing voice and captivate multiple categories of readers and audience – experts in the field, the general public, and prospective employers. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PHC 7410 Principles of Toxicology Cr. 3
Basic concepts and principles of toxicology, including toxicity of major classes of chemicals (pesticides, solvents, metals) and organ systems (renal, immune, digestive, neuro and respiratory) affected. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 7011

PHC 7501 Physics, Equipment, and Safety for Anesthesia Cr. 2
Introduction to the basic principles of physics and their application to anesthesia. Focus on processes that ensure safe anesthesia practice. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $20
Equivalent: AN 7500

PHC 7601 Regional Anesthesia Cr. 4
This course discusses key components related to regional anesthesia practice and their application in the clinical arena which includes acute and chronic pain therapies. Spinal/epidural anesthesia, upper and lower extremity nerve blocks, truncal blocks are covered with special emphasis on anatomy, physiology, drugs and equipment. Ultrasound physics and its application in regional anesthesia is covered and applied in the Anesthesia Sim Lab environment. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $20
Equivalent: AN 7600

PHC 7641 Research and Statistics Cr. 3
This course will provide the nurse anesthesia student with the knowledge, skills, and abilities to perform extensive literature searches, critically appraise the available research evidence, synthesize information from diverse formats and sources, and cogently express understanding of complex concepts in both verbal and written forms. This course will also involve discussion, review and interpretation of basic and clinical biostatistics. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: AN 7640

PHC 7650 Advanced Topics in Pharmacology Cr. 1-6
Modules of instruction in sharply-defined areas of current research in pharmacology and related disciplines. Each module will cover fundamental concepts, essential knowledge base, research protocols and techniques, and future issues. Offered Every Term.
Prerequisite: PHC 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

PHC 7700 Recent Developments in Pharmacology Cr. 1-4
Selected topics and readings in pharmacology. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PHC 7705 Fundamentals of Human Physiology Cr. 2
Students will gain a general understanding of human anatomy, of human physiology, and of the workings of each major organ system in the human body; and students will be able to utilize this information in future courses that discuss and detail the pharmacological targeting/treatment of various organs and organ systems. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PHC 7710 Individual Studies in Pharmacology Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Pharmacology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy or Master of Science degrees.
Repeatable for 8 Credits

PHC 7730 Reproductive Sciences: Teratology Cr. 3
Principles of the science of birth defects; focus on impact of environmental poisons, medicines, and drugs of abuse on developing germ cells, embryos and fetuses. Roles of pharmacological/toxicological, physiological (maternal, placental, and fetal), genetic and nutritional factors in the teratogenic response are examined. Texts and current readings. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PSL 7730

PHC 7880 Anesthesia Seminar Cr. 1
This course allows students to gain experience in critical reading of scholarly articles and case reports, including data analysis and interpretation and translation of research findings into evidence based practices. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: AN 7880
Repeatable for 4 Credits

PHC 7890 Seminar Cr. 1
Assigned readings and student presentation; faculty and outside speakers. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Pharmacology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy or Master of Science degrees.
Repeatable for 12 Credits

PHC 7902 Ethics and Health Care Cr. 3
This course serves as an advanced introduction to health care ethics, designed specifically for nurse anesthesia students. Ethical principles and personal values that shape professional practice and influence decision making will be expounded upon in the discussion of contemporary issues in health care. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: AN 7902

PHC 7996 Research Cr. 1-20
Special research topics in specified areas arranged with individual faculty members. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 30 Credits

PHC 8888 Survey of Research at the Chemistry Biology Interface Cr. 3
The Chemistry Biology Interface course will teach students how to apply chemical approaches to study complete biological processes. It will commence with a basic overview of the biochemistry of biomolecules. Next, complex biological processes related to various diseases will be highlighted by introducing cell biology, model cells and organisms, and disease mechanisms. Finally, the course will highlight contemporary examples of how chemical methods are used to answer complex biological questions to show the value and innovation available by taking a multidisciplinary approach. The focus will be on development of skill sets that are applicable for research at the chemistry biology interface, rigor and transparency in data collection and analysis, and identification of cross-disciplinary research at Wayne State. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 8888, CHM 8888, PSC 8888, PSL 8888

PHC 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHC 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PHC 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PHC 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: PHC 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

PHC 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PHC 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PHC 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PHC 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PHC 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

PHI - Philosophy

PHI 1010 Introduction to Philosophy Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Survey of some major questions that have occupied philosophers throughout history, such as Does God exist? What is a good person? Do we have free will? Is the mind the same as the brain? What can we really know? Course will acquaint students with major figures both historical and contemporary. Offered Every Term.

PHI 1020 Honors Introduction to Philosophy Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry, Honors Section
Survey of some major questions that have occupied philosophers throughout history, such as Does God exist? What is a good person? Do we have free will? What can we really know? Course will acquaint students with major figures both historical and contemporary. Offered Intermittently.

PHI 1050 Critical Thinking Cr. 3
Knowledge and skills relevant to the critical evaluation of claims and arguments. Topics will include: the formulation and identification of deductively and inductively warranted conclusions from available evidence; the assessment of the strengths of arguments; the assessment of consistency, inconsistency, implications, and equivalence among statements; the identification of fallacious patterns of inference; and the recognition of explanatory relations among statements. Offered Every Term.

PHI 1070 Games, Risk, and Logic Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
Students develop quantitative reasoning skills such as statistical analysis and probabilistic reasoning. Topics covered include: logic games, statistical fallacies, calculations of probability, risk assessment, game theory, and how to evaluate decisions in business or personal action based on calculations of expected risk or utility. Offered Every Term.

PHI 1090 Critical Thinking: AI & Information Literacy Cr. 3
Students will learn how to use AI/Large Language Models (LLMs) as a tool to think critically about complicated ethical and public policy issues. They will learn the capabilities and limitations of LLMs, how to create effective LLM prompts, how to assess online information and data for credibility, and how to evaluate and construct arguments. Offered Every Term.

PHI 1100 Contemporary Moral Issues Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Critical discussion of contemporary moral issues including pornography, adultery, same-sex marriage, abortion, preferential treatment, obligations to the poor, capital punishment, terrorism, and others. Offered Every Term.
Repeatable for 9 Credits

PHI 1110 Ethical Issues in Health Care Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Survey of moral issues that arise in the practice of medicine and in pursuit of medical knowledge: abortion, euthanasia, experimentation on human subjects, informed consent, rights to health care, genetic engineering, the concepts of death, health and disease. Offered Every Term.

PHI 1120 Professional Ethics Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Critical examination of moral issues in the workplace, including: discrimination and preferential treatment, sexual harassment, whistle-blowing, privacy and disclosure, corporate social responsibility. Offered Every Term.

PHI 1130 Environmental Ethics Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Is the natural world something to be valued in itself, or is its value exhausted by the uses human beings derive from it? This course introduces students to some of the major views on the subject, anthropocentric (human-centered) and non-anthropocentric. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students.

PHI 1150 AI and Data Ethics Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
A survey of ethical issues related to artificial intelligence and data collection, such as moral rights for AI, algorithmic bias, data privacy, and the use of AI in war. Offered Every Term.

PHI 1200 Life and Death Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Central philosophical and religious questions about life and death, and the enterprise of answering these questions through reasoning and argument. What is it to be alive, and to die? Do we cease to exist when we die, or might we continue to exist in an afterlife following our deaths? Should we fear or regret the fact that we will die someday, or should we be indifferent to it? Why is killing wrong? Is it always wrong to prevent a life from beginning, or to help someone bring his or her own life to an end? What, if anything, makes a life meaningful? We will study the ways in which these questions are raised and answered in a selection of classic and contemporary works of philosophy and literature. Offered Yearly.

PHI 1400 Artificial Intelligence and the Conscious Mind Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
This course provides an introduction to philosophical and scientific thinking about Artificial Intelligence (AI). The public release of Large Language Models (LLMs) such as ChatGPT and relatives has created both high hopes for the future and also deep worries. Generative AI systems such as LLMs now display nearly human-level abilities at tasks that would require genuine intelligence and consciousness if performed by humans. But what are AIs really doing in performing these tasks? Are AIs intelligent, understanding, conscious? Could they be in the near future? Our overall aim in this course is to gain some understanding of the workings of neural networks, machine learning, and AI, to combine that with an understanding of philosophical and cognitive scientific approaches to understanding mentality and consciousness, and thereby to take a few baby steps toward putting together answers to these important questions. Offered Yearly.
Equivalent: MAT 1400

PHI 1500 Race, Sex, and Religion Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
An examination of contemporary ethical issues and controversies involving race, sex, religion, and related topics such as gender identity, class, economic injustice, immigration, and sexual orientation. Offered Fall, Winter.

PHI 1900 Comparative Religion Cr. 3
Origins of religion: its social importance, its structure (fetish, totemism, myth, ritual). Pre-historic religion and the major religious traditions. Offered Every Other Year.
Equivalent: NE 1900

PHI 2100 Ancient Greek Philosophy Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to the Western philosophical tradition from its origins in Ancient Greece. Readings from the pre-Socratics, Plato, and Aristotle. Offered Every Other Year.

PHI 2110 Philosophy of the Scientific Revolution and Enlightenment Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
A survey of philosophical views concerning knowledge, reality, scientific evidence, naturalism, and morality from some of the major European philosophers of the period of the Scientific Revolution and Enlightenment, such as Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant. Offered Every Other Year.

PHI 2140 Ancient Greek Medicine and Psychology Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
An examination of early Greek psychology and medical practice and theory. Figures and schools of thought covered include Homer, Democritus, Empedocles, the cult of Ascleipus, the Hippocratics, Plato, and Aristotle. Offered Every Other Year.

PHI 2150 Chinese Philosophy Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
Main philosophical traditions from ancient to pre-modern China. Readings from Confucius, Mo Tzu (Mohism), Mencius, Hsun Tzu, Han Fei Tzu (Legalism) and Chu Hsi (Neo-Confucianism). Offered Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

PHI 2170 Islamic and Near Eastern Philosophy Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
An examination of major figures and movements in Islamic and Near Eastern philosophy. Offered Every Other Year.
Equivalent: NE 2170

PHI 2320 Introduction to Ethics Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
An introduction to some classical and modern views concerning such questions as: What determines the rightness and wrongness of actions? What is the nature of moral reasoning? What constitutes a moral life? Offered Every Term.

PHI 2330 Introduction to Social and Political Philosophy Cr. 3
Introduction to the basic issues of political philosophy, such as the nature of the state, the ways of justifying its power and authority over its citizens; a philosophical analysis of central concepts like those of freedom, justice, and equality. Selected readings from some of the following: Plato, Aristotle, Hobbes, Locke, Rousseau, Mill, Marx, and Rawls. Offered Every Other Year.

PHI 2360 Feminist Philosophy Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
An examination of work by feminist philosophers. Offered Winter.
Equivalent: GSW 2360

PHI 2390 Philosophy of Human Rights Cr. 3
Addresses central issues in the philosophy of human rights, including questions about the foundation, content, and application of human rights. Examines different approaches to the foundation of human rights and considers whether human rights have one unique foundation or plural foundations. Offered Every Other Year.

PHI 2400 Introduction to the Philosophy of Religion Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Religious beliefs provide subject matter for philosophical study; for example, Are the traditional arguments for the existence of God credible? Does the existence of evil conflict with a belief in God's omnipotence and omnibenevolence? What is the value of religious experience? Offered Intermittently.

PHI 2550 Introduction to Philosophy of Science Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Distinguishing science from non-science; how scientific knowledge is established; what constitutes scientific progress; whether science is cumulative; the place of science in the enterprise of knowledge and rational belief. Offered Every Other Year.

PHI 2650 Minds and Machines Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Central examples of these questions and proposed answers: Is our mind just a piece of software that our brain is running? Can AI exercise moral agency? Are minds physical things? Are we much less rational than we think? How can we understand each other's minds? Can there be laws in psychology? What is consciousness, and can it be studied scientifically? We will address these and other questions via the work of philosophers, psychologists and cognitive scientists. Offered Winter.
Equivalent: PSY 2650

PHI 3270 Foundations of Law Cr. 3
The legal system we live under commands, forbids, punishes, and defines responsibilities and harm. Common-sense morality: what is it, and what is its relation to law? Statutory interpretation: do judges create new law? Punishment: why do we have it, and what rights do the accused have? What is the legal concept of harm and responsibility? Offered Every Other Year.

PHI 3450 Existentialism Cr. 3
Examines major philosophical views and figures in the Existentialist tradition, such as Sartre, Camus, Heidegger, de Beauvoir, Buber, Ortega y Gassett, Kierkegaard, and Nietzsche. Offered Every Other Year.

PHI 3500 Theory of Knowledge Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
The distinction between knowledge and belief is germane to every field of inquiry. What is the difference between knowledge and belief? Do we know anything at all? If so, how? Are we ever in a position of being certain about beliefs pertaining to an objective world? Is our belief in an objective world based on our subjective experiences? Offered Every Term.

PHI 3550 Metaphysics Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Survey and examination of some of the enduring questions of metaphysics concerning the nature of reality. Topics include: the nature of physical objects, abstract entities, the concepts of time and change, the relation between mind and body, causation, the nature of metaphysics. Offered Yearly.

PHI 3650 The Philosophy of Work Cr. 3
This course examines philosophy of work and the relationship between political economy and the ethics of work. It explores the definition and meaning of work in different historical and cultural contexts and then focuses on practical philosophy and applied ethics with respect to work, occupational choice, and social responsibility. It also considers the tensions between work and individual rights and work and social justice. Offered Yearly.
Equivalent: ELR 3650

PHI 3700 Philosophy of Art Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
What are art works? Why are they so moving? What is the nature of the experience they offer? This course introduces the student to some of the schools of thought on these issues. It also attempts to deal with the specific natures of the various artistic media, such as: drama, literature, film, painting, photography, music and opera. Offered Every Term.

PHI 3800 Topics in Philosophy Cr. 1-3
Topics to be announced in Schedule of Classes . Offered Intermittently.
Repeatable for 6 Credits

PHI 3850 Symbolic Logic Cr. 3
The logic of propositions; the general logic of predicates and relations. Offered Every Term.
Equivalent: LIN 1850

PHI 3860 Honors Symbolic Logic Cr. 3
See PHI 3850/LIN 1850. Offered Every Term.
Equivalent: LIN 1860

PHI 4890 Honors Thesis Cr. 3
Directed research project that culminates in the student's honors thesis. Offered Winter.
Restriction(s): Enrollment limited to students in the Honors College.

PHI 4995 Research Training Cr. 1-4
Students engage in an independent research project and learn research methods in Philosophy under the supervision of a faculty member. Offered Every Term.
Repeatable for 4 Credits

PHI 5050 Advanced Symbolic Logic Cr. 4
Formal, extensive treatment of first-order predicate logic with emphasis on the notions of a formal logical language and truth in a model; the logic of identity; definite descriptions; brief introductions to set theory and the metatheory of propositional and first-order logic; some additional advanced topics to be selected by the instructor. Offered Yearly.
Prerequisites: PHI 3850 or PHI 3860
Equivalent: LIN 5050

PHI 5210 Philosophy of Race and Racism Cr. 4
An examination of philosophical approaches to the study of race and racism, including the metaphysics of race and the epistemology of racism and ignorance. Offered Every Other Fall.
Prerequisites: PHI 2000-6XXX with a minimum grade of D-

PHI 5230 Philosophy of Science Cr. 4
Intensive investigation and discussion of special topics or particular authors in the philosophy of science. Offered Yearly.
Prerequisites: 1 of (PHI 2400, PHI 5630, PHI 5640, PHI 2550, PHI 3500, PHI 3600, PHI 5230, PHI 5500, PHI 5530, PHI 5550, or PHI 5570)

PHI 5240 Social and Political Philosophy Cr. 4
Selected topics and readings from major social and political philosophers. Possible readings include Hobbes, Locke, J.S. Mill, Rawls, Simmons, Pateman, Frederick Douglass, and Charles Mills. Offered Every Other Year.
Prerequisites: PHI 2000-ZZZZ with a minimum grade of C (may be taken concurrently)

PHI 5250 Justice and Rights in Health Care Cr. 4
This course is centered around the general question: What does justice require of a society in terms of providing health care to its members? It examines classic philosophical theories of justice including egalitarianism, libertarianism, and Rawls' justice as fairness, before turning to the implications of these theories for health care access. Questions include: Does justice require providing universal health care? Is it compatible with offering different health care plans to different persons, or does justice require everyone have the same health care? How do issues of fairness in health care access relate to various forms of oppression in society, such as racism, classism, and sexism? Offered Fall.
Prerequisites: PHI 2000-ZZZZ with a minimum grade of C (may be taken concurrently)

PHI 5260 Philosophy of Sex and Gender Cr. 3
Explores ethical and conceptual issues surrounding sex, gender, and sexual orientation. Specific topics include conceptual analysis of sex, gender, and sexual orientation; sexual perversion, natural law, consent, marriage, adultery, "casual" sex, polygamy and polyamory, prostitution, and pornography. Offered Every Other Year.

PHI 5270 Philosophy of Law Cr. 4
Intensive investigation and discussion of special topics or particular authors in the philosophy of law. Possible readings include Austin, Hart, Fuller, Finnis, Martin Luther King, Jr., R. Dworkin, Scalia, J.S. Mill, and Shiffrin. Offered Every Other Year.

PHI 5280 History of Ethics Cr. 4
A survey and discussion of historically important moral philosophers from Plato to Mill. Offered Every Other Year.
Prerequisites: PHI 2000-6XXX with a minimum grade of D-, CLA 1010 with a minimum grade of D-, or PS 1010-1030 with a minimum grade of D-

PHI 5290 Free Will and Moral Responsibility Cr. 4
Exploration of the nature of, and relationship between, free will and moral responsibility. Questions include: What is free will? Is free will required for moral responsibility? Are freedom and responsibility compatible with determinism (the claim that the initial state of the universe plus the physical laws of nature determine everything that happens)? Does our practice of holding one another responsible reveal the nature of moral responsibility? Offered Fall.
Prerequisites: PHI 2000-ZZZZ with a minimum grade of C (may be taken concurrently)

PHI 5300 Foundations of Ethics Cr. 4
Twentieth century moral philosophers in the analytic tradition, with focus on debates in moral realism, moral epistemology, and the ""Why be moral?"" question; includes such philosophers as Moore, Stevenson, Foot, Mackie, Blackburn, Gibbard, Parfit, Korsgaard, and Railton. Offered Every Other Year.
Prerequisites: PHI 2000-6XXX with a minimum grade of D-, CLA 1010 with a minimum grade of D-, or PS 1010-1030 with a minimum grade of D-

PHI 5310 Law, Justice, and Intersectionality Cr. 4
An examination of social, political, and legal constructions of race, gender, sexuality, and ableism from intersectional perspectives, with a focus on how these institutions attempt to define who counts as human and whose lives, knowledge, and experiences have value. Offered Fall.
Equivalent: GSW 5310

PHI 5330 Ethics, Law, and Health Cr. 4
Provides a foundational understanding of how to use the tools of philosophy (especially ethics) to critically assess complex issues concerning public health, medical care, health law, and health policy. Covers foundations of normative ethical theory and of legal theory, and uses that understanding to address ethical and legal questions about discrete practical issues dealing with health. Offered Yearly.
Prerequisites: PHI 2000-ZZZZ with a minimum grade of C (may be taken concurrently)

PHI 5340 Special Topics in Philosophy of Law Cr. 3-4
An examination of special topics, issues, controversies in philosophy related to the law, legal theory, and public policy. Offered Intermittently.

PHI 5350 Logical Systems I Cr. 4
Metaresults concerning formal systems of sentential and first-order logics; soundness, completeness; independence of axioms; introduction to recursive functions; formalization of elementary arithmetic; discussion of Godel's incompleteness theorem and Church's Theorem. Offered Every Other Year.
Prerequisites: MAT 5600 with a minimum grade of C-, PHI 2850 with a minimum grade of C-, PHI 2860 with a minimum grade of C-, PHI 5050 with a minimum grade of C-, or MAT 5420 with a minimum grade of C-
Equivalent: MAT 5350

PHI 5410 Plato Cr. 4
Selected readings on topics in Plato. Offered Every Other Year.
Prerequisites: PHI 2000-6XXX with a minimum grade of D-, CLA 1010 with a minimum grade of D-, or PS 1010-1030 with a minimum grade of D-

PHI 5420 Aristotle Cr. 4
Selected readings on topics in Aristotle. Offered Every Other Year.

PHI 5460 Kant Cr. 4
Selected topics or readings in Kant's philosophy. Offered Every Other Year.
Prerequisites: PHI 2000-6XXX with a minimum grade of D-, CLA 1010 with a minimum grade of D-, or PS 1010-1030 with a minimum grade of D-

PHI 5500 Topics in Metaphysics Cr. 4
Intensive investigation and discussion of special topics or particular authors in metaphysics. Offered Yearly.

PHI 5510 Special Topics in the History of Philosophy Cr. 3,4
An examination of special topics, issues, figures, and schools of thought in the history of philosophy. Offered Every Other Year.
Repeatable for 8 Credits

PHI 5520 Topics in Black and Africana Philosophy Cr. 3-4
An examination of major figures, works, and topics in Black and Africana philosophy. Offered Yearly.
Repeatable for 8 Credits

PHI 5530 Topics in Epistemology Cr. 4
Intensive investigation and discussion of special topics or particular authors in the theory of knowledge. Offered Intermittently.

PHI 5550 Philosophy of Mind Cr. 4
Intensive investigation and discussion of special topics or particular authors concerned with the nature and status of the mental and theories about the mental. Offered Every Other Year.

PHI 5570 Philosophy of Language Cr. 4
Intensive investigation and discussion of philosophical problems concerning meaning, truth, and the nature of language. Offered Every Other Year.
Prerequisites: 1 of (PHI 2400, PHI 5630, PHI 5640, PHI 2550, PHI 3500, PHI 3600, PHI 5230, PHI 5500, PHI 5530, PHI 5550, or PHI 5570)
Equivalent: LIN 5570

PHI 5620 Topics in Philosophy of Sci-Fi, Fantasy, & AI Cr. 3-4
An examination of philosophical concepts and issues related to speculative fiction, ethics, and artificial intelligence as presented across fantasy and science fiction literature, film, television, and gaming. Offered Winter.
Repeatable for 8 Credits

PHI 5800 Special Topics in Philosophy Cr. 2-4
Topics and prerequisites to be announced in Schedule of Classes . Offered Intermittently.
Repeatable for 8 Credits

PHI 5900 Advanced Undergraduate Research Seminar in Philosophy Cr. 4
Advanced seminar in Philosophy. Topics and instructor vary by semester. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students in the Department of Philosophy.
Repeatable for 12 Credits

PHI 5993 Writing Intensive Course in Philosophy Cr. 0
Disciplinary writing assignments under direction of faculty member. Must be selected in conjunction with a course designated as a corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Directed practice in rewriting assignments for the concurrently-elected course, for the purpose of perfecting skills in philosophical writing. Does not count toward the course minimums for the major or minor. Required for all majors. Offered Every Term.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and (PHI 3000-5040 (may be taken concurrently), PHI 5200-5340 (may be taken concurrently), or PHI 5400-6999 (may be taken concurrently))
Restriction(s): Enrollment is limited to Undergraduate level students.

PHI 6990 Directed Reading Cr. 1-6
Intensive investigation by student on topic chosen by student in consultation with instructor. Offered Every Term.
Repeatable for 12 Credits

PHI 6999 Certificate Essay Direction Cr. 1-4
Individual direction for writing Certificate Essay in Health Care Ethics. Offered Every Term.
Restriction(s): Enrollment limited to students in the GC in Health Care Ethics program.
Repeatable for 4 Credits

PHI 7790 Seminar in Philosophy of Language Cr. 4
Offered Intermittently.
Prerequisites: PHI 5000-5999
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHI 7800 Seminar in Philosophy: Special Topics Cr. 4
Offered Intermittently.
Prerequisites: PHI 5000-5999
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHI 7810 Seminar in History of Philosophy Cr. 4
Study of a philosopher or period. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHI 7840 Seminar in Ethics Cr. 4
Offered Intermittently.
Prerequisites: PHI 5000-5999
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHI 7850 Seminar in Epistemology Cr. 4
Offered Intermittently.
Prerequisites: PHI 5000-5999
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHI 7860 Seminar in Metaphysics Cr. 4
Offered Intermittently.
Prerequisites: PHI 5000-5999
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHI 7910 Preliminary Research I Cr. 2
Provides students with the opportunity to lay the groundwork for an article of publishable quality in a specialized area of philosophy. With the help of a faculty mentor, students will develop independent philosophical research skills, evaluate current scholarship in a specialized area of philosophy, identify potential article topics in that area, develop an original idea that advances current scholarship in that area, and start the process of writing an article of publishable quality by completing at least a first draft of that article. To enroll in this course, a student must have completed 32 credits toward the Ph.D., must obtain permission from a faculty member in philosophy to serve as the mentor of the course, and must obtain the written consent of the graduate director. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

PHI 7920 Preliminary Research II Cr. 2
Builds on Preliminary Research I, providing students with the opportunity to lay the groundwork for a second article of publishable quality in a specialized area of philosophy. With the help of a faculty mentor, students will continue to develop independent philosophical research skills, evaluate current scholarship in a specialized area of philosophy, identify potential article topics in that area, develop an original idea that advances current scholarship in that area, and start the process of writing an article of publishable quality by completing at least a first draft of that article. To enroll in this course, a student must obtain permission from a faculty member in philosophy to serve as the mentor of the course and must obtain the written consent of the graduate director. Offered Every Term.
Prerequisite: PHI 7910
Restriction(s): Enrollment is limited to Graduate level students.

PHI 7990 Directed Study in Philosophy Cr. 1-4
Directed study for graduate students in Philosophy. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PHI 7999 Master's Essay Direction Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 99 Credits

PHI 8999 Master's Thesis Direction and Research Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHI 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PHI 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PHI 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: PHI 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

PHI 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PHI 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PHI 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PHI 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PHI 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

PHY - Physics

PHY 1001 Perspectives in Physics, Biomedical Physics, and Astronomy Cr. 1
Survey of educational and career paths including specializations in basic research and applied disciplines; recommended for entering students and those considering or beginning a major or minor concentration. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.

PHY 1020 Conceptual Physics: The Basic Science Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry, Quantitative Experience Comp
This course will introduce key concepts of classical and modern physics. Students will be able to demonstrate knowledge of physics concepts starting from the foundations of measurements, describing motion, and Newton's Laws. Building on these foundations, they will be able to explore the concepts of conserved quantities, states of matter, temperature and heat, waves and sound, electricity and magnetism, optics, atomic physics, nuclear physics, relativity, elementary particles, and cosmology. About three fourths of the class will be spent in lecture and one-fourth discussing questions and problems at the end of each chapter. Along with PHY 1020, students may take a one-credit laboratory course, PHY 1021. Students will need to do arithmetic and simple algebra roughly at the level of high school that is required by the university for you to graduate. Offered Every Term.

PHY 1021 Conceptual Physics Laboratory Cr. 1
The Conceptual Physics Laboratory is designed as introduction to research methods in physics. Students learn how to design experiments to answer physical questions, learn how to summarize and present their methods, findings and conclusions, and how to present their conclusions both in written and oral form. Students also learn how to discuss their findings and be able to defend their conclusions. Offered Every Term.
Corequisite: PHY 1020
Fees: $25

PHY 2020 Science, Technology, and War Cr. 4
Modern weapons, nuclear and otherwise are becoming increasingly available and dangerous; people with grievances seem eager to use them. Science and technology, as well as constraints of bureaucracy and society underpin weapons development and use, as technologies affect prospects and results of war and peace. History of humanity and its tools of war. Offered Yearly.
Equivalent: HIS 2510, PCS 2020, PS 2440

PHY 2130 Physics for the Life Sciences I Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry
Introduction to physics for life science majors (including students preparing for medicine, dentistry, pharmacy, and health sciences) and other Liberal Arts and Sciences students. Topics include motion, forces, energy, diffusion, fluids, and thermal physics, with biological applications. This course includes a lecture and a problem-solving lab. Students must also take PHY 2131 (experimental laboratory) concurrently to satisfy the General Education laboratory requirement. No credit is awarded for this course after successful completion of PHY 2170. Offered Every Term.
Corequisite: PHY 2131

PHY 2131 Physics for the Life Sciences Experimental Laboratory Cr. 1
Laboratory experiments in fluid mechanics, diffusion and biophysics. Satisfies General Education laboratory requirement only when taken concurrently with PHY 2130. Offered Every Term.
Corequisite: PHY 2130
Fees: $25

PHY 2140 Physics for the Life Sciences II Cr. 4
Second part of introduction to physics for students in the life sciences, students preparing for medicine, dentistry, pharmacy and health sciences and for general Liberal Arts and Sciences students. Covers thermodynamics, electric fields, oscillations, waves and optics. This course includes a lecture and a problem-solving lab. Students must also take PHY 2141 (experimental laboratory) concurrently to satisfy the General Education laboratory requirement. No credit is awarded for this course after successful completion of PHY 2180. Offered Every Term.
Prerequisites: PHY 2130 with a minimum grade of C-
Corequisite: PHY 2141

PHY 2141 Physics for the Life Sciences Laboratory Cr. 1
Laboratory experiments in electric fields, fluids, optics and spectroscopy. Must be taken concurrently with PHY 2140. Offered Every Term.
Corequisite: PHY 2140
Fees: $25

PHY 2170 University Physics I for Scientists and Engineers Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry
For students specializing in physics, biology, chemistry, mathematics or engineering. Statics, kinematics, dynamics, energy and linear momentum, rotational kinematics and dynamics, angular momentum, solids and fluids, vibrations and wave motion, thermodynamics. This course includes a lecture and a problem-solving lab. Students must also take PHY 2171 (experimental laboratory) concurrently to satisfy the General Education laboratory requirement. No credit after PHY 2175. Offered Every Term.
Prerequisites: MAT 2010 with a minimum grade of C- (may be taken concurrently)

PHY 2171 University Physics I Experimental Laboratory Cr. 1
Satisfies General Education Requirement: Natural Scientific Inquiry
Laboratory experiments in statics, kinematics, dynamics, energy and linear momentum, rotational kinematics and dynamics, angular momentum, simple harmonic motion, optics, continuum mechanics, thermodynamics. Satisfies General Education laboratory requirement only when taken concurrently with PHY 2170. Offered Every Term.
Corequisite: PHY 2170
Fees: $25

PHY 2180 University Physics II for Scientists and Engineers Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry
Electric forces and electric fields, electrical energy, capacitance, current, resistance, direct current circuits, magnetism, induced voltage and inductance, AC circuits, electromagnetic waves, geometric and wave optics. The experimental lab that goes with this course is PHY 2181 and should be taken concurrently to satisfy the General Education laboratory requirement. Offered Every Term.
Prerequisites: MAT 2010 with a minimum grade of D-, MAT 2020 with a minimum grade of D- (may be taken concurrently), and (PHY 2170 with a minimum grade of C- or PHY 2175 with a minimum grade of C-)

PHY 2181 University Physics II Experimental Laboratory Cr. 1
Satisfies General Education Requirement: Natural Scientific Inquiry
Laboratory experiments in electrostatics, currents and circuit elements, magnetic fields, magnetic induction, AC circuits, electromagnetic waves, interference of waves. Satisfies General Education laboratory requirement only when taken concurrently with PHY 2180. Offered Every Term.
Corequisite: PHY 2180
Fees: $25

PHY 2210 General Physics Laboratory Cr. 1
Consult departmental undergraduate academic advisor prior to registering for this course. No credit after PHY 1020 if taken for four credits. Offered Every Term.
Prerequisite: PHY 1020 with a minimum grade of D-
Fees: $15

PHY 3100 The Sounds of Music Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry
For music majors and other students interested in the physical foundations of the production, perception, and reproduction of musical sounds. Makes only limited use of simple mathematics. Includes topics such as wave properties, loudness levels and the human ear, hearing loss, tone quality, frequency and pitch, musical intervals and tuning, room acoustics, the production of sound by various musical instruments, and electronic reproduction of music. Meets General Education Laboratory Requirement. Offered Fall.
Fees: $25

PHY 3300 Introductory Modern Physics Cr. 3
For physics, chemistry, engineering, mathematics majors and other interested students. Introduction to relativity, quantum phenomena, atomic structure, quantum mechanics, condensed matter physics, quantum optics, nuclear physics, elementary particles, and anti-particles. Offered Fall, Winter.
Prerequisites: ((PHY 2130 with a minimum grade of C- and PHY 2131 with a minimum grade of C-) or (PHY 2170 with a minimum grade of C- and PHY 2171 with a minimum grade of C-)), ((PHY 2140 with a minimum grade of C- and PHY 2141 with a minimum grade of C-) or (PHY 2180 with a minimum grade of C- and PHY 2181 with a minimum grade of C-)), and MAT 2020 with a minimum grade of C-
Corequisite: PHY 3310

PHY 3310 Introductory Modern Physics Laboratory Cr. 2
Laboratory course to accompany PHY 3300. Hands-on experience in logical and rigorous analysis of phenomena of modern physics. Offered Fall, Winter.
Prerequisites: ((PHY 2140 with a minimum grade of D- and PHY 2141 with a minimum grade of D-) or (PHY 2180 with a minimum grade of D- and PHY 2181 with a minimum grade of D-)) and (PHY 3300 with a minimum grade of C (may be taken concurrently) or PHY 5015 with a minimum grade of C (may be taken concurrently))
Fees: $25

PHY 3500 Introduction to Thermal and Fluid Physics Cr. 3
Provides an introduction to physics of gases, fluids and other states of matter for majors in physics and other science, technology and mathematics fields. builds on a knowledge of the mechanics in introductory physics courses. Topics covered include: thermodynamic equilibrium; energy, work and heat; Ideal gas and kinetic theory; entropy; free energy; Maxwell relations; chemical equilibria; equilibrium between liquids, solids and gases; heat transport and kinetics; and properties of fluids. Familiarity with mathematics at the level of Calculus 3 is recommended. Offered Yearly.
Prerequisite: PHY 2170 with a minimum grade of C- or PHY 2180 with a minimum grade of C-

PHY 3750 Introduction to Computational Methods Cr. 1
Introduction to the principles of computer programming with MATLAB or similar software. In addition to learning applications of the software, there will be opportunities for independent or group projects of interest to students. Offered Fall.
Prerequisites: ((PHY 2130 with a minimum grade of C- and PHY 2140 with a minimum grade of C-) or (PHY 2170 with a minimum grade of C- and PHY 2180 with a minimum grade of C-)) and MAT 2020 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment is limited to students with a major in Biomedical Physics.

PHY 3990 Directed Study Cr. 1-4
Primarily for students who wish to continue in a field beyond material covered in regular courses, or who wish to study material not covered in regular courses, including certain research participation. Offered Every Term.
Repeatable for 4 Credits

PHY 4700 Introduction to Biomedical Physics Cr. 4
Basic and applied physical concepts used in biology, human anatomy, and physiology, as well as in medical diagnosis and treatment. Offered Winter.
Prerequisites: ((PHY 2130 with a minimum grade of C- and PHY 2140 with a minimum grade of C-) or (PHY 2170 with a minimum grade of C- and PHY 2180 with a minimum grade of C-)), PHY 3700 with a minimum grade of C-, and MAT 2020 with a minimum grade of D-

PHY 5010 Astrophysics and Stellar Astronomy Cr. 3
Electromagnetic radiation and matter; solar characteristics; stellar distances; magnitudes; spectral classification; celestial mechanics; binary stars; stellar motions, structure and evolution; compact and variable stars; Milky Way Galaxy and interstellar medium; galaxies and clusters of galaxies; quasars; Hubble's Law; cosmology. Offered Every Other Winter.
Prerequisites: PHY 3300 with a minimum grade of C-
Equivalent: AST 5010

PHY 5100 Methods of Theoretical Physics I Cr. 3
Introduction to mathematical tools used in advanced courses in physics. Offered Fall.
Prerequisites: MAT 2030 with a minimum grade of C- and PHY 2180 with a minimum grade of C-

PHY 5200 Classical Mechanics I Cr. 4
Introduction to fundamental ideas: Newton's laws, notions of momentum, angular momentum, kinetic and potential energy, mechanical energy, conservation laws, friction and retardation forces, oscillations, resonances, gravitation, and introduction to the Lagrangian formalism. Offered Fall.
Prerequisites: PHY 2180 with a minimum grade of C-

PHY 5210 Classical Mechanics II Cr. 3
Accelerated reference frames, centrifugal and Coriolis forces, rigid body dynamics, motion of tops and gyroscopes, Lagrange's equations, constraints, Lagrange multipliers, general central force problem, stability of orbits, relativistic mechanics. Offered Winter.
Prerequisite: PHY 5200 with a minimum grade of C- and MAT 2150 with a minimum grade of C-

PHY 5340 Optics Cr. 3
Electromagnetic radiation; geometrical, physical, and modern optics. Offered Winter.
Prerequisites: (PHY 2140 with a minimum grade of C- and MAT 2030 with a minimum grade of C-), (PHY 2180 with a minimum grade of C- and PHY 3700 with a minimum grade of C-), (PHY 2140 with a minimum grade of C- and PHY 3700 with a minimum grade of C-), or (PHY 2180 with a minimum grade of C- and MAT 2030 with a minimum grade of C-)

PHY 5341 Optics Laboratory Cr. 2
Experiments involving geometrical, physical, and quantum optics. Offered Winter.
Prerequisites: ECE 5760 with a minimum grade of C (may be taken concurrently) and PHY 5340 with a minimum grade of C (may be taken concurrently)
Fees: $25

PHY 5620 Electronics and Electrical Measurements Cr. 3
Theory of amplifier circuits, operational amplifiers, oscillators, digital electronics, analog and digital measurements. Offered Fall.
Prerequisites: ((PHY 2180 with a minimum grade of C- and PHY 2181 with a minimum grade of C-) or (PHY 2140 with a minimum grade of C- and PHY 2141 with a minimum grade of C-)) and PHY 5621 with a minimum grade of C- (may be taken concurrently)
Corequisite: PHY 5621

PHY 5621 Electronics and Electrical Measurements Laboratory Cr. 2
Laboratory measurements related to amplifier circuits, operational amplifiers, oscillators, and digital electronics. The lab will also cover analog and digital measurements and will require a final project. Offered Fall.
Corequisite: PHY 5620
Fees: $25

PHY 5750 Biological Physics Cr. 4
Introduction to applications of physics to molecular biology. Offered Fall.
Prerequisites: PHY 3700 with a minimum grade of C- and PHY 4700 with a minimum grade of C-

PHY 5990 Directed Study Cr. 1-3
Primarily for students who wish to continue in a field beyond material covered in regular courses, or who wish to study material not covered in regular courses, including certain research participation. Offered Every Term.
Repeatable for 6 Credits

PHY 6080 Survey of Astrophysics Cr. 3
This course provides an introduction to high-energy astrophysics with a focus on X-ray astronomy. We will cover the physics of X-ray emission and absorption in an astrophysical context, as well as discussing observational techniques used to detect X-rays. Bright X-ray emitting objects are some of the most extreme in the universe, and we will discuss objects including neutron stars, black holes, cataclysmic variables, supernovae and supernovae remnants, and galaxy clusters. Offered Every Other Year.
Prerequisites: PHY 3330 with a minimum grade of C-
Equivalent: AST 6080

PHY 6250 Survey of Condensed Matter Physics Cr. 3
This course introduces upper-level undergraduate majors in physics and other science, technology and mathematics fields to the discoveries and research methods of condensed matter physics. Modern condensed matter physics research is experiencing rapid growth in various areas such as superconductivity, magnetism, and topological matter. Important advances critically depend on a good understanding of the basic concepts. This course is prepared to help you start by introducing the basic properties of solids and other condensed matter. Methods of electromagnetic and quantum theory are applied to study the electronic and topological properties, magnetism, the Hall effect, superconductivity, and the optical properties of solids and condensed matter. The course builds on a knowledge of electromagnetic theory as studied in courses like PHY 6600. Offered Every Other Winter.
Prerequisites: PHY 6600 with a minimum grade of C-

PHY 6260 Survey of Elementary Particle Physics Cr. 3
Introduces students to the discoveries and research methods of elementary particle physics. Topics covered can include elementary particle dynamics; relativistic kinematics; symmetries, introduction to quantum field theory; Feynman calculus; gauge theories; the standard model and proposed modifications; experimental evidence; survey of experimental methods, detector, accelerators and colliders. Methods of quantum mechanics are introduced, including scattering theory; spin; symmetry groups; bound states; time dependent and time independent perturbation theory. Builds on a knowledge of quantum physics studied in courses like PHY 6400. Offered Every Other Fall.
Prerequisite: PHY 6400 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

PHY 6270 Survey of Nuclear Physics Cr. 3
Introduces upper-level undergraduate majors in physics and other science, technology and mathematics fields to the discoveries and research methods of nuclear physics. Nuclear physics topics covered can include nuclear collisions; nuclear structure: liquid drop model, shell model; nucleon-nucleon interaction; quarks and the strong interaction; quark-gluon plasma; alpha, beta and gamma decay; and nuclear fusion. Nuclear astrophysics topics can include compact objects; stellar nucleosynthesis; nucleosynthesis in supernovae, neutron star collisions, and the big bang. Methods of quantum mechanics are introduced, including scattering theory; Born approximation; eikonal approximation; Glauber Model; WKB theory; time dependent and time independent perturbation theory. Builds on a knowledge of quantum physics studied in PHY 6400 and is in-part a sequel to that course. Offered Every Other Fall.
Prerequisite: PHY 6400 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

PHY 6290 Survey of Biophysics Cr. 3
Introduction to modern biophysics with emphasis on a physical understanding of biological structure and function; biological activity; biology and light; energy, thermodynamics and statistical mechanics in biology; and techniques of experimental biophysics. Offered Yearly.
Prerequisite: PHY 3300 with a minimum grade of C- and MAT 2030 with a minimum grade of C- and (PHY 4700 with a minimum grade of C- or PHY 3500 with a minimum grade of C-)
Restriction(s): Enrollment is limited to Undergraduate level students.

PHY 6400 Quantum Physics I Cr. 4
This course introduces upper-level undergraduate majors in physics and other science, technology and mathematics fields to the methods of quantum mechanics. Topics covered will include operators and their eigenfunctions; quantization rules; solution of Schrödinger equation in 1- and 3-dimensions; angular momentum; spin; bosons and fermions; and time-independent perturbation theory. The course builds on a knowledge of modern physics as studied in introductory courses such as PHY 3300. Mathematical methods will be introduced for application to specific quantum mechanics problems. These include: Linear algebra; boundary value problems in ordinary differential equations; separation of variables in partial differential equations; Fourier transforms; orthogonal functions; Laplacian in spherical and cartesian coordinates; Legendre Functions and Spherical Harmonics; operators in Hilbert space. Offered Winter.
Prerequisites: PHY 3300 with a minimum grade of C- and MAT 2150 with a minimum grade of C-

PHY 6410 Quantum Physics II Cr. 3
Applications of quantum mechanics: atoms in electric and magnetic fields, multielectron atoms, molecules, quantum statistics, solids (band structure, magnetic properties), nuclei, fundamental forces and standard model. Offered Fall.
Prerequisites: PHY 6400 with a minimum grade of C-

PHY 6450 Introduction to Material and Device Characterizations Cr. 4
Lecture/laboratory; introduction to analytic and measurement techniques for characterizing and evaluating materials, especially for potential applicability in sensor and integrated devices. Techniques include diffraction and microscopy methods, electron spectroscopies, and electrical, optical and magnetic measurements. Offered for graduate credit only. Offered Winter.
Prerequisites: PHY 7050 with a minimum grade of C (may be taken concurrently), ECE 5500 with a minimum grade of C (may be taken concurrently), or ECE 5550 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $60

PHY 6480 Introduction to Quantum Computing Cr. 3
Serves as an introduction to quantum computing and brings together students with different backgrounds in mathematics, physics, chemistry, and computer science to foster interdisciplinary connections in the areas of quantum computing and quantum information. A strong background in linear algebra over the complex numbers as well as differential and integral calculus is required. Familiarity with quantum physics and complexity theory will be helpful, but it is not required. Offered Fall.
Equivalent: MAT 6480

PHY 6500 Thermodynamics and Statistical Physics Cr. 3
Laws of thermodynamics, thermodynamic equilibrium, applications of kinetic theory of gases, basic introduction to classical and quantum statistical description of physical systems with large numbers of particles. Offered Fall.
Prerequisites: PHY 3300 with a minimum grade of C-

PHY 6570 Smart Sensor Technology I: Design Cr. 3
Introduction to various types of sensors and the design of basic analog VLSI circuit building blocks. Offered Winter.
Prerequisites: PHY 2185 with a minimum grade of C- or PHY 2180 with a minimum grade of C-
Equivalent: BME 6470, ECE 6570

PHY 6600 Electromagnetic Fields I Cr. 4
This course introduces upper-level undergraduate majors in physics and other science, technology and mathematics fields to the methods of electricity and magnetism. Topics covered will include electrostatics; solution of the Laplace equation; electric current; magnetic field of steady currents; electromagnetic induction; Maxwell Equations; and electromagnetic waves. The course builds on a knowledge of electromagnetic phenomena as studied in introductory courses such as PHY 2180. Mathematical methods will be introduced for application to specific electromagnetism problems, including spherical and cylindrical coordinates; vector calculus in 2 and 3 dimensions; Stokes and divergence integral theorems; solution of Laplace and Wave equations by separation of variables; uniqueness of solutions for linear PDE of Elliptic and Hyperbolic type; boundary and initial value problems; scalar and vector potentials. Offered Fall.
Prerequisites: PHY 5200 with a minimum grade of C- and MAT 2150 with a minimum grade of C-

PHY 6610 Electromagnetic Fields II Cr. 3
Continuation of PHY 6600: Maxwell equations, electromagnetism and relativity, optics, wave guides and transmission lines, radiation of EM waves. Offered Winter.
Prerequisite: PHY 6600 with a minimum grade of C-

PHY 6750 Applied Computational Methods Cr. 2
Development of concepts learned in PHY 3750 or PHY 3310 for computer applications in physics research, including applications in theoretical physics, data fitting, image analysis, and integration with experimental equipment. There will be opportunities for independent as well as group projects. Offered Fall.
Prerequisite: PHY 3750 with a minimum grade of C- or PHY 3310 with a minimum grade of C-

PHY 6780 Research Methods in Biomedical Physics Cr. 3
Introduction to laboratory experience in biomedical physics research. Capstone course for biomedical physics majors. Offered Winter.
Prerequisites: PHY 3700 with a minimum grade of C- and PHY 4700 with a minimum grade of C-

PHY 6850 Advanced Physics Laboratory Cr. 3
Techniques and experiments in physics of atoms, atomic nuclei, molecules, the solid state and other areas that have advanced our modern understanding of physics. This is the capstone physics course. Students are encouraged to schedule this course in their final year of study. Offered Winter.
Prerequisites: PHY 3300 with a minimum grade of C- and (PHY 5341 with a minimum grade of C- or PHY 5621 with a minimum grade of C-)
Fees: $25

PHY 6860 Computational Physics Cr. 3
Introduction to use of computers to model physical systems; description of techniques in numerical analysis including linear algebra, integration, algebraic and differential equations, data analysis and symbolic algebra. Offered Fall.
Prerequisites: PHY 3310 with a minimum grade of C- or PHY 5100 with a minimum grade of C-

PHY 6991 Special Topics Cr. 1-4
Topics and prerequisites for each section to be announced in Schedule of Classes . More than one section may be elected in a semester. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

PHY 6992 Physics Graduate Teaching Assistant Training Cr. 1
Students solve and discuss problems from calculus-based general physics courses in front of their peers and instructor, enhancing their ability to analyze, interpret and present the material in a clear, informative way. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PHY 6995 Professional Development Seminar in Physics Cr. 2
Introduction to the conduct, skills and ethics of a professional physicist or astronomer. Topics include: critical reading of scientific literature; research ethics and professional conduct; introduction to modern research topics in physics and research in the department of physics and astronomy; careers in physics and astronomy; scientific and proposal writing; and teamwork. Offered Yearly.
Repeatable for 4 Credits

PHY 6999 Internship in Physics Cr. 1
Practical research experience through visiting a university, industry, or national laboratory. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Physics; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

PHY 7050 Survey of Condensed Matter Physics Cr. 3
This course introduces graduate students to the discoveries and research methods of condensed matter physics. Modern condensed matter physics research is experiencing rapid growth in various areas such as superconductivity, magnetism, and topological matter. Important advances critically depend on a good understanding of the basic concepts. This course is prepared to help you start by introducing the basic properties of solids and other condensed matter. Methods of electromagnetic and quantum theory are applied to study the electronic and topological properties, magnetism, the Hall effect, superconductivity, and the optical properties of solids and condensed matter. The course builds on a knowledge of electromagnetic theory as studied in courses like PHY 6600. Offered Winter.
Prerequisites: PHY 6600 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7060 Survey of Elementary Particle Physics Cr. 3
This course introduces graduate students to the discoveries and research methods of elementary particle physics. Topics covered can include elementary particle dynamics; relativistic kinematics; symmetries, introduction to quantum field theory; Feynman calculus; gauge theories; the standard model and proposed modifications; experimental evidence; survey of experimental methods, detector, accelerators and colliders. Methods of quantum mechanics are introduced, including scattering theory; spin; symmetry groups; bound states; time dependent and time independent perturbation theory. The course builds on a knowledge of quantum physics studied in courses like PHY 6400. Offered Every Other Fall.
Prerequisites: PHY 6400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7070 Survey of Nuclear Physics Cr. 3
This course introduces graduate students to the discoveries and research methods of nuclear physics. Nuclear physics topics covered can include nuclear collisions; nuclear structure: liquid drop model, shell model; nucleon-nucleon interaction; quarks and the strong interaction; quark-gluon plasma; alpha, beta and gamma decay; and nuclear fusion. Nuclear astrophysics topics can include compact objects; stellar nucleosynthesis; nucleosynthesis in supernovae, neutron star collisions, and the big bang. Methods of quantum mechanics are introduced, including scattering theory; Born approximation; eikonal approximation; Glauber Model; WKB theory; time dependent and time independent perturbation theory. The course builds on a knowledge of quantum physics studied in courses like PHY 6400. Offered Every Other Fall.
Prerequisites: PHY 6400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7080 Survey of Astrophysics Cr. 3
This course provides an introduction to high-energy astrophysics with a focus on X-ray astronomy. We will cover the physics of X-ray emission and absorption in an astrophysical context, as well as discussing observational techniques used to detect X-rays. Bright X-ray emitting objects are some of the most extreme in the universe, and we will discuss objects including neutron stars, black holes, cataclysmic variables, supernovae and supernovae remnants, and galaxy clusters. Offered Every Other Year.
Prerequisites: PHY 3300 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7090 Survey of Biophysics Cr. 3
Introduction to modern biophysics with emphasis on a physical understanding of biological structure and function; biological activity; biology and light; energy, thermodynamics and statistical mechanics in biology; and techniques of experimental biophysics. Offered Yearly.
Prerequisites: 3 of (MAT 2030 or PHY 3700), PHY 3300, and (PHY 4700 or PHY 3500)
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7110 Methods of Theoretical Physics II Cr. 3
Complex variables and their applications. Homogeneous and inhomogeneous differential equations. Special functions such as gamma functions, Bessel functions, Legendre functions, Hermite functions and Laguerre functions. Fourier series. Offered Fall.
Prerequisites: PHY 5110 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7200 Advanced Mechanics Cr. 3-4
Variational principles, central forces, transformation theory, Hamilton-Jacobi theory. Offered Winter.
Prerequisites: PHY 5210 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7400 Quantum Mechanics I Cr. 3
Physical and mathematical principles of quantum mechanics. Schrodinger equation and its applications. Spin and angular momentum in quantum mechanics. The WKB approximation. Perturbation theory for time-independent and time-dependent cases. Offered Fall.
Prerequisites: (PHY 6410 with a minimum grade of C and PHY 7110 with a minimum grade of C (may be taken concurrently))
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7410 Quantum Mechanics II Cr. 3
Scattering theory. Partial wave expansion and perturbation theory. Bound states. Symmetry principles and conservation laws. The path integral formalism. Entanglement. Quantum computation. Charged particles in electromagnetic fields. Quantum theory of radiation. Relativistic one-particle equations Offered Winter.
Prerequisite: PHY 7400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7500 Statistical Mechanics Cr. 4
Classical and quantum statistical mechanics and applications. Offered Fall.
Prerequisites: PHY 6500 with a minimum grade of C and PHY 7400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7550 Advanced Condensed Matter Physics: Solid State Cr. 3
Current topics in condensed matter physics, including electronic band structure, magnetism, superconductivity, nanophysics, and the optical properties of solids. Offered Every Other Fall.
Prerequisite: PHY 7050 with a minimum grade of C and PHY 7110 with a minimum grade of C and PHY 7400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7560 Advanced Condensed Matter Physics: Soft Matter Cr. 3
Current topics in condensed matter physics, including the building blocks, structures, physical properties, and phase transitions in a variety of complex fluid systems such as simple liquids and liquid mixtures, colloids, polymers, liquid crystals, amphiphiles, and soft matter in living organisms. Offered Every Other Winter.
Prerequisite: PHY 7050 with a minimum grade of C and PHY 7110 with a minimum grade of C and PHY 7400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7580 Smart Sensor Technology II: Characterization and Fabrication Cr. 4
Integration of ongoing research in integrated technology of smart sensors. Design of smart sensor devices using computer simulation. Fabrication of smart sensor. Offered Spring/Summer.
Prerequisite: PHY 6570 with a minimum grade of B- or ECE 6570 with a minimum grade of B- or BME 6470 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $50
Equivalent: BME 7470, ECE 7570

PHY 7600 Electromagnetic Theory I Cr. 3
Microscopic and macroscopic Maxwell's equations, special relativity, Lagrangian and Hamiltonian formulation of EM theory, energy-momentum tensor, conservation laws, radiation, scattering, applications. Offered Winter.
Prerequisites: PHY 6610 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7850 Data Analysis Techniques Cr. 3
Foundations in probability and statistics used in physics, biophysics and astronomy, an extensive discussion of the notions of statistical and systematic uncertainties, data correction techniques, and basic Monte Carlo techniques. Offered Yearly.
Prerequisite: MAT 2030 with a minimum grade of C or PHY 6860 with a minimum grade of C or PHY 6750 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 7990 Directed Study Cr. 1-3
Application forms available in department office. Primarily for graduate students in physics who wish to study material not covered in regular courses. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

PHY 7996 Research in Physics Cr. 1-10
Graduate-level Physics research course designed to provide students with sustained experience in original research under the supervision of a faculty advisor. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Physics; enrollment is limited to Graduate level students.
Repeatable for 25 Credits

PHY 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

PHY 8800 Advanced Nuclear Physics Cr. 3
Research topics in nuclear physics such as: relativistic heavy ion physics, nuclear/nucleon models, and many body theory. Covers both theory and experimental methods. Offered Every Other Winter.
Prerequisite: PHY 7070 with a minimum grade of C and PHY 7110 with a minimum grade of C and PHY 7410 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 8810 Advanced Particle Physics Cr. 3
Advanced elementary particle physics including weak, electromagnetic, and strong interactions. Rudiments of experimental devices and techniques at level appropriate to both experimentally- and theoretically-oriented students. Offered Every Other Fall.
Prerequisite: PHY 7060 with a minimum grade of C and PHY 7110 with a minimum grade of C and PHY 7410 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 8850 Quantum Theory of Fields I Cr. 3
Introduction to quantum field theory, classical and path integral quantization of scalar, spinor, and vector fields, gauge theories, interactions and Feynman rules, modal field theories, Hubbard model, introduction to renormalization Suitable for both students of theory and experiment in the fields of nuclear, particle, and condensed matter physics and astrophysics. Offered Every Other Fall.
Prerequisite: PHY 7110 with a minimum grade of C and PHY 7410 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 8860 Quantum Theory of Fields II Cr. 3
Symmetry and symmetry breaking. Goldstone theorem and Higgs effect, renormalization group, collective phenomena, superfluids and superconductivity, the Standard Model of electroweak interactions, effective field theories. Appropriate for students in fields of nuclear, particle, condensed matter physics and astrophysics. Offered Every Other Winter.
Prerequisite: PHY 8850 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PHY 8991 Special Topics Cr. 1-3
Topics and prerequisites for each section to be announced in Schedule of Classes . More than one topic may be elected in a semester. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PHY 8995 Colloquium Cr. 1
Must be elected every semester by all graduate physics students. Lectures given by external visitors and graduate faculty. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 10 Credits

PHY 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PHY 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PHY 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PHY 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: PHY 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

PHY 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PHY 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PHY 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

POL - Polish

POL 1010 Elementary Polish I Cr. 4
Development of practical skills in understanding, reading, speaking and writing Polish; emphasis on fundamental communication skills. Offered Fall.
Fees: $5

POL 1020 Elementary Polish II Cr. 4
Continuation of POL 1010. Development of practical skills in understanding, reading, speaking and writing Polish; emphasis on fundamental communication skills. Offered Winter.
Prerequisites: POL 1010 with a minimum grade of D-
Fees: $5

POL 2010 Intermediate Polish Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Further development of Polish language and cultural proficiency through listening, reading, speaking and writing activities, and examination of Polish culture. Completion of this course fulfills the General Education requirement for foreign language and culture. Offered Fall.
Prerequisites: POL 1020 with a minimum grade of D-
Fees: $5

POL 2030 Polish Conversation Cr. 1
Development of Polish oral language skills through intensive speaking and listening practice. Offered Intermittently.
Prerequisites: POL 2010 with a minimum grade of D-
Repeatable for 4 Credits

POL 2035 Polish Conversation II Cr. 1
Students develop speaking and listening comprehension skills discussing a variety of topics including work, leisure time, pets, living arrangements, cooking, fashion, and shopping. Particular attention is paid to expressing opinions and arguing a point. Offered Intermittently.
Prerequisites: POL 1020 with a minimum grade of D-

POL 2060 Composition and Conversation Cr. 4
For students with rudimentary knowledge of Polish. Vocabulary and aspects of grammar not discussed in the previous courses, practiced through oral and written composition and translation exercises. Offered Every Other Winter.
Prerequisites: POL 2010 with a minimum grade of D-
Repeatable for 8 Credits

POL 2710 Survey of Polish Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Introductory cultural survey from beginnings of Polish state to present. Polish society and cultural developments analyzed in comparative contexts. Offered Fall, Winter.

POL 3000 Polish Grammar and Usage Cr. 4
Comprehensive review of Polish grammar; proper usage, vocabulary expansion. For intermediate or advanced-level students, including heritage speakers. Offered Every Other Year.
Prerequisites: POL 2010 with a minimum grade of D-

POL 3030 Language Skills: Advanced Speaking and Writing Cr. 2-4
Original texts and audio-visual materials used to further knowledge of Polish language. Special attention paid to vocabulary enrichment, colloquial usage and idioms needed for achieving independent expression in the Polish language. Offered Every Other Fall.
Prerequisites: POL 2060 with a minimum grade of D-

POL 3060 Medical Polish I Cr. 1
One of two online Polish language courses designed to teach vocabulary used in the medical field. POL 3060 focuses on the human musculoskeletal and digestive systems, their diseases and treatments, medical facilities and doctor-patient interactions. Offered Fall, Winter.
Prerequisites: POL 1020 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

POL 3061 Medical Polish II Cr. 1
One of two online Polish language courses designed to teach vocabulary used in the medical field. POL 3061 focuses on the human cardiovascular and respiratory systems, their diseases and treatments, on dentistry, and on doctor-patient interactions. Offered Fall, Winter.
Prerequisites: POL 1020 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

POL 3111 Digital Storytelling and Ethnic Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Students will learn about the ethnic, racial, and cultural history of Detroit and how to document elements of that history. This course introduces students to both theoretical and practical concepts around digital storytelling, drawing on extensive theoretical scholarship about placemaking, experiencing place, and the social production of heritage that spans the disciplines of anthropology, historical archaeology, heritage studies, historic preservation, media studies, and mobilities. Students will learn the practical steps involved in creating digital stories and will be introduced to best practices in multimedia development as discussed in the literature in the field of instructional technology. They will also explore the cultural, ethical and technological considerations involved in creating and disseminating digital stories. They will then create their own short digital story, which they will be able to share with the website Ethnic Layers of Detroit. Offered Yearly.
Equivalent: ANT 3111, GLS 3111, RUS 3111

POL 3410 New Soil, Old Roots: The Immigrant Experience Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. Offered Fall.
Equivalent: ARM 3410, GER 3410, RUS 3410, SLA 3410

POL 3750 Polish and Yugoslavian Cinema Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Two national cinemas introduced through milestone films and lesser-known cinematic gems produced before and after the fall of communism. Offered Every Other Winter.
Equivalent: SLA 3750

POL 3800 Topics in Slavic Studies Cr. 3
Special topics relating to Slavic languages, literatures and cultures, such as drama, the Gulag, and contemporary culture. Offered Yearly.
Equivalent: RUS 3810, SLA 3800
Repeatable for 9 Credits

POL 3990 Directed Study Cr. 1-3
For students desiring additional work in the language at the intermediate level; for programs of work not included in scheduled course, either in language or literature. Offered Every Term.
Prerequisites: POL 2010 with a minimum grade of D-
Repeatable for 6 Credits

POL 5990 Directed Study Cr. 1-3
Offered Every Term.
Prerequisites: POL 3020 with a minimum grade of D-
Repeatable for 12 Credits

POL 5993 Writing Intensive Course in Polish Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Fall, Winter.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

POL 5999 Internship in Polish Studies Cr. 3
Internship in a public or private organization related to Polish studies. Offered for undergraduate credit only. Offered Every Term.
Prerequisite: POL 3000 with a minimum grade of C- or POL 3030 with a minimum grade of C- or POL 3060 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Slavic Studies or Slavic Studies Honors.

PPR - Pharmacy Practice

PPR 4115 Social Administrative Sciences and Professional Development I Cr. 3
Designed to familiarize the student with pharmacy as a profession and to facilitate an understanding of its place in health care today and in the future. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 4245 Patient Care Lab 1 Cr. 1
The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $80

PPR 4255 Social Administrative Sciences and Professional Development II Cr. 2
Exploration of health care delivery and payment systems, with an emphasis on pharmacy and pharmacists. Discussion of social constructs, cultural sensitivity, and health belief models as related to pharmacy practice. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 4315 Pharmacy Jurisprudence I and Professional Responsibility Cr. 2
Provides a foundational knowledge of pharmacy law with a combined emphasis on professional responsibility. The law component will focus on the application of Michigan state and federal laws to the practice of pharmacy. The professional responsibility component will prepare pharmacy students for their upcoming didactic and experiential learning. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 4365 Introductory Pharmacy Practice Experience I Cr. 1
Beginning learning experiences for patient interviewing and counseling, interaction with healthcare professionals, pharmacy practice in various settings, interprofessional education, healthcare in the underserved population, and community service. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 5145 Patient Care Lab II Cr. 1
The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $80

PPR 5155 Social Administrative Sciences and Professional Development III: Practice Management Cr. 2
Focus on topics that will enable an understanding of how pharmacy services are managed and how to manage personnel and provide leadership. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 5165 Introductory Pharmacy Practice Experience II Cr. 1
Beginning learning experiences for patient interviewing and counseling, interaction with healthcare professionals, pharmacy practice in various settings, interprofessional education, healthcare in the underserved population, and community service. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 5215 Applied Pharmacokinetics and Pharmacogenomics Cr. 2
Application of knowledge of pharmacokinetics and pharmacogenomics to patient-specific drug dosing. Offered Winter.
Prerequisite: PSC 5115
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 5245 Patient Care Lab III Cr. 1
The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $80

PPR 5255 Social Administrative Sciences and Professional Development IV Cr. 2
Designed to enable understanding of the importance of constructing medication systems and processes around proven best practices to maximize patient safety and to begin developing the ability to conceptualize, implement, and manage these systems in all health care settings. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 5265 Introductory Pharmacy Practice Experience III Cr. 1
The introductory pharmacy practice experiences are to provide a beginning learning experiences for patient interviewing and counseling, interaction with healthcare professionals, pharmacy practice in various settings, interprofessional education, healthcare in the underserved population, and community service. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 5990 Directed Study in Pharmacy Practice Cr. 2
No credit after election of two credits in any of PSC 5990, PSC 5991, PSC 5992, except by written consent of department chair. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6115 Applied Therapeutics in Self-Care Cr. 2
Application of concepts of patient assessment, therapeutics, patient education, and health care systems to patient self-care. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6145 Patient Care Lab IV Cr. 1
The Patient Care Lab sequence (PCL 1-4) is designed to allow students to begin to develop the direct patient care and pharmacy practice skills they will need to become successful practitioners. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $80

PPR 6155 Social Administrative Sciences and Professional Development V Cr. 3
Development of and justification for a pharmacy service, including background, service objectives, service design, implementation plan, and evaluation. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6165 Community-Introductory Pharmacy Practice Experience (C-IPPE) Cr. 2
Introduction to the organization and provision of community pharmacy services. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6175 Hospital-Introductory Pharmacy Practice Experience (H-IPPE) Cr. 2
Introduction to the organization and provision of health-system pharmacy services. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6235 Social Administrative Sciences and Professional Development VI Cr. 2
Understanding, developing and evaluating population health and population-based health care programs. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6245 Pharmacy Ethics and Professional Responsibility Cr. 2
Understanding ethical precepts and applying normative principles to the practice of pharmacy in the context of professional service to the community. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6295 Clinical Capstone Cr. 2
Utilization of pharmacotherapeutic-related knowledge and skills to evaluate patient cases and practice-related problems in order to assess students' preparedness for advanced pharmacy practice experiences. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.
Fees: $99

PPR 6320 Underserved Care: Local and Global Experiences Cr. 2
Provides the opportunity for hands-on clinical experience in local and international under-served communities. Offered Every Term.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6430 Well-Being for Professional Success Cr. 2
This course focuses on exploring various dimensions of personal well-being, including scientific evidence behind wellness and well-being practices, and implementing example approaches to wellness and well-being in students' lives. The course will include readings, in-class activities, and group discussions, as well as opportunities to incorporate well-being activities into daily life and reflect on those experiences. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Professional level students.

PPR 6520 Contemporary Issues in Nutrition Support Cr. 2
Provision of patient care in cooperation with patients. patients' agents, prescribers, and other members of an interprofessional health care team; management and use of resources of the health care system; evaluation of a patient case and design of an optimal nutritional regimen. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6550 Psychiatric Pharmacy Cr. 2
Covers core clinical sciences beyond the required pharmacotherapy modules on psychiatric topics. Offered Spring/Summer.
Prerequisite: PHA 5155 or PHA 5225

PPR 6560 Foundations in Global Health Cr. 2
Provides pharmacy students an introduction to Global Health and enables them to explore their own Global Health interests through local volunteering, class discussions and group projects. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6570 Pharmaceutical Economics Cr. 2
This course introduces students to cost-effectiveness analysis and related economic tools used to determine the value of pharmaceuticals to society. The tools reviewed are increasingly being used by insurance programs to regulate access to drugs by patients. This course will also cover the institutional landscape of the markets for development and sale of pharmaceuticals, with a focus on the features that have made pharmaceutical prices in the United States among the highest in the world. Policy options that are being considered to reduce these prices have become highly politically salient in recent years, this will be reviewed as well. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6580 Contemporary Issues in Anticoagulation Management Cr. 2
Advanced therapeutics in area of anticoagulant use. Offered Fall.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6590 Principles of Pain Management Cr. 2
Covers core clinical sciences beyond the required pharmacotherapy modules on pain management topics. And expands on the pathophysiology, pharmacology, and therapeutics covered in the core clinical sciences courses to assist the student pharmacist in developing assessment skills emphasizing inter-professional collaboration. Offered Winter.
Prerequisite: PHA 5225
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6690 Managed Care Pharmacy Elective Cr. 2
This pharmacy elective course will provide an overview of managed care pharmacy and an understanding of how it impacts the healthcare system. The course will provide the foundation to prepare students for experiential education and career opportunities in a variety of settings, such as: managed care organizations, hospital administration, ambulatory care, pharmaceutical industry, and community pharmacy management. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6720 Clinical Applications of Diabetes Cr. 2
Advanced elective course on management of diabetes mellitus and its related disorders. Principles of student directed learning, literature discussion and evaluation, interprofessional exposure, small group learning, and hands-on activities. Offered Fall.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6730 The What, How and Why of Community: Community Pharmacy Elective Cr. 2
This course will focus on building upon and enhancing community pharmacy practice skills and foundational knowledge to prepare students to be practice ready, community pharmacy leaders through real world application. Topics to be covered will include, but not limited to: Practice business management, public health initiatives, leadership, communication, incorporating clinical patient care services in the workflow, advanced training opportunities, pharmacy ownership and advocacy. The course will include required readings, in-class activities, and group discussions, as well as some activities held outside of the classroom at community pharmacy sites. Offered Yearly.

PPR 6740 Advanced Topics in Ambulatory Care Pharmacy Cr. 2
The overall goal of this course is to increase pharmacy students' knowledge of practice models for ambulatory care pharmacy and investigate career opportunities in ambulatory care pharmacy practice. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 6750 Clinical Practice in Pediatric Diabetes Care Cr. 2
This course provides the opportunity for hands-on learning through a camp for children with Type 1 Diabetes, in Fenton, Michigan. Students will be immersed in an overnight, week-long experience at the camp. During this time, students will be functioning as Medical Staff, alongside other healthcare professionals (medical students/residents, nurses, nutritionists, pharmacists, etc.). Students will work closely with endocrinologists during this experience. In this role, they will be assigned a cabin (group of children) that they will be responsible for, the entire week. Responsibilities include some of the following: glucose monitoring, hypo-/hyperglycemia management, carbohydrate counting & insulin dosing, and diabetes device management (insulin pumps, continuous blood glucose monitors, etc.). Prior to the start of camp, students will be responsible for completing mandatory pre-camp training. After camp, students will complete reflections and provide a presentation of their experience. Offered Spring/Summer.
Prerequisite: PHA 5215 with a minimum grade of C

PPR 6770 Study of Medicinal Plants and Culture in Amazonia Cr. 2
Ethnobotany of indigenous plants and use of these substances in the health and beliefs of the native people. Students meet with botanists, taxonomists, pharmacists, shamans, and native people. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 6780 Critical Care Pharmacy Elective Cr. 2
This course is designed to meet the needs of pharmacy students with an interest in further developing their knowledge in common acute diseases encountered in the intensive care unit and the emergency department. The format will consist of a discussion of the disease and drug therapy using patient case presentation(s), class participation, and flipped classroom teaching methods. These sessions will focus on choice and rationale for therapy, dosing and disease state guidelines, as well as monitoring parameters for assessment of efficacy, safety, and toxicity. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 7115 Special Topics: Interprofessional Education Cr. 2
This interprofessional course is for health professional student learners in the areas of advanced practice. The course allows health professional students to learn about, from and with each other, how each discipline contributes to the healthcare team, the importance of effective communication, the role of team collaboration and preparing health care professionals for collaborative practice with a focus on clinical decision making in interdisciplinary teams. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate, Medical or Professional level students.
Equivalent: MD4 8115, NUR 7115, PAS 7115, SW 7115

PPR 7195 Advance Research Scholars: Advance Pharmacy Practice Experience Cr. 4
Provides capstone research instruction aimed at project completion, writing and peer review processes, and research program advancement. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PPR 7225 Vaccines in Clinical and Public Health Practice Cr. 2
Explorations of topics related to use of vaccines for infants, children and adults in practice settings that include clinics, pharmacies and public health programs. Offered Yearly.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy or Master in Public Health programs.

PPR 7405 Social Administrative Sciences VII (Career Readiness) Cr. 1
This course provides a hybrid, synchronous and asynchronous learning experience designed to prepare students for both licensure and post-graduate career success. Students will complete structured self-study modules with formative assessments aligned with NAPLEX content and testing conditions, culminating in a high-stakes exam that simulates the NAPLEX experience. In parallel, students will engage in career-preparation and professional development activities that support their transition to postgraduate training or practice. Offered Yearly.

PPR 7410 Advanced Pharmacy Practice Inpatient/Acute Care Cr. 4
Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $85
Repeatable for 12 Credits

PPR 7420 Advanced Pharmacy Practice Ambulatory Care Cr. 4
Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 12 Credits

PPR 7430 Advanced Pharmacy Practice Patient Care Core Cr. 4
Experimental education designed to provide practical training experience in managing drug therapy of patients in a variety of health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 12 Credits

PPR 7530 Advanced Pharmacy Practice Patient Care Elective I Cr. 4
Experimental education designed to provide practical training experience in managing drug therapy of specialized patients in diversified health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 8 Credits

PPR 7540 Advanced Pharmacy Practice Non-Patient Care Elective I Cr. 4
Practical education to develop knowledge in specific areas of pharmacy practice in specialized pharmacy or health-care settings. Offered Every Term.
Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 8 Credits

PPR 7550 Advanced Pharmacy Practice Hospital Cr. 4
Practical training experience in hospital pharmacy practice, including pharmacy operations and clinical services. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PPR 7560 Advanced Pharmacy Practice Community Cr. 4
Practical training experience in management of a community pharmacy, and managing drug therapy of patients in community pharmacy setting. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PS - Political Science

PS 1000 Introduction to Political Science Cr. 3
Satisfies General Education Requirement: Civic Literacy, Social Inquiry
Introduction to the scope and method of political science. Overview of politics, political systems, nature and role of political institutions. Empirical political theory; practice in conducting political research. Offered Yearly.

PS 1010 American Government Cr. 4
Satisfies General Education Requirement: Civic Literacy, Social Inquiry
Politics and functions of American governmental institutions. Policy processes and the role of citizens in the political process. No credit after PS 1030. Offered Every Term.

PS 1030 The American Governmental System Cr. 3
Satisfies General Education Requirement: Civic Literacy, Social Inquiry
Structure and functions of the American political system. Governmental institutions and processes. No credit after PS 1010. Offered Every Term.

PS 1050 Understanding Political Science Statistics Cr. 4
Satisfies General Education Requirement: Quantitative Experience Comp
Applications of elementary statistical methods to the study of American government, comparative politics, and international relations. Offered Fall, Winter.

PS 1100 Changing Detroit Cr. 4
Satisfies General Education Requirement: Civic Literacy, Diversity Equity Incl Inquiry
This course is the first half of the Honors Foundation Sequence. It explores the history and development of the city of Detroit, including the challenges of deindustrialization and segregation, and guides students through the steps of civic engagement including how to identify and specify social problems, formulate workable solutions and advocate effectively for their implementation. Offered Fall.

PS 1110 Work and Democracy: An Introduction Cr. 3
Satisfies General Education Requirement: Civic Literacy
The course explores the role that labor and the labor movement have played in shaping democracy in the United States over the past two centuries and the limits of democracy in the workplace. It covers key political achievements of labor and workers' organizations and the contemporary challenges they face today. Key themes include labor and citizenship, industrial democracy, the role of the state in mediating labor relations, gender, race, sexuality and labor, the labor movement as a social movement, and power and politics in the workplace. Offered Every Term.
Equivalent: ANT 1110, ELR 1110, HIS 1110

PS 2000 Introduction to Urban Studies Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
In this introductory urban studies course, students learn about the historic and contemporary forces driving urbanization with an emphasis on US cities and urban areas; the effects of these forces on diverse population groups; and challenges facing cities and strategies to resolve them. Although the course will draw from international contexts, wherever possible, experiences of and from the Detroit metro—city and suburbs—will be used to illustrate particular themes. Student learning centers on an examination of issues related to diversity, equity, and inclusion, and broader social phenomena. Offered Every Term.
Equivalent: GPH 2000, HIS 2000, SOC 2500, US 2000

PS 2206 Political Sociology Cr. 3
Examines the sociology of politics and explores sociological analysis of political processes in the United States. Offered Every Other Year.
Equivalent: SOC 2206

PS 2240 Introduction to Urban Politics and Policy Cr. 4
Satisfies General Education Requirement: Social Inquiry
Influences on politics and problems of cities, forms of local political involvement, role of local public officials, impact of state and federal policies. Overview of current issues and problems in specific policy areas. Offered Yearly.

PS 2310 Introduction to Public Administration Cr. 4
Governmental and administrative structures and organizations. Concepts and techniques of public management. Impact of public bureaucracies on modern society. Offered Every Term.
Prerequisites: PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-

PS 2410 Introduction to Public Policy Cr. 4
Public policy-making institutions and processes. Emphasis on theory and practice of policy formation, implementation and evaluation. Various models of political decision making. Offered Every Term.
Prerequisites: PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-

PS 2420 Ethics and Politics of Public Policy Cr. 4
Moral and political standards for policy-making, relation of major political and social theorists to policy issues such as economic inequality, racial and sexual discrimination, the enforcement of morals, and violence and social change. Offered Yearly.

PS 2440 Science, Technology, and War Cr. 4
Modern weapons, nuclear and otherwise are becoming increasingly available and dangerous; people with grievances seem eager to use them. Science and technology, as well as constraints of bureaucracy and society underpin weapons development and use, as technologies affect prospects and results of war and peace. History of humanity and its tools of war. Offered Yearly.
Equivalent: HIS 2510, PCS 2020, PHY 2020

PS 2460 Policy and Rationality: Dilemmas of Choice Cr. 4
Individual decision-making and limitations on human cognition; collective choice; implications for policy development. Offered Yearly.

PS 2510 Introduction to Political Philosophy: What is Politics? Cr. 4
Introduction to the history of political philosophy through readings from Plato, Aristotle, Thomas Aquinas, Thomas Hobbes, John Locke, Jean-Jacques Rousseau, Karl Marx, and Friedrich Nietzsche. Offered Yearly.

PS 2550 The Study of Non-Violence Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Intellectual and social roots of non-violence and the practice of non-violence in different people's life styles. Historical and political forces and movements related to non-violence. (Some sections linked to Peace and Justice Learning Community.) Offered Every Term.
Equivalent: HIS 2530, PCS 2050, SOC 2050

PS 2700 Introduction to Canadian Studies Cr. 3
Satisfies General Education Requirement: Foreign Culture, Global Learning Inquiry
Survey of Canada in its cultural, literary, historical, geographical and political aspects; key concepts and social patterns that define the Canadian experience. Offered Intermittently.
Equivalent: ENG 2670, GPH 2700, HIS 2700

PS 2710 Introduction to Comparative Politics Cr. 4
Comparison of the political cultures, politics, and political institutions of Eastern, Western, and Southern European political systems. Similarities and differences in public policies; European influence; parallels in developing nations. Offered Every Other Year.

PS 2810 World Politics Cr. 4
Role of power, methods of resolving international conflict, economic relations between industrialized and Third World countries, multinational corporations, terrorists, and other non-state actors. Offered Yearly.

PS 2820 Introduction to Peace and Conflict Studies Cr. 3
Introduction to the peace and conflict studies co-major. Survey, ranging from biology and conflict among animals to disputes involving the individual, the family, the neighborhood and region, the nation and global or international community. Definitions and approaches to peace. (Some sections linked to Peace and Justice Learning Community.) Offered Yearly.
Equivalent: HIS 2500, PCS 2000

PS 2830 Topics in Peace and Conflict Studies Cr. 1-4
Special topics relating to peace and conflict studies. Offered Every Term.
Equivalent: HIS 2520, PCS 2010
Repeatable for 12 Credits

PS 2992 Political Science Internship Cr. 1-4
Internship in a public or quasi-public organization, agency, civic or voluntary group, or campaign organization. Collateral reading, written work and arranged conferences with faculty supervisor. Offered Every Term.
Prerequisites: (PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-) and (PS 2310 with a minimum grade of D-, PS 2410 with a minimum grade of D-, PS 2510 with a minimum grade of D-, PS 2710 with a minimum grade of D-, or PS 2810 with a minimum grade of D-)
Repeatable for 4 Credits

PS 3010 Public Opinion and Political Behavior Cr. 4
Factors that shape public opinion; patterns of political participation and electoral politics. Impact of public opinion and popular participation on the political system. Offered Yearly.
Prerequisites: PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-

PS 3020 Political Parties and Elections Cr. 4
Development, structure, functions and operations of American political parties; their electoral and governmental roles; comparison with other systems; possible reforms. Offered Every Other Year.
Prerequisites: PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-

PS 3025 Political Campaigns in America Cr. 4
Nature and dynamics of campaigns for public office in the U.S. Campaign techniques and strategies in an era of candidate-centered American politics. Offered Intermittently.

PS 3030 Political Interest Groups Cr. 4
Structure, techniques and internal politics of interest groups, their roles in policy-making and relationship with other groups such as political parties, legislatures and administrative agencies. Offered Intermittently.
Prerequisites: PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-

PS 3040 The Legislative Process Cr. 4
Function, structure, procedures and politics of American legislative bodies with special attention to Congress. Relationships with other political institutions, especially the executive branch, and comparisons with foreign legislative institutions. Offered Yearly.
Prerequisites: PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-

PS 3050 Politics of the American Presidency Cr. 4
Constitutional, historical, and political bases of the presidency. Influence of courts, Congress, interest groups, the news media, and personality on the office. Offered Intermittently.
Prerequisites: PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-

PS 3060 State Government and Politics Cr. 4
A comparison of states in the United States in terms of their governmental structures, functions and response to changes in national and local relationships. Offered Every Other Year.

PS 3070 Michigan Politics Cr. 4
History and overview of Michigan politics: structure, process, current issues. Offered Every Term.

PS 3080 Gender and Politics Cr. 4
Satisfies General Education Requirement: Civic Literacy
Genesis and perpetuation of gender roles; feminist movements to modify these roles; impact of gender on public policy; gender-differentiated impact of public policy. Offered Intermittently.

PS 3100 American Legal Systems and Processes Cr. 4
Introduction to the American legal system and to basic concepts in American law; exploration of the role of judicial review of legislation in a democratic society, covering topics such as race and gender discrimination, affirmative action, LGBTQ+ rights, hate speech, and pornography. Offered Yearly.

PS 3120 Politics of the Criminal Justice Process Cr. 3
Satisfies General Education Requirement: Civic Literacy
Political aspects of criminal justice; politics of crime legislation, police function, prosecution, adjudication, and corrections; Federal role in criminal justice. Offered Intermittently.
Equivalent: CRJ 3120

PS 3250 Detroit Politics: Continuity and Change in City and Suburbs Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Detroit area political systems and processes; historical, economic, and social influences on local politics. Traditions, changes, and future challenges in Detroit and metropolitan area. Offered Every Other Year.
Equivalent: HIS 3240

PS 3320 Empowering Change through Nonprofit Engagement Cr. 4
An immersive and interactive exploration of the dynamic world of nonprofit enterprises. In this course, students will delve into the theoretical underpinnings of the nonprofit sector while actively engaging with local nonprofit organizations to gain a deeper understanding of their operations and impact. Through encounters with various nonprofit organizations, students will have the opportunity to witness firsthand how these organizations operate within their communities. Offered Yearly.

PS 3430 Bureaucracy and Public Policy Cr. 4
Theory and development of modern governmental bureaucracy. Bureaucratic politics and its significance for decision making and program implementation. Normative aspects of bureaucracy, including accountability to the public and the role of bureaucrats in helping to define rational, efficient policies. Offered Every Other Year.
Prerequisites: PS 1010 with a minimum grade of D- or PS 1030 with a minimum grade of D-

PS 3450 Environmental Policy and Politics Cr. 4
Introductory course; primary focus on United States. Discussion of major environmental problems and their causes; environmental politics and the policy process. Offered Every Other Year.

PS 3520 Theories of Justice Cr. 4
Satisfies General Education Requirement: Cultural Inquiry
Exploration of what terms such as justice, equality, liberty, and democracy mean to adherents of varying worldviews; examination of processes for arriving at collective decisions binding on participants who disagree about fundamental principles of political morality. Offered Every Other Year.

PS 3530 Classical Political Philosophy: What is Justice? Cr. 4
An in-depth analysis of the classical conception of justice as an individual virtue and as a characteristic of good political communities through a detailed and careful reading of Plato's "Republic." Offered Every Other Year.

PS 3550 American Political Philosophy: What is Freedom? Cr. 4
Readings of major texts in the history of American Political Philosophy. Federalist/anti-Federalist debates, early modern foundations of religious toleration, Alexis de Tocqueville's Democracy in America, and African American Political Thought from abolition to civil rights. Offered Every Other Year.

PS 3560 Modern Political Philosophy: What is a Republic? Cr. 4
In-depth exploration of the essential character of self-government, including its necessary cultural, economic, educational, and intellectual foundations, as rediscovered and reconceived by a variety of philosophers from the modern period (16th through 19th centuries). Offered Every Other Year.

PS 3600 Methods of Political Inquiry Cr. 4
Techniques of political science research: data gathering techniques, especially survey design; data processing and analysis using computers; and the interpretation and reporting of statistical results. Offered Every Term.

PS 3710 Politics of Western Europe Cr. 4
Western Europe: driving force in world politics over centuries; lofty principles and gruesome conflict. Origins of European political systems; twentieth-century crises; ongoing process of creating united Europe. Offered Every Other Year.

PS 3715 Politics of Russia and Eastern Europe Cr. 4
The course provides a foundation for understanding the modern-day politics of Russia and Eastern Europe. We will learn about Russia, the largest state to emerge from the breakup of the USSR and analyze politics in Russia under Putin in the 20th and 21st centuries, including the Russia-Ukraine war. Additionally, we will study the Yugoslav wars of the 1990s to understand the Russian sphere of influence, past and present. Offered Yearly.

PS 3735 Politics of Latin America Cr. 4
Political, social, economic and cultural foundations, the structure and function of institutions, and political processes in Latin America. Offered Every Other Year.

PS 3760 Understanding Africa: Past, Present and Future Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
In-depth knowledge of Africa through the study of its physiography, prehistory and history, social institutions, and social changes within a global context. Offered Intermittently.
Equivalent: ANT 3520

PS 3770 Politics of East Asia Cr. 4
Survey of five major polities in East Asia: China, Taiwan, Japan, South Korea, and (more briefly) North Korea. Why some of them have undergone democratization and others have not; how political factors have affected their recent economic performance; what explains conflicts and cooperation among them, and what security implications they hold for the United States. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.

PS 3795 Latin America in World Affairs Cr. 4
Latin America's position in the international system; relationships between Latin American countries and the United States. Offered Every Other Year.

PS 3811 Theory of World Politics Cr. 4
Major theoretical approaches. Evaluation of the extent to which theses that devolve from realist, idealist, globalist, culturalist, feminist and decision-making approaches allow the explication of phenomena in world politics. Offered Intermittently.
Prerequisites: PS 2810 with a minimum grade of D-

PS 3820 Pan Africanism: Politics of the Black Diaspora Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Interplay of Pan Africanism as a cultural and socio-political movement in world politics from its origins as a concept to organizing practice worldwide. Offered Yearly.
Equivalent: AFS 3420

PS 3830 War Cr. 4
Major theoretical and methodological approaches to study of international conflict. Analysis of impact of domestic, state, and global system factors in explicating international war. Aspects of civil wars that have become internationalized. Offered Intermittently.

PS 3835 Middle East Conflict Cr. 4
International and regional factors affecting contemporary political landscape of the region: influence of European colonialism; emergence and persistence of Palestinian-Israeli conflict; contemporary developments in the Persian Gulf and the role of U.S. policy since 9/11. Discussion of topics of current interest such as the situation in Iraq and the prospects for democratic reform in the region. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

PS 3991 Directed Study: WSU-Salford Exchange Cr. 3-9
Credit earned through approved upper-division course work at the University of Salford, England, as part of the W.S.U.- Salford Exchange Program. Offered Fall, Winter.

PS 4460 Techniques of Policy Analysis Cr. 4
Introduction to several major techniques used by policy analysts to measure and evaluate the effectiveness, efficiency, and equity of public policies and programs. Approaches and methodologies considered will include systems analysis, benefit-cost analysis, and simulation. This course involves quantitative data analysis. Students are expected to be proficient in basic algebra and to be computer literate. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

PS 4510 Classical Political Philosophy: What is War? Cr. 4
An in-depth study of the causes, effects, and characteristics of war, seen through the lens of classical Greek philosophy as a permanent feature of the human condition, by means of a detailed and careful study of Thucydides's "History of the Peloponnesian War." Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.

PS 4710 Democracy Cr. 4
"The worst form of government except for all the others?" How democracy has evolved from ancient Athens until today. What makes democracy work. How democratization is proceeding in Latin America, Europe, Africa, Asia. Offered Every Other Year.

PS 4725 Globalization and Politics Cr. 4
Domestic and international politics and globalization: theories and evidence. Consequences for economic development and democratization or economic inequality. Questions explored include: What is economic globalization? Is it really new? What caused its recent resurrection? What political disjunctions engendered the process and how do they vary within political institutions? How has it threatened sovereign nation-states, constrained governmental policy autonomy, and encouraged regional separatist movements? Offered Every Other Year.

PS 4810 Foreign Policies of Major Powers Cr. 4
Major issues and trends in the foreign policies of Russia, China, Japan, and the European Union. Offered Every Other Year.

PS 4835 Civil War and Conflict Processes Cr. 3
Introduction to literature on civil wars: origins, variables affecting their duration, termination. Peacemaking and peace agreements studied comparatively. Includes study of recent conflicts. Offered Every Other Year.

PS 4850 International Organizations Cr. 4
Issues of global governance; role of international organizations in managing issues that cross borders. Offered Intermittently.
Restriction(s): Enrollment is limited to Undergraduate level students.

PS 4990 Directed Study Cr. 1-4
Independent study assignment under the direction of a faculty member. Offered Every Term.
Repeatable for 8 Credits

PS 4995 Senior Honors Paper Cr. 4
Completion of an extended examination of a topic or research question in political science, under the direction of one or more members of the departmental faculty. Offered Every Term.

PS 5030 African American Politics Cr. 4
Nature and texture of black politics; various perspectives on politics by blacks; the impact of blacks on American politics. Offered Every Other Year.
Equivalent: AFS 5030

PS 5040 Religion and Politics Cr. 4
Religion and American political culture; religious institutions and religious movements; church lobbying in national, state, and local governments; specific manifestations of religion and politics; African Americans, women and conservative Christians. Offered Every Other Year.

PS 5110 Constitutional Law Cr. 4
Examination of the power of judicial review, barriers to court review, distribution of powers in the national government, federal-state relations, federal-state power to regulate and tax interstate commerce, and protection of property through the due process clause. Offered Yearly.

PS 5120 Constitutional Rights and Liberties Cr. 4
The Bill of Rights and the Fourteenth Amendment's due process and equal protection clauses, including rights of criminal defendants, freedom of speech and religion, race and sex discrimination. Offered Yearly.

PS 5514 Law, Authority, and Resistance Cr. 3
This course addresses, in both theoretical and practical terms, the relationship between legal and political obligation: When, if ever, do individuals have a moral obligation to obey the law because it is the law? What count as valid justifications of civil disobedience, conscientious refusal, or insurrection? When can governmental authority justifiably depart from "the rule of law"? When can individuals be held criminally accountable for egregious acts committed under unjust prior regimes? The course combines classics of the history of political thought with contemporary theoretical writings and contemporary discussions of topical questions (e.g., jury nullification, emergency measures, transitional justice). Particular attention will be paid to the special obligations of lawyers who are asked to validate immoral practices (e.g., "enhanced interrogation methods" in the Global War on Terrorism). Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Equivalent: LEX 7514, PS 7514

PS 5560 Biopolitics Cr. 4
Use of the perspective of the life sciences in the study of political behavior, political evolution, political institutions, and contemporary political issues. Offered Yearly.

PS 5630 Statistics and Data Analysis in Political Science I Cr. 4
Introduction to statistical description and inference in the study of politics, administration and public policy. Introduction to statistical analysis using microcomputers. Offered Every Term.

PS 5740 Ethnicity: The Immigrant Experience Cr. 4
The course covers history and current debates pertaining to migration and ethnicity, both worldwide and in the US context. We look at migrant and ethnic groups' roles in international politics, host country politics, and economic development. We also examine themes of immigrant belonging in law and national discourse. Offered Every Other Year.

PS 5760 History and Development of Islamic Political Thought Cr. 3
Historical analysis of political Islam through study of the precepts and historical vicissitudes impacting the Islamic world from within and from external forces. Offered Intermittently.
Prerequisites: NE 2030 with a minimum grade of D- and NE 3040 with a minimum grade of D-
Equivalent: NE 5110

PS 5820 International Law Cr. 4
Sources of international law (treaty and custom); institutions of the international system and relationship to domestic law and the courts; state sovereignty; role of United Nations and other international organizations. Application of legal norms to contemporary armed conflicts and human rights catastrophes. Offered Every Other Year.

PS 5830 International Diplomacy and Conflict Cr. 3
This course presents career-relevant understanding of international conflict negotiations, mediation and diplomacy. It covers diplomatic history, theories and processes of diplomatic practice and international conflict background and settlement. Students will also enhance practical skills in diplomatic practice and policy-relevant writing through participation in negotiation simulations and preparation of planning and advisory reports. Offered Intermittently.

PS 5850 Human Rights Cr. 4
Theoretical traditions that have inspired the human rights movement; critiques from liberal and conservative perspectives; international human rights treaties and efforts to implement their terms; controversies over cultural relativism, economic and social rights, treatment of women, and the question of non-intervention. Offered Intermittently.

PS 5860 Conflict in the Nuclear Age Cr. 3
Examination of post-World War II historical conflicts using formal mathematical models and games of strategic interaction. Offered Intermittently.

PS 5890 Dispute Resolution Cr. 3
Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. Offered Yearly.
Equivalent: CRJ 5994, PCS 5000, PSY 5710

PS 5991 Directed Study: WSU- Salford Exchange Cr. 3-9
Credit earned through approved upper-division course work at the University of Salford, England, as part of W.S.U.- Salford student exchange program. Offered for undergraduate credit only. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.

PS 5993 Writing Intensive Course in Political Science Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated corequisite; see section listing in Schedule of Classes for corequisites available each term. Offered Every Term.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and PS 3000-6999 with a minimum grade of D- and PS 3000-6999 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

PS 5999 Special Topics in Political Science Cr. 1-4
Topics to be announced in Schedule of Classes . Offered Every Term.
Repeatable for 16 Credits

PS 6010 Political Psychology Cr. 3
Political attitudes and behavior of both ordinary citizens and political elites using theory and research that adopt a psychological perspective. Topics include: political socialization, ideological belief systems, role of mass media in shaping beliefs and attitudes, race and gender stereotypes and their psychological and political consequences, personality and the dynamics of political leadership. Offered Yearly.
Equivalent: PSY 6020

PS 6020 Intergovernmental Relations and American Federalism Cr. 3
Legal, fiscal, political and administrative relationships among governments in the American federal system. Current issues and public policies which affect or are affected by intergovernmental relationships. Offered Every Other Year.

PS 6050 Class, Race, and Politics in America Cr. 3
Historical and analytic investigation into the role of class and race in American politics. Offered Intermittently.

PS 6070 Labor and American Politics Cr. 3
The role of organized labor in American politics. Historical background; race, gender, and immigration as they shape labor politics; current issues for the labor movement and labor's political agenda; organized labor's future as a force in politics and governance. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ELR 7420

PS 6100 Introduction to Graduate Peace and Security Studies Cr. 3
Survey of the peace and security studies fields at the graduate level. Offered for graduate credit only. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PCS 6100

PS 6340 Public Sector Labor Relations Cr. 3
History, present functions, problems and current controversies surrounding public sector unions. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: ELR 7430

PS 6640 Statistics and Data Analysis in Political Science II Cr. 3
Modern statistical theory applied to the study of politics, administration, and public policy. Multivariate analysis: multiple regression, logistic regression, path analysis, and factor analysis. Offered Yearly.
Prerequisite: PS 5630

PS 6700 Financial Management for Nonprofit Organizations Cr. 3
Conducting financial management in nonprofit organizations. Topics include: legal responsibilities, cash versus accrual basis accounting, financial statements, fund accounting, fixed assets and depreciation, contributions and budgeting. Offered Yearly.

PS 6720 Marketing, Development, and Grant Writing for Nonprofit Organizations Cr. 3
How nonprofit organizations locate and secure resources from the private sector, individual philanthropists, foundations, and governments, through marketing, development, and the writing and submission of grants. Offered Yearly.

PS 6850 International Organizations Cr. 3
Covers origins and significance of international institutions in world politics. Reviews theoretical approaches to international institutions and global governance, including realist, institutionalist and constructivist. Examines problems of cooperation, delegation of power, disparities of power and the development of robust international regimes in a variety of areas of global governance (security, economic, human rights). Offered Intermittently.

PS 6860 American Foreign Policy Cr. 3
Contending paradigms of realism and liberalism as they relate to programs for American foreign policy. Offered Yearly.

PS 6870 United States Foreign Relations Law Cr. 4
U.S. constitutional law and politics relating to the branches' competencies in conduct of foreign affairs and to incorporation of international law in U.S. courts; war powers, counterterrorism, treaties, human rights litigation, immunities. Offered Every Other Year.
Equivalent: LEX 7888

PS 7020 The New Institutionalism Cr. 3
Applies concepts of rational choice theory to explain the development of political institutions. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7030 American Political Processes Cr. 3
Political socialization, public opinion, and political behavior. Role of political parties and interest groups in the political process. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7040 American National Institutions Cr. 3
Examination of the functions, structure and processes of major American governmental institutions with special emphasis on the Congress and the courts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7240 Urban Public Policy Cr. 3
Overview of major theoretical approaches to understanding urban/regional problems and politics. Focus on following regional issues: interdependence of populations across municipal borders, municipal fragmentation, racial and economic segregation, mobility of labor and capital within and across regions. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7250 Seminar in Urban Administration Cr. 3
Administration in agencies with urban-related policy and program functions. Focus on: public services delivery; urban systems development; program-project design, implementation and evaluation; and intergovernmental relations. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7300 Public Administration and its Environment Cr. 3
Emergence and evolution of public administration as both a profession and a field of study. The role of public bureaucracies in the political process and efforts to ensure administrative accountability and responsiveness to the democratic system. Administrative relationships with elected executives, legislatures, the judiciary, the media and interest groups. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7310 Public Management Internship Cr. 1-3
Internship designed to integrate graduate course work with practical knowledge and experience gained from employment in a responsible capacity in a public agency or nonprofit organization. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

PS 7320 Organization Theory and Behavior Cr. 3
Study of major theoretical approaches to the structure, functioning and performance of organizations and the behavior of groups and individuals within them. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7330 Public Budgeting and Finance Cr. 3
Processes of public budgeting in the United States; political dynamics of budgetary decision-making; assessment of efforts to change budget systems; basic concepts of fiscal analysis of expenditure patterns and revenue sources. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7340 Public Personnel Management Cr. 3
Examination of the public personnel systems of American governmental units; analysis of current practices and techniques for recruiting, selecting, training, promoting, compensating and removing public employees. Major issues in public personnel management such as collective bargaining, equal employment opportunity, civil service reform and employee productivity and performance. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7350 Managing Public Organizations and Programs Cr. 3
Processes and techniques for managing public organizations and providing public services. Topics include: total quality management, communication and information management, motivation and supervision of subordinates, planning and decision making. Relying on for-profit and nonprofit organizations in service delivery. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7375 Professional Development Seminar Cr. 1-2
Analysis of managerial techniques and practices currently used by administrators in the public sector. Emphasis on managerial applications of information technology, administrative writing and presentation skills, and organizational and behavioral approaches and techniques. Content areas will vary with yearly offerings. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7410 Policy Formation and Implementation Cr. 3
Analysis of the processes through which public policy is made and implemented. Examination of the factors that promote or impede the development and realization of rational, effective, and responsive public policy. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7460 Program Evaluation Cr. 3
Theory and practice of program evaluation. Role of program evaluation in the policy process. A number of theories of evaluation will be presented, followed by a discussion of techniques. Topics include total quality management, bench marking; utilization of evaluation. Offered Yearly.
Prerequisite: PS 5630
Restriction(s): Enrollment is limited to Graduate level students.

PS 7470 Comparative Public Policy Cr. 3
Provides a comparative introduction to the field of public policy for graduate students. Topics covered include actors and institutions involved in policy making, key concepts, major policy theories and frameworks. After establishing this conceptual foundation, students will explore substantive policy in the U.S. and international context, with attention to the sources of policy differences, such as political institutions, economic conditions and culture. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7480 Policy Analysis for Administration Cr. 3
Introduction to the conceptual foundations of public policy analysis as well as training in various policy analysis tools. Opportunities for students to do policy analysis. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7514 Law, Authority, and Resistance Cr. 3
This course addresses, in both theoretical and practical terms, the relationship between legal and political obligation: When, if ever, do individuals have a moral obligation to obey the law because it is the law? What count as valid justifications of civil disobedience, conscientious refusal, or insurrection? When can governmental authority justifiably depart from "the rule of law"? When can individuals be held criminally accountable for egregious acts committed under unjust prior regimes? The course combines classics of the history of political thought with contemporary theoretical writings and contemporary discussions of topical questions (e.g., jury nullification, emergency measures, transitional justice). Particular attention will be paid to the special obligations of lawyers who are asked to validate immoral practices (e.g., "enhanced interrogation methods" in the Global War on Terrorism). Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate or Law level students.
Equivalent: LEX 7514, PS 5514

PS 7550 Topics in the History of Political Thought Cr. 3-6
Survey of selected political theorists by period or theme; emphasis on interpretation of major works. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7560 Contemporary Political and Social Theory Cr. 3-6
Analysis of selected major problems, topics, and themes in recent political and social theory. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7580 Political Theory of Public Law Cr. 3
Legal restraints on exercise of public power as conceived in works of early modern theorists (e.g., Machiavelli, Locke, Montesquieu, and Madison), and as applied in constitutional arrangements that have emerged in a range of historical settings. Topics include: role of law in totalitarian political systems; emergency rule; comparative approaches to judicial review. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: LEX 7659

PS 7660 Research Methods in Policy and Politics Cr. 3
Analytic methods in the study of politics and public policy: formulating researchable problems, use of models, research design, measurement, data collection, and computer-based data analysis. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7700 Foundations of Nonprofit Management Cr. 3
Topics include: nonprofit organizations and their history; nonprofit policy fields; organizational types and characteristics; governance and leadership; nonprofit strategy; nonprofit management; nonprofit advocacy and lobbying; resource development. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7710 Seminar in Comparative Politics Cr. 3
Research-oriented seminar in which students learn basic approaches to the study of domestic policy-making through the comparative method, including structural, cultural, institutional, elite, and rational choice approaches. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7711 Advanced Seminar in Comparative Politics Cr. 3-6
Analysis of selected major issues, topics, and debates in the field. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 99 Credits

PS 7720 Comparative Politics of Advanced Industrial Democracies Cr. 3
Provides an in depth at the political structures and institutions of advanced industrial democracies and at the methods, concepts and theories of comparative politics that further our understanding of those countries. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7740 Political Economy Cr. 3
Seminar course; comprehensive survey of political economy: interaction between the government and the economy; microeconomics of politics. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7745 Ethnicity: The Immigrant Experience Cr. 4
Covers history and current debates pertaining to migration, ethnicity, refugees and internally-displaced populations, both worldwide and in the US context. We study migrant and ethnic groups' roles and influence in international politics, host country politics, and economic development. Themes of immigrant belonging both in law and in national discourse are also examined. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7810 Seminar in World Politics Cr. 3
Major theoretical approaches. Students evaluate the extent to which theses that devolve from realist, idealist, Marxist, culturalist, decision-making, and alternative approaches allow us to explicate phenomena in world politics. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PS 7811 Advanced Seminar in World Politics Cr. 3
Examination of broad range of substantive topics; student develops ability to conduct independent research in world politics subfield; introduction to alternative theoretical approaches and different methods for conducting empirical research. Major performance objective is student development of a research design. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

PS 7830 Civil War and Conflict Processes Cr. 3
Introduction to literature on civil wars: origins, variables affecting their duration, termination. Peace making and peace agreements studied comparatively. Recent civil wars. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7995 Directed Study Cr. 1-6
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7997 Research in Political Science Cr. 1-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

PS 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

PS 8000 Readings in Political Science Cr. 3
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

PS 8600 Philosophic Problems of Social and Political Inquiry Cr. 3
Required of all doctoral students. Exploration of competing philosophies of science and their relevance to the study of politics. Study of selected problems in political inquiry, including objectivity, commensurability, and progress. Review of disciplinary history and assessments of contemporary approaches to the study of politics. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

PS 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PS 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PS 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PS 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: PS 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

PS 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PS 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PS 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PS 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PS 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

PSC - Pharmaceutical Sciences

PSC 4115 Pharmaceutics I Cr. 3
Introduction to pure drug substance formulation into dosage forms and the principles and mechanisms for developing dosage forms for safe and effective use in patients. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PSC 4125 Introduction to Pharmaceutical Sciences: Medicinal Chemistry / Pharmacology / Immunology Cr. 3
Introduction to medicinal chemistry, pharmacology and biotechnology with a focus on drug discovery and drug action. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PSC 4215 Pharmaceutics II Cr. 2
Basic pharmacokinetics: principles of drug administration, distribution, metabolism and excretion (ADME) using different dosage forms, and basics of administration routes. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PSC 4225 Autonomic Pharmacology Cr. 2
The principles of autonomic pharmacology integrated into an understanding of the functioning of the autonomic system; the major target organs and the physiological effects of agonists and antagonists elicited through autonomic receptor subtypes. Offered Winter.
Prerequisite: PSC 4125
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PSC 5115 Pharmacokinetics Cr. 2
Conceptual knowledge-base and practical calculation applications of pharmacokinetic principles. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PSC 5600 Drugs of Abuse Cr. 2
Pharmacology and toxicology, both clinical and animal, associated with recreationally-used agents; treatment of acute and chronic problems associated with these agents; concept of chronic drug administration and abuse as disease state. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PSC 5870 Seminar in Pharmacology Cr. 1
Reports and discussions on current literature and recent advances in the field. Assigned topics presented by students. Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 2 Credits

PSC 5990 Directed Study in Medicinal Chemistry Cr. 2
Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PSC 5991 Directed Study in Pharmaceutics Cr. 2
Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PSC 5992 Directed Study in Pharmacology Cr. 2
Offered for undergraduate credit only. Offered Every Term.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PSC 6285 Pharmacy Seminar Cr. 1
Presentations on topics of current interest on basic science problems relevant to the major discipline of pharmaceutical sciences. Offered Winter.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PSC 6620 Veterinary Pharmacology Cr. 2
Provides an overview of veterinary pharmacology that offers a review of the chemical structure, mechanism of action, indications for use, and side effects of therapeutics. Includes topics such as toxicology, laws and regulations and common diseases/conditions of veterinary species. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Pharmacy program.

PSC 6800 Introduction to Research Cr. 2
Fundamental concepts and resources for responsible conduct of biomedical research and advancing scientific professional development, and data analysis and statistics. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PSC 6890 Toxicology for Pharmacists Cr. 2
Exposes students to basic concepts in toxicology; serves as a knowledge base to assist in the understanding of mechanisms and rationale behind the relationship of certain drugs and their specific types of toxicities, and addresses tissue and organ-specific toxicities, drug-drug interactions, on-target and off-target effects, and risk assessment. Offered Winter.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PSC 6910 Pharmaceutical Waste: Environmental Impact and Management Cr. 2-3
Course designed for advanced professional and graduate students with sufficient chemistry and/or biological sciences background who are interested in the environmental impact, management, and regulation of waste pharmaceuticals as emerging issues. Offered Winter.
Restriction(s): Enrollment is limited to Graduate or Professional level students.
Equivalent: CE 6910

PSC 7001 Survey of Pharmaceutical Sciences Cr. 3
The basic principles of pharmaceutical science are covered via an introduction in three major disciplines: medicinal chemistry, pharmaceutics, and pharmacology. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PSC 7010 Advanced Drug Action and Safety I Cr. 3
Survey of advanced research topics in pharmacology. Offered Fall.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PSC 7020 Advanced Drug Discovery I Cr. 3
Survey of advanced research topics in medicinal chemistry. Offered Winter.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PSC 7040 Advanced Drug Formulation and Delivery I Cr. 3
Survey of advanced research topics in pharmaceutics. Offered Winter.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PSC 7160 Advanced Practice Basic Pharmaceutical Sciences Elective Cr. 3-6
Eight-week rotation in basic science-oriented research laboratory. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 6 Credits

PSC 7777 Chemistry Biology Interface Seminar Series Cr. 1
The Chemistry Biology Interface (CBI) seminar series will expose students to CBI-related research, CBI-related professional development activities, review of current literature, topics in rigor and reproducibility, and networking social activities. These activities will be in the format of presentations, panel discussions, workshops, small group discussions, or social activities. The goal is for graduate students from discipline-specific fields to move across a multi-disciplinary landscape, or for students already working in inter-disciplinary fields, such as chemical biology, to gain new expertise in specific disciplines. Beyond scholarly goals, the seminar series will enrich the graduate experience by providing career guidance, non-laboratory skill development, training in rigor and reproducibility, and professional networking. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 7777, CHM 7777

PSC 7800 Research Techniques in Medicinal Chemistry Cr. 1-4
Laboratory work employing modern techniques available in medicinal chemistry; application of basic principles to graduate study and research. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 16 Credits

PSC 7810 Research Techniques in Pharmaceutics Cr. 1-4
Laboratory work employing modern techniques available in pharmaceutics: application of basic principles to graduate study and research. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 16 Credits

PSC 7820 Research Techniques in Pharmacology Cr. 1-4
Laboratory work employing some of the modern techniques available in pharmacology, including the application of basic principles to graduate study and research. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 16 Credits

PSC 7850 Pharmaceutical Sciences Colloquium Cr. 1
This course is a required seminar course for all graduate students in the Department of Pharmaceutical Sciences. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 10 Credits

PSC 7860 Introduction to Seminar Cr. 1
A required seminar course for all first year graduate students in the Department of Pharmaceutical Sciences. Students will be required to present a seminar on their research progress during their first year in the program. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PSC 7870 Second Year Seminar Cr. 1
A required seminar course for all second year PhD students in the Department of Pharmaceutical Sciences. Students will be required to present a seminar on a topic unrelated to their research. Offered Fall, Winter.
Prerequisites: PSC 7860 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSC 7880 Third Year Seminar Cr. 1
A required seminar course for all third year PhD students in the Department of Pharmaceutical Sciences. Students will be required to present a seminar on their research. Offered Fall, Winter.
Prerequisites: PSC 7870 with a minimum grade of C

PSC 7999 Master's Essay Direction Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 4 Credits

PSC 8650 Special Topics in Medicinal Chemistry Cr. 2
Recent developments in medicinal chemistry. Topics under investigation and of current interest offered in different semesters. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 16 Credits

PSC 8660 Special Topics in Pharmaceutics Cr. 2
Recent developments in pharmaceutics. Topics under investigation and of current interest offered in different semesters. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 16 Credits

PSC 8670 Special Topics in Pharmacology Cr. 2
Recent developments in pharmacology. Topics under investigation and of current interest offered in different semesters. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 16 Credits

PSC 8888 Survey of Research at the Chemistry Biology Interface Cr. 3
The Chemistry Biology Interface course will teach students how to apply chemical approaches to study complete biological processes. It will commence with a basic overview of the biochemistry of biomolecules. Next, complex biological processes related to various diseases will be highlighted by introducing cell biology, model cells and organisms, and disease mechanisms. Finally, the course will highlight contemporary examples of how chemical methods are used to answer complex biological questions to show the value and innovation available by taking a multidisciplinary approach. The focus will be on development of skill sets that are applicable for research at the chemistry biology interface, rigor and transparency in data collection and analysis, and identification of cross-disciplinary research at Wayne State. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 8888, CHM 8888, PHC 8888, PSL 8888

PSC 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 8 Credits

PSC 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 12 Credits

PSC 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 9 Credits

PSC 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 18 Credits

PSC 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PSC 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

PSC 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate or Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 0 Credits

PSL - Physiology

PSL 5010 Individual Research I Cr. 2-5
Direct participation in laboratory research in the physiological sciences under the supervision of a departmental faculty advisor. Introduction to experimental protocol and current related scientific literature. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Junior or Senior.
Repeatable for 5 Credits

PSL 5200 Embryology: Premedical Studies Cr. 2
Students will learn the sequence of development of the human body from fertilization through the formation of the three-dimensional embryo, the contribution of various germ layers and precursors to definitive structures, including the role of cell interactions, induction, growth, and differentiation, and describe the origin of commonly occurring malformations in terms of abnormal developmental processes. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Premedical Studies; enrollment is limited to Graduate level students.

PSL 5250 Biochemistry: Premedical Studies Cr. 2
This course is a comprehensive exploration of biochemistry, delving into protein and lipid structure, intermediary metabolism, individual metabolic pathways for carbohydrates and lipids, and the transmission of genetic information. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Premedical Studies; enrollment is limited to Graduate level students.

PSL 5300 Physiology: Premedical Studies Cr. 2
This course teaches basic concepts in physiology to prepare the student to successfully complete first-year MD program physiology topics. The course is also designed to teach effective learning methods. Specific topics covered are: cell physiology, electrophysiology, vascular physiology, cardiac physiology, pulmonary physiology, and renal physiology. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Premedical Studies; enrollment is limited to Graduate level students.

PSL 5400 Histology: Premedical Studies Cr. 2
Students will demonstrate the ability to identify the cells, tissues, and organs of the human body at the light microscopic level, identify significant fine structural features of cells or tissues as viewed with transmission electron microscopy, scanning electron microscopy, freeze-fracture electron microscopy, immunocytochemistry, or other selected research techniques, and to correlate the specialized or unique histological structural features at the light and electron microscopic levels with their normal function in the human body. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Premedical Studies; enrollment is limited to Graduate level students.

PSL 5450 Gross Anatomy: Premedical Studies Cr. 2
Gross Anatomy is designed to assist students in acquiring knowledge of the human musculoskeletal system at a pace and depth similar to the first year of medical school. Students will learn the structural contents and anatomical relationships of the back & shoulder, arm, forearm, hand, gluteal region, thigh, leg, ankle, and foot. For each upper and lower extremity region, students are expected to learn how anatomical structures relate to function and how knowledge of normal anatomy can be applied to solve clinically relevant problems affecting the musculoskeletal system. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Premedical Studies; enrollment is limited to Graduate level students.

PSL 5680 Basic Endocrinology Cr. 3
Basic description of the human endocrine system, the endocrine control of several physiologic processes (growth, development, metabolism and reproduction), and a description of common endocrine disorders. Offered Fall.
Prerequisites: BIO 3200 with a minimum grade of C- or BIO 4120 with a minimum grade of C-
Equivalent: BIO 5680

PSL 6010 Advanced Exercise Physiology Cr. 3
Metabolic, neuromuscular, cardiovascular, and respiratory adjustments to acute and chronic exercise in health and disease, including body composition and weight control, nutritional considerations, and the effects of different environments on exercise performance. Offered Fall.

PSL 6300 Biotechnology: Techniques and Applications Cr. 2
Various biotechnical methodologies currently used in research and industry; application of these methodologies in scientific inquiries. Offered Fall.

PSL 6310 Biotechnology: Techniques and Applications Lab Cr. 2-5
Students choose one of the biotechnology techniques discussed in PSL 6300 and spend the semester in an active research laboratory learning the practice of the technique through hands-on experience. Offered Winter.
Prerequisites: PSL 6300 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7010 Basic Graduate Physiology Lecture I Cr. 4
Introduction to basic human physiology. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7011 Basic Integrative Graduate Physiology I Cr. 4
Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Physiology.

PSL 7015 Introduction to Metabolism Cr. 2
An introduction to intermediary metabolism of carbohydrate, lipids, amino acids and proteins. Focuses on the metabolic pathways involved in the synthesis and degradation of metabolites. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BMB 7015

PSL 7020 Introduction to Rigor, Reproducibility, Experimentation, and Statistics in Physiology Cr. 3
Introductory to techniques use in research to develop experimental design, analyze and present data collected. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Physiology.
Fees: $50

PSL 7030 Basic Graduate Physiology Lecture II Cr. 4
Functional mechanisms of the human body. Offered Winter.
Prerequisite: PSL 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7031 Basic Integrative Graduate Physiology II Cr. 4
Second of two courses designed to give an introduction to basic human functional physiology. Offered Winter.
Prerequisite: PSL 7011 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physiology.

PSL 7040 Basic Graduate Physiology Laboratory II Cr. 2
Experimental physiology of organ systems. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Physiology.
Fees: $50

PSL 7060 Current Literature in Physiology Cr. 1
Students are required to present published papers at least once each semester, and must attend all class meetings. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

PSL 7120 Cardiovascular Systems Modeling Cr. 3
Application of engineering principals and mathematical and computational techniques to cardiovascular systems. Partial differential equations, signal transduction pathway and biotransport modeling, and introduction to systems biology approaches. Offered Winter.
Prerequisites: BME 5010 with a minimum grade of B- or BME 5020 with a minimum grade of B-
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7020

PSL 7180 Nutritional Metabolomics and Bioinformatics Cr. 3
Introduction to and application of the ""omics"" technologies to nutrition: genomics, proteomics, and metabolomics. Examples and exercises using bioinformatic software for multivariate data analyses. Offered Winter.
Prerequisite: NFS 6000 with a minimum grade of C- and STA 1020 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: NFS 7000

PSL 7215 Nanobioscience Cr. 3
Introduction to interdisciplinary research field of nanobioscience, at the interphase of biology, chemistry, and physics; specific properties of nanoscale objects. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7220 Metabolism and Disease Cr. 2
This course will review normal metabolic pathways and their regulation and then discuss in depth aberrant metabolism as it contributes to or causes diseases such as diabetes, cancer, and neurodegeneration. Didactic lectures will be complemented with student-based presentations of classic and current primary literature studies. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: MGG 7020

PSL 7350 Psychosocial Perspectives of Health Care: Premedical Studies Cr. 2
Psychosocial Perspectives of Health Care explores various psychosocial and non-cognitive topics relevant to the personal growth and development of future physicians. The course is designed to prepare students for the psychosocial aspects of medical training and patient care by analyzing practices and workplace scenarios, in which many underrepresented medical students and practicing physicians face. In addition, the course provides students an opportunity to reflect on their journey which led them to medical school, share their life experiences, and recognize any personal biases through class group discussions. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Premedical Studies; enrollment is limited to Graduate level students.

PSL 7400 Sleep and Breathing in Health and Disease Cr. 2
This course is designed to expose students to topics in respiratory control during wakefulness and sleep in healthy individuals and individuals with sleep apnea and/or spinal cord injury. Advanced topics in respiratory physiology; guidance in critical reading and discussion of the literature. Offered Every Other Winter.
Prerequisite: PSL 7030 with a minimum grade of C or PSL 7031 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate or Medical level students.

PSL 7420 Organizing and Communicating Hypothesis Testing in Physiology Cr. 3
Understanding the development of physiologically relevant hypotheses, testing hypotheses, and both written and oral presentation of physiologic studies/proposals. Students will develop substantial components of a training fellowship proposal. Offered Winter.
Prerequisite: PSL 7011 with a minimum grade of C and PSL 7031 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7490 Translational and Integrative Physiology Cr. 4
This course focuses on selected, current topics in physiology with the intention of highlighting and bridging basic physiological principles with clinical diseases, diagnostic approaches, or therapies. The course will provide an in-depth, interactive lecture session discussing physiological principles from laboratory to clinic by paired instructors: a basic scientist and a clinician in the respective field (e.g., cardiac physiology/cardiology). The lecture session will be followed by a second session wherein one or two papers that provide either classic or state-of-the-art investigations that are translational in nature and are grounded in the material from the previous lecture session. The course is team taught with faculty who have appropriate expertise in a given area leading the didactic/discussion sessions. Offered Winter.
Prerequisites: (PSL 7010 and PSL 7011) and (PSL 7030 and PSL 7031)
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7550 Advanced Renal Physiology Cr. 2
A detailed study of the physiological mechanisms promoting homeostasis of the body fluid volumes and ionic composition in the mammal. Offered Every Other Fall.
Prerequisites: PSL 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7600 Advanced Cardiovascular Physiology Cr. 2
Basic principles of heart dynamics and control techniques in measurement of cardiac function. Offered Fall.
Prerequisites: PSL 7030 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physiology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy or Master of Science degrees.

PSL 7640 Cell and Molecular Physiology Cr. 3
Lecture and discussion. Research in atomic force microscopy, molecular structure, exocytosis, insulin signal transduction, glucose transport, estrogen receptors, ion channels, Na, K-ATPase, Na/Ca exchanger, hormonal regulation of ion transport. Offered Every Other Winter.
Prerequisites: PSL 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7660 Advanced Neurophysiology Cr. 3
Current topics in cognitive neurosciences ranging from cellular and molecular aspects to systems, network dynamics, and cognitive functions as well as neurological diseases. Offered Every Other Fall.
Prerequisites: PSL 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7680 Endocrinology Cr. 4
A detailed emphasis on current research. Student participation encouraged; each student required to present a one hour lecture. Offered Winter.
Prerequisites: PSL 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7685 Reproductive Physiology Seminar Cr. 1
The seminar covers principles and translational components of reproduction and associated disease states including endocrinology, infertility, contraception, recurrent pregnancy loss, menopause, and reproductive immunology. This weekly seminar series exposes students to the work of their departmental peers and faculty, as well as external speakers who are invited monthly, and it aims to broaden the knowledge and expertise of the participating students in the field of reproductive biology. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

PSL 7690 Principles and Techniques of Reproductive Biology Cr. 3
Principles and techniques in reproduction including endocrinology, gametogenesis, fertilization, implantation, embryogenesis, stem cell determination, pregnancy and parturition. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: IBS 7690

PSL 7700 Embryonic Stem Cell Biology Cr. 3
Methods involved in production and utilization of embryonic stem cells. Lectures supplemented with text, reviews, and recent papers. Offered Every Other Winter.
Prerequisite: PSL 7690
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7710 Disease States and Reproductive Processes Cr. 1
Diseases and areas in reproductive medicine where additional research is required. Students accompany clinicians during rounds in hospital and out-patient clinics. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Medicine; enrollment is limited to Graduate level students.

PSL 7730 Reproductive Sciences: Teratology Cr. 3
Principles of the science of birth defects; focus on impact of environmental poisons, medicines, and drugs of abuse on developing germ cells, embryos and fetuses. Roles of pharmacological/toxicological, physiological (maternal, placental, and fetal), genetic and nutritional factors in the teratogenic response are examined. Texts and current readings. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: PHC 7730

PSL 7770 Perinatal Biology and Reproductive Immunology Cr. 3
The aim of this course is to introduce students the role of the immune system in the physiology and pathology of the female reproductive system during the non-pregnant as well as the pregnant state. Offered Winter.
Prerequisite: PSL 7690 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7775 Current Research Topics in Reproductive Science Cr. 3
Covers principles and translational components of reproduction and associated disease states including, endocrinology, infertility, contraception, recurrent pregnancy loss, menopause and reproductive immunology. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7825 Membrane Physiology: Protein Transport, Lipid Metabolism and Human Diseases Cr. 2
Covers the basic concepts of membrane transport in the mammalian secretory pathway with an emphasis on the dysregulation of key transport steps and the defective mutations of key regulators which lead to human diseases (e.g. neurodegenerative diseases, diabetes and coronary heart diseases). Offered Winter.
Prerequisite: IBS 7015 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7880 Special Problems in Physiology Cr. 1-8
Topics individually arranged with faculty. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PSL 7890 Seminar Cr. 1
For graduate students in physiology. Participation in weekly departmental seminars. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

PSL 7891 Seminars in Physiology Cr. 0
Topics individually arranged with faculty. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7910 Epigenetics and the Developmental Origin of Health and Disease Cr. 3
Numerous animal and epidemiologic studies demonstrate that many adult-onset diseases ranging from cardiovascular disease to mental health may result from environmental conditions, such as famine or chemical exposures, encountered early in life or even prior to conception. This course will cover principles and current and seminal research in the field of developmental origins of health and disease (DOHaD). Topics will include the history of DOHaD; windows of susceptibility in male and female germs cells and early-life development; the numerous environmental factors (e.g., nutrition, toxicants, built environment) that may affect your health later in life; and the mechanisms (e.g., epigenetics) that link early-life environmental conditions to adult-onset diseases. Offered Winter.
Prerequisite: PSL 7730 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PSL 7996 Arranged Research Cr. 1-15
Graduate level experiences in research techniques. Special research topics in specified areas arranged with individual faculty member. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 15 Credits

PSL 8888 Survey of Research at the Chemistry Biology Interface Cr. 3
The Chemistry Biology Interface course will teach students how to apply chemical approaches to study complete biological processes. It will commence with a basic overview of the biochemistry of biomolecules. Next, complex biological processes related to various diseases will be highlighted by introducing cell biology, model cells and organisms, and disease mechanisms. Finally, the course will highlight contemporary examples of how chemical methods are used to answer complex biological questions to show the value and innovation available by taking a multidisciplinary approach. The focus will be on development of skill sets that are applicable for research at the chemistry biology interface, rigor and transparency in data collection and analysis, and identification of cross-disciplinary research at Wayne State. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BIO 8888, CHM 8888, PHC 8888, PSC 8888

PSL 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PSL 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PSL 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PSL 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: PSL 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

PSL 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PSL 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PSL 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PSL 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PSL 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

PSY - Psychology

PSY 1010 Introductory Psychology Cr. 4
Satisfies General Education Requirement: Natural Scientific Inquiry
Grade of C or better required for psychology majors. Introduction to the science of behavior. Principles, concepts, and theories of human thought and action. Selected concepts illustrated through laboratory experiments. Recommended for students intended to major in psychology. Meets General Education Laboratory Requirement. No credit after PSY 1020. Offered Every Term.

PSY 1020 Elements of Psychology Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
Principles, theories and applications of psychological knowledge. Intended for non-psychology majors. No credit after PSY 1010. Offered Every Term.

PSY 1030 Introductory Psychology Laboratory Cr. 1
Principles, concepts and theories of human thought and behavior illustrated through laboratory experiments. Required of psychology majors who have AP Psych credit or took PSY 1020 to complete Introductory Requirement; Grade of C or better required for psychology majors. No credit after PSY 1010. Offered Every Term.
Prerequisites: PSY 1020 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.

PSY 2020 Research Methods In Psychology Cr. 4
Basic principles of research design in psychology and measurement of psychological constructs. Students must take lecture and corresponding lab. Psychology majors must earn C or better. Students are strongly urged to complete PSY 2020 at or before the completion of 45 credits. Course study and/or tutoring is available for this course. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of C or PSY 1030 with a minimum grade of C

PSY 2030 Statistical Methods in Psychology Cr. 4
Primarily for psychology majors. Principles and computational methods that apply to quantitative aspects of psychological procedure; elementary correlation theory and prediction, sampling problems, tests of hypotheses, elementary test theory, interpretation of results. Students will learn how to use statistics software SPSS. Psychology majors must earn C or better and are strongly urged to complete PSY 2030 at or before the completion of 60 credit hours. Course study and/or tutoring is available for this course. Offered Every Term.
Prerequisites: (PSY 1010 with a minimum grade of C or PSY 1030 with a minimum grade of C) and (MAT 1000-6999 with a minimum grade of C, STA 1020 with a minimum grade of C, STA 2210 with a minimum grade of C, TIS 2300 with a minimum grade of C, ACT Math >= 25 (QE = 100) with a test score minimum of 100, Quantitative Exp P=100/F=000 with a test score minimum of 100, SAT Math (QE = 100) with a test score minimum of 100, or Michigan Transfer Agreement with a test score minimum of 100)

PSY 2080 Introduction to Drugs, Behavior, and Society Cr. 3
Introduction to drugs and their actions. Emphasis on psychoactive drugs, their effects, and the consequences of their use and misuse to the individual and society. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 2100 Psychology and the Workplace Cr. 3
Psychology applied to workplace issues. Major topics include organizational staffing, employee training and development, organizational leadership, employee attitudes and motivation, organizational culture and climate, and employee health and well-being. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 2300 Psychology of Everyday Living Cr. 4
Applications of psychological principles to everyday life. How research can be used to guide positive self-change in various contexts (e.g., stress, psychological problems, personality, persuasion, attitudes). Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 2400 Developmental Psychology Cr. 4
Facts, principles, theories of psychological development throughout the lifespan. Development of intellectual, emotional, perceptual, linguistic, and social behavior. Developmental trends. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 2410 Health Psychology Cr. 4
Clinical, social, developmental, and biopsychosociological theory and research on relationship of psychological and behavioral factors to physical health and well-being. Positive and negative health behaviors, stress and coping, social relations and social support, psychoneuroimmunology, patient-practitioner interaction and health utilization, management of chronic illness. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 2600 Psychology of Social Behavior Cr. 4
Social behavior of the individual as influenced by the group. Particular attention given to social perception, motivation, and learning; attitudes and values; dynamics of social groups. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 2650 Minds and Machines Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Central examples of these questions and proposed answers: Is our mind just a piece of software that our brain is running? Can AI exercise moral agency? Are minds physical things? Are we much less rational than we think? How can we understand each other's minds? Can there be laws in psychology? What is consciousness, and can it be studied scientifically? We will address these and other questions via the work of philosophers, psychologists and cognitive scientists. Offered Winter.
Equivalent: PHI 2650

PSY 3000 Evolutionary Psychology Cr. 3
Application of evolutionary theory to the study of human behavior, including favoritism of kin, sex differences in behavior and anatomy, and life history strategies. Introduction to behavioral genetics. Description of various facets of a given behavior: its development, neural and hormonal mechanisms, phylogenetic distribution, and adaptive value, with examples. Interaction between genetic and environmental influences on behavior, including cultural values. No credit after BIO 4220. Offered Fall.
Prerequisite: PSY 1010 or PSY 1020

PSY 3040 Psychology of Perception: Fundamental Processes Cr. 3
Fundamental theories, concepts, and empirical studies of basic sensory processes and the perception and organization of sensory phenomena. Offered Fall, Winter.

PSY 3060 Psychology of Learning and Memory: Fundamental Processes Cr. 3
Fundamental theories, concepts, and empirical findings in field of learning. Offered Fall, Winter.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3080 Cognitive Psychology: Fundamental Processes Cr. 3
Fundamental theories, concepts, and empirical findings in study of human cognition. Topics include: thinking, problem solving, language comprehension and production, memory and attention. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-
Equivalent: LIN 3080

PSY 3120 Brain and Behavior Cr. 3
Introduction to the brain and its influence over behavior. Structure and function of the nervous system, neural communication, and neural mechanisms of higher nervous system functions and dysfunctions. Topics include: biological basis of sleep, sex, learning, memory, language, schizophrenia, and depression. No credit after PSY 3330. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3200 Motivation, Feeling and Emotion Cr. 3
Experimental findings in psychological and allied fields on topics of motivation, feeling, and emotion; evaluation of classical theories and an attempt to develop a theoretical approach based on factual knowledge. Offered Intermittently.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3250 Psychology of Gender Cr. 3
Evidenced-based understanding of similarities and differences between women and men in domains such as cognitive skills, aggression, empathy, communication, emotional expression and mental health. Exploration of biological, psychological and social theories used to explain gender identity and expression. Focus on historical and current issues related to the psychology of women, including relationships, careers and health. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3310 Abnormal Psychology Cr. 4
Nature and causes of various forms of abnormal behavior, including schizophrenia, depression, and neurosis, viewed from psychological, biological, cultural, developmental and historical perspectives. Diagnosis and treatment of pathological behavior. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3315 Introduction to Positive Psychology Cr. 3
Positive psychology encompasses the study of positive experiences, positive character strengths, positive relationships, and the institutions and practices that facilitate their development. This course reviews the history of positive psychology and the contributions this new field has made to several traditional research areas in psychology. We will study an overview of the field—giving specific attention to the central tenants of positive psychology: signature strengths, values, positive relationships, positive emotions, mindfulness, resilience, and positive organizations. Offered Yearly.
Prerequisite: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3330 Systems Neuroscience Cr. 3
Systems Neuroscience explores the brain circuits that contribute to regulatory (i.e., sexual differentiation and reproductive behavior, reward and addiction, aggression and violence, physical and social pain), and higher order (i.e., learning and memory, cerebral lateralization and consciousness) experiences and behaviors. Changes in neural circuits that contribute to disorders of thought (schizophrenia), emotion (anxiety) and sensory processing (chronic pain), and neurobiological strategies for their remediation also are explored. Offered Winter.
Prerequisite: BIO 3200 with a minimum grade of C-

PSY 3350 Psychology of Personality Cr. 3
An examination of the major approaches to the study of personality. Current psychological findings in the field of personality and their implications for psychotherapy and assessment. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3380 Human Sexuality Cr. 3
Biological, psychological and socio-cultural aspects of human sexuality. Topics include anatomy and development, sexual behavior, and cultural influences. Offered Every Term.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3430 Infant Development Cr. 3
Development of the infant from conception through the toddler years. Physical, motor, perceptual, cognitive, language, social and emotional development. Current findings and their implications for parenting, programming and care. Offered Yearly.
Prerequisites: PSY 2400 with a minimum grade of D-

PSY 3440 Psychology of Child Behavior and Development Cr. 3
Developmental processes in childhood; language acquisition, cognitive development, development of peer-peer interactions. Offered Yearly.
Prerequisite: PSY 1010 with a minimum grade of D-

PSY 3460 Psychology of Adolescent Behavior and Development Cr. 3
Factors that promote the emergence of new relationships with parents, changes in peer relationships, increased independence, preparation for marriage and parenthood, and socioeconomic integration into the larger society. Biological and anthropological perspectives on sex roles. Offered Yearly.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3480 Parent-Child Interaction Across the Lifespan Cr. 3
Theory and research on interactions between parents and children. Focus on normal developmental concerns, infancy through adulthood: discipline, sibling rivalry, sex-role identification, parental support. Offered Yearly.
Prerequisites: PSY 2400 with a minimum grade of D-

PSY 3490 Psychology of Adult Development and Aging Cr. 3
The adulthood and aging years from a developmental perspective, including: intelligence, memory, personality, and social behavior. Offered Intermittently.
Prerequisite: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3540 Jane Austen's World Cr. 3
Jane Austen's novels have generated great—and well deserved—interest in the world she inhabited. Austen wrote during one of the most turbulent periods of British and World history. This class will place her writings into a historical and cultural context. Over the course of the semester we will address a number of questions that shaped Austen's era and resonate for our own: How does her work interpret and reflect changing views of love and family? How do they reflect rising consumer capitalism and new styles of fashion? What do they say about women's rights to property? About the Napoleonic Wars and the British slave trade? How can novels help us understand the conflicts of an era? Our course will deepen our understanding of British, and global, society and culture. Offered Every Other Year.

PSY 3700 Black and African American Experience Cr. 3
This course will examine psychological theory, empirical research, and clinical practice that emphasize African/African-American/Black culture. Students will learn theories of Black personality and identity development, the co-existence of African/African American and European/European American worldviews, psychological health and well-being, social and emotional consequences of institutionalized racism (including socioeconomic and health disparities), and the impact of acculturation on African American mental health. Offered Yearly.
Prerequisite: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-

PSY 3993 Laboratory in Experimental Psychology Cr. 2
Lab investigations of perceptual, sensory, learning, or cognitive processes. This capstone course will culminate in the writing of a research proposal. Course unique to WSU; students must complete course at WSU. Offered Every Term.
Prerequisites: PSY 2020 with a minimum grade of C, PSY 2030 with a minimum grade of C, and (ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C)
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $15

PSY 3995 Advanced Seminar in Psychology Cr. 3
An advanced writing intensive seminar course that will examine a specific topic in psychological research. This course will expand beyond the fundamentals of scientific research and will ask students to explore specific psychological concepts, in depth. This capstone course will culminate in the writing of a research paper. Offered Intermittently.
Prerequisites: PSY 2020 with a minimum grade of B, PSY 2030 with a minimum grade of B, and (ENG 2390 with a minimum grade of B, ENG 3010 with a minimum grade of B, ENG 3020 with a minimum grade of B, or ENG 3050 with a minimum grade of B)

PSY 4140 Hormones and Behavior Cr. 3
Examines the relationship between hormones and behavior, taking a biological approach to behavioral questions that have long been of interest to Psychologists, Biologists and Neuroscientists. Explores the research area of Behavioral Endocrinology, a field that seeks biologically (in particular hormone)-based explanations of behavior. Offered Intermittently.
Prerequisites: PSY 1010 with a minimum grade of C and (PSY 3120 with a minimum grade of C or PSY 3330 with a minimum grade of C)
Equivalent: BIO 4140

PSY 4310 Psychological Disorders of Children Cr. 3
Points of view, methods of study and research findings regarding psychopathology in children. Offered Fall.
Prerequisites: PSY 1010 with a minimum grade of C or PSY 1020 with a minimum grade of C

PSY 4320 Introduction to Clinical Psychology Cr. 3
An introduction to the methods, rationale, and empirical foundations of clinical psychology. Issues in the assessment and treatment of psychopathology. Offered Yearly.
Prerequisites: PSY 1010 with a minimum grade of C or PSY 1020 with a minimum grade of C

PSY 4990 Directed Study and Research Cr. 2-4
Library or laboratory study of an advanced problem in psychology under the guidance of a faculty member. Offered Every Term.
Repeatable for 9 Credits

PSY 4991 Honors Directed Study Cr. 2-4
Honors library or laboratory study of advanced problem in psychology under guidance of a faculty member. Offered Every Term.
Repeatable for 9 Credits

PSY 4994 Special Projects Cr. 1-4
Departmental assignment to special projects for advanced students. Offered Every Term.
Prerequisite: PSY 1010 with a minimum grade of C or PSY 1030 with a minimum grade of C
Repeatable for 12 Credits

PSY 4995 Special Topics in Psychology Cr. 3
Topics of current interest to be announced in Schedule of Classes . Offered Intermittently.
Prerequisites: PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-
Repeatable for 6 Credits

PSY 4998 Senior Thesis Cr. 3
Research leading to the design and execution of a senior honors thesis in psychology. Presentation of research at department, university or external conference is required. Offered Every Term.
Prerequisites: PSY 2020 with a minimum grade of C, PSY 2030 with a minimum grade of C, and PSY 3993 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Psychology Honors.

PSY 5020 Honors Research in Psychology Cr. 3
Critical evaluation of scientific literature and the planning and development of psychological research proposals. Offered Fall.
Prerequisites: PSY 2010 with a minimum grade of C, PSY 2020 with a minimum grade of C, and PSY 3993 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Psychology Honors.

PSY 5040 Cognitive Neuroscience Cr. 3
Brain processes and brain structures that support them, framed in terms of theoretical models and empirical evidence from brain imaging techniques and patient populations. Topics include attention, memory, space, language, and decision-making. Offered Yearly.
Prerequisites: PSY 3120 with a minimum grade of C or PSY 3330 with a minimum grade of C

PSY 5070 Neuropharmacology Cr. 3
Physiological and behavioral bases of drug action, with emphasis on brain neurotransmitters, psychopharmacology, and substance abuse disorders. Offered Fall.
Prerequisites: PSY 1010 with a minimum grade of C and (PSY 3120 with a minimum grade of C or PSY 3330 with a minimum grade of C)

PSY 5080 Cellular Basis of Animal Behavior Cr. 3
Relationship between behavior and neuroscience using a variety of animal models, each examined from the level of natural behavior progressively to the cellular level. Topics include: sensory systems, motor behavior, and learning. Offered Winter.
Prerequisite: BIO 2550 with a minimum grade of C- or BIO 2600 with a minimum grade of C- or PSY 3120 with a minimum grade of C- or PSY 3330 with a minimum grade of C-
Equivalent: BIO 5080

PSY 5100 Applied Statistics in Psychology Cr. 4
General linear model, coding techniques, multiple correlation and regression, analysis of variance and covariance, planned and post hoc tests, use of statistical computer packages. Offered Every Term.
Prerequisites: PSY 2020 with a minimum grade of C

PSY 5330 Human Neuropsychology Cr. 3
History of the development of human neuropsychology. Neuropsychological mechanisms underlying behavior and mental processes: sensory-motor mechanisms; integrative action of the nervous system; mechanisms involved in emotional behavior and learning and memory. Current perspectives of theories of brain organization and function and empirical foundations of neuropsychological assessment. Offered Yearly.
Prerequisites: (PSY 1010 with a minimum grade of D- or PSY 1020 with a minimum grade of D-) and (PSY 3120 with a minimum grade of C or PSY 3330 with a minimum grade of C)

PSY 5360 Child Language Acquisition Cr. 3
Despite its complexity and abstractness, young children acquire language without conscious effort or explicit instruction in a span of just a few years. This feat is unique to humans and is unmatched by any other species or even the most sophisticated computers. The course will present a comprehensive introduction to the study of child language acquisition. We will use a cross-linguistic approach to discuss some of the most important issues in language acquisition. We will not only talk about what children accomplish linguistically at various ages, but also discuss various theoretical approaches to explaining how children acquire linguistic knowledge in different domains, focusing on acquiring the sound inventory, words and sentence structure. We will look at some of the methods that have been employed to collect and analyze child language data. Offered Fall.
Equivalent: ENG 5360, LIN 5360

PSY 5440 Developmental Neuropsychology Cr. 3
Neurobiology of development. Topics include: neuroplasticity throughout the life span, maturation of the brain and neural connectivity, neurodevelopment of behavioral, emotional, social and cognitive functions. This course will bridge human behavioral and animal models to illustrate the dexterity and limitations of available scientific methods to study developmental neuropsychology. Offered Intermittently.
Prerequisites: PSY 1010 with a minimum grade of C and (PSY 3120 with a minimum grade of C or PSY 3330 with a minimum grade of C)

PSY 5700 The Psychology of African Americans Cr. 4
Methodological approaches to and theories of Black behavior and personality development. Topics include: race and pathology, life-span and psycho-sexual development, personality formation, social and environmental stress and adaptation. Offered Every Term.
Equivalent: AFS 5700

PSY 5710 Dispute Resolution Cr. 3
Overview of the processes and actors in the field of dispute resolution including negotiation, mediation, arbitration, and conciliation. Offered Yearly.
Equivalent: CRJ 5994, PCS 5000, PS 5890

PSY 5900 Culture, Language and Cognition Cr. 3
Systematic investigation of the relationships among, language, cognition and culture, including issues relating to human universals, cross-cultural concept formation, metaphor, classification and the evolution of cognition and language. Offered Every Other Winter.
Prerequisites: ANT 3310 with a minimum grade of D-, ANT 5320 with a minimum grade of D-, LIN 3310 with a minimum grade of D-, LIN 5320 with a minimum grade of D-, LIN 3080 with a minimum grade of D-, or PSY 3080 with a minimum grade of D-
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students.
Equivalent: ANT 5900, LIN 5900

PSY 6010 Equitable Partnerships with Families and Communities Cr. 3
Theory and research-based strategies that support equitable collaboration between professionals and families to best meet the needs of children. Explores family and community contexts as assets for learning. Emphasis on culturally and linguistically responsive approaches to learn about and leverage family strengths and priorities, as well as communication strategies for making shared decisions with families. Offered Fall.
Equivalent: ELE 6010, SW 6010

PSY 6020 Political Psychology Cr. 3
Political attitudes and behavior of both ordinary citizens and political elites using theory and research that adopt a psychological perspective. Topics include: political socialization, ideological belief systems, role of mass media in shaping beliefs and attitudes, race and gender stereotypes and their psychological and political consequences, personality and the dynamics of political leadership. Offered Yearly.
Equivalent: PS 6010

PSY 6500 Advanced Psychological Statistics Cr. 3
Review of core statistical procedures; in-depth exploration of concepts of correlation and regression. Brief review of descriptive statistics and methods of statistical inference. Statistical software will be introduced and used. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy.

PSY 6510 Organization Theory Cr. 3
Work organization theories, and history of social modeling; classical, neoclassical, and open system of contingency theories. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy.

PSY 6520 Organizational Behavior Cr. 3
Employee motivation, job attitudes, leadership and management development; related aspects of organizational behavior, design and development. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy.

PSY 6535 Psychometric Theory Cr. 3
Development, validation, and use of psychological tests and other psychological instruments. Origins and value of psychological testing. Offered Yearly.
Prerequisites: PSY 6500 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy.

PSY 6550 Training and Employee Development Cr. 3
Theory and practice of organizational training, employee development, and management development; establishment of performance standards, performance appeal process, evaluation of training and development programs. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy.

PSY 6570 Research Methods in Industrial/Organizational Psychology Cr. 3
Field and lab research methods for workplace settings. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy.

PSY 7010 History and Systems of Psychology Cr. 1-2
History and philosophical ideas that have influenced development of the scientific field of psychology. Core issues in philosophy of science; their integration with major theories, philosophies and trends in development of modern psychology. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7080 Human Cognition Cr. 3
Unified approach to human cognitive activity, including perception, attention, memory, language, concepts, and problem solving. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7120 Biological Basis of Behavior Cr. 3
Major literature relating the anatomy of the nervous system to psychological processes. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7150 Quantitative Methods in Psychology I Cr. 4
Introduction to statistical inference for psychologists. Bivariate measures of relationship and associated statistical tests: chi square, t-test, F test and selected rank order tests. Research methods including randomized designs, repeated measures, counter-balancing and Latin square designs, and quasi-experimental designs common to applied social science research, such as matched case controls, pre- and post- designs, and interrupted time-series. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7160 Psychometrics and Factor Analysis Cr. 3
Psychometric theory and psychological measurement including Factor Analysis and Item Response Theory. Offered Winter.
Prerequisites: PSY 7150 with a minimum grade of C (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7200 Psychological Assessment I Cr. 4
Psychometric theory and application emphasizing reliability, validity, utility and interpretation of selected intelligence, achievement, and objective personality tests, including the WAIS-IV and MMPI-2. Required lab section includes individual supervision on interviewing, testing, and report writing. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7210 Psychological Assessment II Cr. 4
Half of the course covers child intellectual and academic assessment, based on measures such as the WISC-IV and WIAT-II. The other half addresses adult personality assessment, based on measures such as the Rorschach and TAT. Emphasis on providing feedback and writing reports for clients. Required lab section includes individual supervision on interviewing, testing and report writing. Offered Winter.
Prerequisites: PSY 7200 with a minimum grade of B (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7230 Assessment Practicum Cr. 1
Students learn to conduct psychological assessments of adults and children. Skills taught include how to: a) generate clinical hypotheses; b) interview patients; c) select, administer, score, and interpret a range of psychological measures; d) integrate findings to answer assessment questions; e) write assessment reports; f) give feedback; and g) both receive and provide supervision. Unique aspects of assessing specific clinical conditions or disorders will be covered. Students will present cases based on assessments they conduct in the departmental training clinic. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

PSY 7240 Ethics, Professional Issues, and Diversity Cr. 1
Three separate sections of this course focus on ethical principles as applied to practice, research and teaching, human diversity. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.
Repeatable for 3 Credits

PSY 7250 Theory of Personality Cr. 3
Major approaches to the study of personality. Current psychological research and issues in the field; implications for psychotherapy and assessment. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.

PSY 7270 Research Methods in Clinical Psychology Cr. 3
Examines a range of methods that address the most commonly asked questions in the science of clinical psychology. Topics include defining research questions, reviewing literatures, designing studies, collecting data, and interpreting data. Specific topics include observational methods, longitudinal designs, clinical trials, program evaluation, mediators and moderators, publishing, and grant writing. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.

PSY 7290 Diversity, Systems, and Inequality Cr. 3
Focuses on the impact of diversity, systems, and inequality in the U.S. on the field of psychology. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7300 Psychopathology Cr. 1,2
Basic psychological concepts of psychopathology with a focus on adult disorders. Current theory and research and their implications for clinical practice. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

PSY 7310 Developmental Psychopathology Cr. 3
Processes of development as they relate to emergence and course of psychopathology from conception through young adulthood; theory and research on major forms of psychopathology with childhood and adolescent onset. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7330 Clinical Neuropsychology Cr. 3
History of the development of clinical neuropsychology. Current perspectives of theory and empirical foundations of neuropsychological assessment. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7340 Neuropathology and Behavior Cr. 3
Discussion of the current state of neuropathology and its cognitive consequences. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7370 Psychological Interventions I Cr. 3
Survey of intervention development, theory and research; focus on empirically-supported individual psychotherapy for adults and evidenced-based therapeutic processes. Offered Fall.
Prerequisites: PSY 7300 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7380 Psychological Interventions II Cr. 3
Survey of intervention development, theory and research; focus on evidence-based interventions for children and adolescents as well as systems (families, groups, communities). Offered Winter.
Prerequisites: PSY 7370 with a minimum grade of B (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7400 Introduction to Life-Span Developmental Psychology Cr. 3
Theory, methods and selected content areas; cognitive and social development as they relate to the entire life cycle. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7425 Psychology of Infant Behavior and Development Cr. 3
Prenatal development and infancy through the toddler years. Major theoretical positions and research relating to motor, perceptual, cognitive, language, social, and emotional development. Implications for parenting, programming, and care. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7430 Developmental Assessment of Infants and Toddlers Cr. 3
Overview of assessment methods; training in administration of the Bayley Scales of Infant development. No credit after PSY 6470. Offered Yearly.
Prerequisite: PSY 6420 with a minimum grade of C or PSY 7400 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7440 Cognitive Development Cr. 3
Current theoretical perspectives and related research on cognitive development in childhood; topics include cognition, memory, concepts, and language. Offered Intermittently.
Prerequisite: PSY 7400 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7450 Social Development Across the Life-Span Cr. 3
Recent perspectives on the psychological and environmental factors affecting social development across the life-span. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7470 Interdisciplinary Research Methods in Social, Cognitive and Developmental Psychology Cr. 3
Required of all first-year students in cognitive, developmental, and social psychology. Advanced survey of research design methods and issues across a broad array of social and behavioral fields, including cognitive, developmental, social, and personality psychology. Also covers Master's thesis development and ethical and professional issues. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7500 Research Methods in Industrial/Organizational Psychology Cr. 3
Analysis of methodology and research design problems in the field of industrial psychology; discussion of professional and ethical problems. Offered Yearly.
Prerequisite: PSY 7150 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7510 Criterion Development and Performance Evaluation: Theory and Research Cr. 3
Nature and kinds of criteria of job performance; development and measurement of criteria; problems and issues in performance evaluation. Offered Yearly.
Prerequisites: PSY 7500 with a minimum grade of B (may be taken concurrently) and PSY 7160 with a minimum grade of B (may be taken concurrently)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7520 Selection and Placement: Theory and Research Cr. 3
Principles in development and evaluation of employee selection procedures; methods for establishing job-relatedness; problems and issues in evaluation and use of employee selection procedures. Offered Every Other Year.
Prerequisites: PSY 7500 with a minimum grade of B (may be taken concurrently) and PSY 7160 with a minimum grade of B (may be taken concurrently)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7560 Leadership and Executive Development: Theory and Research Cr. 3
Selected leadership research studies; theories relating to leadership; principles of training and development. Offered Every Other Year.
Prerequisite: PSY 7500 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7570 Industrial Motivation and Morale: Theory and Research Cr. 3
Meaning of motivation and incentive as used in industry; research methods for study of motivation, job satisfaction, and morale; research data and interpretations in theoretical frameworks. Offered Every Other Year.
Prerequisite: PSY 7500 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7590 Industrial and Organizational Psychology Cr. 3
Lecture, discussion, analysis of articles and chapters, in-class exercises. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7620 Social Psychology: Research and Theory Cr. 3
Graduate-level introduction to the major theoretical and research areas of social psychology; current issues and research. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7645 Social Psychology of Close Relationships Cr. 3
Social Psychological theory and research that examines the dynamics of close relationships, including relationship formation, maintenance, enhancement, and dissolution. Offered Every Other Year.
Prerequisite: PSY 7620 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 7745 Job Analysis and Performance Criteria Cr. 3
Job analysis methods, criterion development, and performance appraisal. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy; enrollment is limited to Graduate level students.

PSY 7750 Organizational Staffing Cr. 3
Recruitment, screening, and personnel selection. Offered Yearly.
Prerequisites: PSY 7745 with a minimum grade of B (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy; enrollment is limited to Graduate level students.

PSY 7770 Testing in the Workplace Cr. 3
Test development; in-depth discussion of existing tests. Offered Yearly.
Prerequisites: PSY 6535 with a minimum grade of B (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy; enrollment is limited to Graduate level students.
Fees: $100

PSY 7780 Industrial/Organizational Psychology Cr. 1
Approved internship field placement for a period of one semester to two years. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy; enrollment is limited to Graduate level students.
Repeatable for 4 Credits

PSY 7790 Capstone Course Cr. 3
Special topics in I/O psychology. Students write a major paper or conduct an individual project. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Industrial/Organizational Psy; enrollment is limited to Graduate level students.

PSY 7990 Directed Study Cr. 1-9
For students who wish further study of technical literature of a problem systematically reviewed in a preceding course. Intensive and systematic reading of original literature (particularly journals) dealing with topic or problem. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PSY 7991 Current Topics in Behavioral Neuroscience Cr. 1
Discussion of current papers in the field. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PSY 7997 Research Problems Cr. 1-8
Original research under direction of departmental staff. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 32 Credits

PSY 8000 Clinical Practicum Cr. 1
Approved clinical practicum placement. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PSY 8050 Cognitive Neuroscience Cr. 3
Concepts and methods used to study neurobiological basis of cognition, covering brain systems involved in perception, attention, memory, language, and decision making, as well as life-span development of brain, cognition and psychopathology. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8060 Functional Neuroanatomy Cr. 4
Anatomical features of the human nervous system; emphasis on relationship between neural structure and behavior. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Fees: $15

PSY 8065 Neurophysiology and Neural Plasticity Cr. 3
Physiological and molecular properties of neurons and the relationship of neural plasticity to behavior and development. Offered Every Other Year.
Prerequisites: PSY 8060 with a minimum grade of C (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8140 Meta-Analysis Cr. 2-3
Use of quantitative techniques for summarizing research results in psychology. Offered Spring/Summer.
Prerequisites: PSY 8150 with a minimum grade of B (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8150 Multivariate Analysis in Psychology Cr. 4
Extension of the general linear model to multivariate statistical techniques, including: exploratory factor analysis and principal components analysis, confirmatory factor analysis, discriminant function analysis, canonical correlation analysis, and multivariant analysis of variance. Offered Winter.
Prerequisite: PSY 7150 with a minimum grade of B
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8170 Structural Equation Modeling Cr. 3
Practical introduction to structural equation modeling. Offered Yearly.
Prerequisites: PSY 7160 with a minimum grade of B (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8190 Statistical Analysis of Longitudinal and Nested Data Cr. 3
Extends the general linear model framework to the analysis of non-independent data including data that is hierarchically nested (persons within groups) and longitudinally nested (time within persons). Techniques covered include: Multilevel Models, Latent Growth Models, and Survival Analysis. Offered Fall.
Prerequisite: PSY 7160 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

PSY 8300 Health Psychology I Cr. 3
Theoretical and empirical review of major topics in behavioral approaches to health and illness, including: 1) theories of health behavior and behavior change; 2) psychological impact of acute and chronic physical illness; and 3) health care utilization including health disparities, patient-provider communication, and psychosocial factors that affect adherence. . Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8340 Clinical Neuropsychological Assessment Cr. 3
Review of principles and literature on neuropsychological assessment, common neuropsychological tests and test batteries, in context of actual clinical cases. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8350 Community Psychology Cr. 3
Current findings, theory, and research in the field of community psychology. Emphasis on current urban problems. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8390 Therapeutic Intervention Practicum Cr. 1
Students learn to conduct evidence-based psychological interventions with adults, children, couples, and families. Skills taught include how to: a) develop case conceptualizations based on different theoretical models; b) apply techniques from motivational, cognitive-behavioral, relational, psychodynamic, and other therapies; c) develop and maintain the therapeutic alliance; d) track outcomes and modify approach as needed; e) terminate cases; and f) both receive and provide supervision. Unique aspects of intervening for specific clinical conditions or disorders will be covered. Students will present cases based on interventions they conduct in the departmental training clinic. Offered Every Term.
Prerequisites: PSY 7380 with a minimum grade of B (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

PSY 8440 Developmental Neuropsychology Cr. 3
Neurobiology of development. Topics include: neuroplasticity throughout the life span, maturation of the brain and neural connectivity, neurodevelopment of behavioral, emotional, social and cognitive functions. This course will bridge human behavioral and animal models to illustrate the dexterity and limitations of available scientific methods to study developmental neuropsychology. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Psychology.

PSY 8500 Seminar in Industrial/Organizational Psychology Cr. 1-3
For industrial/organizational psychology students. Current topics in industrial psychology; content varies. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 15 Credits

PSY 8620 Social Cognition Cr. 3
How mental representations underlie the processes of social thought and behavior. Students survey, evaluate, and discuss social cognition processes and research; group work to design and conduct tests of social-cognitive processes. Offered Every Other Winter.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8630 Motivation Science Cr. 3
The seminar will revisit some classics and will cover recent work on motivation. It aims to provide basic understanding into the theoretical and empirical developments that have marked the field and that may have the potential to inspire future developments into both the basic and applied areas. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.

PSY 8740 Seminar in Psychological Measurement and Statistics Cr. 2-3
Topics in measurement and statistical analysis; exploratory data analysis and related problems; multidimensional scaling and clustering techniques; time series analysis; analysis of longitudinal data; item response theory and tailored testing; statistical power. Offered Intermittently.
Prerequisites: PSY 7160 with a minimum grade of B (must be taken at WSU)
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PSY 8760 Seminar in Clinical Psychology Cr. 1-3
New clinical methods and scientific developments in the field of clinical psychology. Meets with continuing education seminars in clinical psychology. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PSY 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Psychology; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PSY 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PSY 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PSY 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: PSY 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

PSY 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PSY 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PSY 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PSY 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PSY 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

PT - Physical Therapy

PT 5010 Clinical Applications I Cr. 1
First part-time integrated clinical experience for physical therapy students. Orientation to clinical education and PT practice to develop professional behaviors, observation skills, fundamentals of written and verbal communication and basic examination and intervention skills in a clinical setting. Offered Winter.
Fees: $20

PT 5020 Foundations of Physical Therapy Cr. 2
Sociological and historical background of the PT profession. Professional behavior, patient care interaction and medical terminology. Basic physical therapy care procedures, documentation, patient education, care in medical emergencies. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $300

PT 5030 Basic Patient Care in Physical Therapy Cr. 2
Introduction to the basic skills necessary for patient care and provide a foundation to the theory and practice of basic patient care procedures for the Physical Therapist. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Physical Therapy degree; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $25

PT 5070 Clinical Applications II Cr. 2
Second part-time integrated clinical experience for physical therapy students. This clinical education course includes and orientation to basic and intermediate examination and intervention skills, professional behavior, communication, documentation, inter-professional collaboration and team work. Offered Fall.
Prerequisite: PT 5010 (may be taken concurrently)

PT 5100 Therapeutic Exercise I Cr. 3
Foundational course designed to focus on the principles and techniques of therapeutic exercise for patients with pathological conditions to the neuromusculoskeletal system. Students will develop and administer treatment plans for specific patient problems and progress treatment plans based on patient condition and response to treatment. Offered Fall.
Prerequisite: PT 5430 and PT 5500
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $105

PT 5120 Human Growth and Development Cr. 2
Theories and basic principles in prenatal, physical, sensorimotor, perceptual, cognitive, social, emotional and language growth and development. Implications for physical therapy evaluation and treatment of children with developmental disabilities. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $10

PT 5300 Surface Anatomy Cr. 2
Laboratory-based course teaching skills for soft tissue palpation, identification of surface anatomy landmarks, soft tissue mobilization and massage. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PT 5320 Basic Examination and Evaluation Procedures Cr. 3
Lecture and laboratory experience focusing on principles and procedures of foundational medical screening, physical therapy differentiation, and clinical reasoning and decision-making skills; basic principles and techniques for posture, integumentary, neurological, range of motion, and strength examination and evaluation, documenting progress and outcome, and the continued development of patient care skills. Offered Winter.
Prerequisite: PT 5030 and PT 5300 and PT 5505
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $25

PT 5400 Neurosciences for Health Care Professionals Cr. 3
Study of the human central nervous system; emphasis on sensory and motor systems and structures that contribute to normal movement. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $55
Equivalent: OT 5400

PT 5410 Clinical Medicine I Cr. 3
Designed to provide specific information needed by the physical therapist treating patients with a variety of diseases. Pathology, etiology, clinical signs and symptoms, prognosis, and treatment of a variety of illnesses and conditions relevant to physical therapy treatment are covered. The role of other health care specialists including physician, occupational therapist, speech pathologist, nurses and psychologists is explored. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Physical Therapy.

PT 5430 Clinical Medicine II Cr. 1
Disease processes, and medical and surgical interventions. Role of physical therapy as part of comprehensive multi-disciplinary health care team. Offered Spring/Summer.
Prerequisite: PT 5410
Restriction(s): Enrollment is limited to students with a major in Physical Therapy.

PT 5500 Kinesiology and Biomechanics Cr. 3
Normal movement and biomechanics applied to the human body. Offered Winter.
Prerequisite: PT 5505 and PT 5510 and PT 5400
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $20

PT 5505 Clinical Applications of Human Anatomy Cr. 3
Knowledge of basic human anatomy for students in health science professional programs; foundation for further study in clinical sciences. Offered Fall.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Occupational Therapy or Physical Therapy.
Equivalent: OT 5505

PT 5510 Clinical Applications of Human Anatomy: Laboratory Cr. 1
Examination of prosections, dissection of human cadavers; didactic study. Offered Yearly.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $220
Equivalent: OT 5510

PT 5650 Pathophysiology for Health Sciences Cr. 3
Fundamental knowledge of the nature of disease for the health sciences student; physiologic and morphologic changes accompanying disease processes; mechanisms of repair and recovery. Offered Fall.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Equivalent: OT 5650, RT 5650

PT 5660 Pathokinesiology Cr. 2
A continuation of PT 5500 (Kinesiology and Biomechanics), this course is designed to teach: foundational principles regarding biomaterials, key biomechanical and kinesiological principles of human movement as related to anatomy and physiology, and application of this information to clinical situations that involve alterations in movement. Analyses of pathological motion and pathokinesiology of selected joints will be included. Offered Spring/Summer.
Prerequisite: PT 5500
Corequisite: PT 5670
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $10

PT 5670 Special Test in Physical Therapy Cr. 1
A continuation of PT 5300 (Basic Evaluation), this course is designed to teach Special Test as part of a physical therapy examination. Student will relate the special tests to appropriate pathologies, perform and interpret the results of special tests and discuss hypotheses in light of evidence-based knowledge. Offered Spring/Summer.
Prerequisite: PT 5300
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PT 5800 Clinical Education I Cr. 3
First of a four-course clinical education series. Six weeks of full-time supervised clinical experience for physical therapy students. Offered Yearly.
Fees: $20

PT 5820 Clinical Education II Cr. 3
Second of a four-course clinical education series. Six-week of full-time supervised clinical experience for physical therapy students. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the Doctor of Physical Therapy program.
Fees: $15

PT 5990 Directed Study Cr. 1-4
The remediation directed study has been designed to help students remediate for academic or clinical competency standards in the Physical Therapy program. The student will identify, based on performance areas of weakness on course content or clinical skills. Once identified a faculty mentor will assist the student in developing a plan to develop mastery of the content or clinical skills needed to be deemed competent in deficient areas and continue in the PT program. The remediation plan will then be implemented by the student. Offered Every Term.
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Repeatable for 8 Credits

PT 6100 Therapeutic Exercise II Cr. 3
Advanced application of principles and techniques of therapeutic exercise; evaluation and modification of therapeutic exercise plan of care, based on physical and functional responses and characteristics of patients or clients. Offered Fall.
Prerequisite: PT 5100
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $70

PT 6300 Research I: Critical Thinking Cr. 2
Introduction to evidence-based practice and clinical reasoning and decision making. Identification, location, critique and analysis of evidence. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the Doctor of Physical Therapy program.

PT 6310 Advanced Exercise Physiology Cr. 2
Metabolic, neuromuscular, cardiovascular, and respiratory adjustments to acute and chronic exercise in health and disease, including body composition and weight control, nutritional considerations, and the effects of different environments on exercise performance. Offered Fall.
Equivalent: KIN 6310, PSL 6010

PT 6410 Special Topics in Physical Therapy I Cr. 1
This course will cover the topics of teaching and learning, professionalism, cultural sensitivity and being successful as a physical therapy graduate student. Offered Spring/Summer.

PT 6420 Special Topics in Physical Therapy II Cr. 1
This course will cover the topics as related to the Physical Therapy including, Legal and Ethical Issues, Mental Health Considerations, and Complementary Therapies in Rehab. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Physical Therapy.

PT 6430 Special Topics in Physical Therapy III Cr. 1
This course will cover advance topics as related to the Physical Therapy including, Diversity and Implicit Bias, Oncology, and professional and individual aspects related to the transition from student to clinician. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Physical Therapy.

PT 6500 Pharmacology Cr. 2
Effects of drug distribution, absorption and excretion as pertaining to physical therapy. Major drug categories, OTC, and nutritional supplements, pertinent to acute and chronic responses to physical therapy; indications, mechanisms, effects. Offered Fall.
Prerequisite: PT 5430 and PT 5650
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PT 6700 Motor Learning and Motor Control Cr. 2-3
Current theories and concepts in processes of motor skill acquisition and performance, from a behavioral objective. Additional evidence-based case reports required if elected for three credits. Offered Winter.
Prerequisite: PT 5400 with a minimum grade of C-
Restriction(s): Enrollment limited to students in the Pharmacy and Health Sciences.

PT 7000 Therapeutic Modalities Cr. 3
Lecture and laboratory experiences focusing on principles and procedures for using physical agents and spinal traction. Tissue inflammation and repair, pain, superficial and deep heat, cryotherapy, electrotherapy, and spinal traction included. Integumentary evaluation and wound management. Offered Fall.
Prerequisite: PT 5430 and PT 5660
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $30

PT 7100 Management of Patients with Orthopedic Conditions I Cr. 4
Lecture and laboratory experience focusing on knowledge, principles, clinical reasoning and decision making skills, examination and evaluation procedures, and interventions required for managing patients with impairments, functional limitations, and disabilities due to musculoskeletal pathologies of the extremity joints across the life span, and the continued development of patient care skills. Offered Fall.
Prerequisite: PT 5300 with a minimum grade of C and PT 5320 with a minimum grade of C and PT 5500 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.
Fees: $55

PT 7120 Management of Patients with Orthopedic Conditions II Cr. 3
Lecture and laboratory experience focusing on knowledge, principles, clinical reasoning and decision making skills, examination and evaluation procedures, and interventions required for managing patients with impairments, functional limitations, and disabilities due to musculoskeletal pathologies of the spinal column and extremity joints across the life span, and the continued development of patient care skills. Offered Winter.
Prerequisite: PT 7100
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $25

PT 7200 Management of Patients with Neurological Disorders I Cr. 3
Basic principles and techniques of assessing problems associated with neurological disorders including postural tone, sensation, superficial and developmental reflexes, quality of movement, perceptual-motor skills and functional mobility. Offered Yearly.
Prerequisite: PT 5400 and PT 6700
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $66

PT 7220 Management of Patients with Neurological Disorders II Cr. 3
Theory, principles and application of the neurophysiological approach to evaluation and treatment. Proprioceptive neuromuscular facilitation, neuro development treatment, sensory integration, and sensory-motor approaches. Offered Winter.
Prerequisite: PT 7200
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $35

PT 7300 Orthotics and Prosthetics Cr. 3
Principles and techniques of prosthetic and orthotic function, component selection and application, use and training. Upper and lower extremity devices, and spinal devices, wheelchairs, ambulatory aids, assistive devices and environmental control systems. Advanced gait and movement biomechanics and evaluation. Offered Fall.
Prerequisite: PT 5500 and PT 5660 and PT 7200
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.
Fees: $25

PT 7320 Rehabilitation Procedures Cr. 3
Theoretical issues and treatment of patients with spinal cord injury, traumatic brain injury, problems of aging, and chronic neuromuscular conditions. Offered Fall.
Prerequisite: PT 7200 and PT 7220
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.
Fees: $20

PT 7400 Cardiopulmonary Rehabilitation Cr. 4
Physiology and pathophysiology of disorders of the cardiac and pulmonary systems. Evaluation and treatment of cardiopulmonary disorders. Offered Winter.
Prerequisite: PT 5100 and PT 5430 and PT 6310
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $20

PT 7600 Physical Therapy for Medical and Surgical Conditions Cr. 3
Management of patients with complex problems including medical and surgical conditions seen in acute care hospital settings. Offered Winter.
Prerequisite: PT 5650 and PT 5430
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.
Fees: $25

PT 7700 Research II: Design & Methodology Cr. 2
Introduction to basic principles of research theory, design, and methodology for physical therapy. Biostatistics and analysis of scientific literature relevant to physical therapy. Offered Fall.
Prerequisite: PT 6300
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PT 7710 Research in Health Care Cr. 3
Principles of research theory, design, and methodology for physical therapy. Students will analyze relevant scientific literature, design, continue to work on their research project and learn basic computer skills utilizing a statistical analysis program (SPSS). Offered Fall.
Prerequisite: PT 6300 with a minimum grade of C
Restriction(s): Enrollment limited to students in a Doctor of Physical Therapy degree.

PT 7720 Research III: Data Analysis and Interpretation Cr. 2
Basic principles of research design as it relates to the theory and practice of physical therapy Students will analyze relevant scientific literature, design, develop and implement a research project, and learn basic computer skills in utilizing a statistical analysis program. Offered Fall.
Prerequisite: PT 7700 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.
Fees: $20

PT 7740 Research IV: Research Practicum Cr. 1
Basic principles of research design as it relates to the theory and practice of physical therapy. Students will develop and implement a research project and present the results in several formats. Offered Fall.
Prerequisites: PT 6300, PT 7700, and PT 7720
Restriction(s): Enrollment is limited to Graduate level students.

PT 7990 Directed Study Cr. 1-4
Independent study: critical analysis or review of new or unique topics in health care; or physical therapy role, approach, methodology, techniques or scientific rational for professional practice. Oral and written presentation required. Elective. Offered Yearly.
Prerequisite: PT 5100
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PT 8000 Therapeutic Management of Pediatric Populations Cr. 3
Principles and application of the elements of physical therapy practice in the management of pediatric populations. Offered Fall.
Prerequisite: PT 5120 with a minimum grade of C and PT 6700 with a minimum grade of C and PT 7220 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.
Fees: $15

PT 8110 Geriatrics Cr. 2
Theories and basic principles of physical, sensorimotor, perceptual, cognitive, social, emotional, and language changes during the aging process. Emphasis is placed on the how the aging process impacts functional independence and contributions from all body systems. Implications for physical therapy evaluation and treatment for the aging population are examined. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.

PT 8170 Professional Development and Reflective Practice Cr. 3
Exploration of novice vs. expert practice in physical therapy; role of reflection in developing professional skills and behaviors. Current professional and legal issues in provision of physical therapy services. Web-based course. Offered Every Term.
Restriction(s): Enrollment limited to students in the Doctor of Physical Therapy program; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PT 8200 Management in Physical Therapy Practice Cr. 2
Overview of health care systems; financing and administration of physical therapy services within various health care systems. Offered Fall.
Restriction(s): Enrollment limited to students in the Doctor of Physical Therapy program; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PT 8300 Differential Diagnosis for Health Sciences Cr. 3
Principles and procedures designed to facilitate the integration of previously-introduced examination and evaluation skills, in order to perform differential diagnosis for primary care practice. Offered Every Term.
Restriction(s): Enrollment limited to students in the Doctor of Physical Therapy program; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PT 8400 Diagnostic Procedures for Health Sciences Cr. 2-3
Medical diagnostic procedures and application of results as related to provision of physical therapy health services, including diagnostic imaging and laboratory tests. Additional project required if elected for three credits. Offered Every Term.
Prerequisite: PT 5650 with a minimum grade of C and PT 5430 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PT 8500 Clinical Decision Making Cr. 3
Integration of didactic and clinical knowledge in development of diagnostic prognostic skills in physical therapy; focus on refining competencies in peer referral across health care disciplines; development of strategies for clinical decision making. Offered Yearly.
Prerequisite: PT 6100 with a minimum grade of C and PT 7120 with a minimum grade of C and PT 7220 with a minimum grade of C and PT 7400 with a minimum grade of C
Restriction(s): Enrollment limited to students in the Doctor of Physical Therapy program; enrollment is limited to Graduate level students.
Fees: $95

PT 8600 Health Promotion and Wellness Cr. 2
Dimensions of health promotion and wellness, including implementation strategies for different populations. Analysis of physical, emotional and cost benefits. Identification of needs and development of practice plan for groups and individuals. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.

PT 8800 Clinical Education III Cr. 4
Third in a four-course clinical education series. Twelve weeks of full-time supervised terminal clinical experience for physical therapy students with emphasis on progression to entry-level clinician. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.
Fees: $70
Repeatable for 8 Credits

PT 8820 Clinical Education IV Cr. 8
Fourth in a four-course clinical education series. Final full-time supervised terminal clinical experience for physical therapy students. Twelve week full time experience with emphasis on progression to entry-level clinician. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Physical Therapy; enrollment is limited to Graduate level students.
Fees: $30

PT 8850 Clinical Practicum Cr. 3
Monitored clinical practice in a focused area of physical therapy practice. Focus may include: administration and management, cardiopulmonary, neurology, orthopedics, integumentary care, pediatrics, and teaching. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

PTH - Pathology

PTH 7080 Special Topics in Pathology Cr. 1-15
Frontier areas in experimental pathology and clinical laboratory sciences. Format may be lecture, laboratory, or discussion; topics to be announced in Schedule of Classes . Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 20 Credits

PTH 7085 Critical Review of Scientific Publications Cr. 1
For Ph.D. students in biomedical fields. Current experimental approaches in medical research. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Pathology; enrollment limited to students in the PhD in Medicine program; enrollment is limited to Graduate level students.
Repeatable for 5 Credits

PTH 7890 Seminar Cr. 1
Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Pathology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.
Repeatable for 25 Credits

PTH 8000 Current Topics in Tumor Metastasis Cr. 3
Advances in research on key aspects of tumor metastasis; emphasis on molecular mechanisms, tumor invasion, angiogenesis, and organ-specific tumor metastasis. Offered Fall.
Prerequisites: IBS 7015 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PTH 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PTH 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PTH 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: PTH 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

PTH 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Yearly.
Prerequisite: PTH 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PTH 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Yearly.
Prerequisite: PTH 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PTH 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

PYC - Psychiatry

PYC 0900 Reproducible and Responsible Neuroscience Research: Case Studies from Addiction Cr. 0
This course is designed for graduate students interested in neuroscience research. This course is mandatory for TRAIN@wayne T32 Fellows. The objective of this course is to provide students with the knowledge and critical thinking skills necessary to conduct rigorous, reproducible, and ethical neuroscience (and related) research. Topics will include the principles and practices that guide ethical research (preclinical and clinical), scientific integrity, experimental design, data interpretation, publishing standards, and other relevant topics. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

PYC 6050 Biology of the Eye Cr. 3
Introduction to biology of eye structure/function, and to causes and clinical treatments of eye-related disorders and diseases. Offered for undergraduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $25
Equivalent: ANA 6050, BIO 6055

PYC 7010 Basis of Neural Sciences I: Mechanisms and Molecules Cr. 3
Graduate-level course presents an in-depth consideration of the bases of brain functions, including mechanisms that underlie neurological and psychiatric disorders. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PYC 7020 Basis of Neural Sciences II: Systems and Syndromes Cr. 3
This course will provide foundational instruction in systems neural science including cellular, circuit, and anatomical level understanding of neural systems and disorders/diseases of the nervous system. Offered Winter.
Prerequisite: PYC 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PYC 7140 Fundamentals of Neuroimaging Cr. 3
Overview of methods: PET, EEG/ERP/TMS, fundamentals of MR, structural MRI, functional MR, MR spectroscopy and DTI. Review of the application of these methods in studying disorders of the nervous system. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

PYC 7150 Fundamentals of Neuropsychiatric Disorders Cr. 3
Overview of pathophysiology, clinical manifestations, and treatment of major neuropsychiatric disorders. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Medicine.

PYC 7320 MR Imaging of Neurovascular Disease Cr. 3
Recent advances in MRI technology applied to human brain vascular diseases. Methods include: 3D anatomical imaging, diffusion tensor imaging, functional brain imaging, perfusion hanging, and susceptibility weighted imaging. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: BME 7720

PYC 7500 Advanced Topics in Neuroscience Cr. 1-6
Topics offered each semester in one-credit modules, relevant to ongoing research in the degree program. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PYC 7515 Advanced Topics: Imaging, Neurodevelopment and Psychiatric Disorders Cr. 3
Advanced introduction to imaging neurodevelopment based on anatomical, biochemical and functional studies; focus on abnormal development of psychiatric disorders. Offered Every Other Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.

PYC 7595 The Gut Microbiome and Translational Neuroscience Cr. 3
This combined lecture and discussion course will introduce graduate students with interests in translational neurosciences to the emerging field of the gut microbiome. Lectures will cover basics of the gut microbiome to include bacterial taxonomy, samples used to study the gut microbiome, DNA isolation, library construction and quality control and 16S rRNA sequencing on a MiSeq next generation sequencer. Additional lectures will include descriptions of sequence data download and analysis, bioinformatics, multivariate statistics, and graphical display of data. The latest published literature on the gut-brain axis will also be used for purposes of discussion and to give students an appreciation for how the gut microbial community can influence the brain and its function. Particular emphasis will be placed on how a dysbiosis in the gut microbiome can influence psychiatric diseases, substance abuse disorders and other physiological functions attributed entirely to the brain heretofore. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.

PYC 7890 Research Seminar Cr. 1
Presentations by clinical and basic research staff and by the program's graduate students. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PYC 7990 Directed Study Cr. 1-6
Independent study under the guidance of an advisor, including complete review of a problem area immediately relevant to basic or clinical neuroscience. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 10 Credits

PYC 7996 Laboratory Rotation Cr. 3
Directed laboratory rotation for graduate students in the translational neuroscience program. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

PYC 7998 Translational Rotation Experience Cr. 1-3
The mentored Translational Rotation Experience course can include, but is not limited to: preclinical, clinical, industry, advocacy scientific communication experiences. Rotational experiences in areas such as industry, advocacy, scientific communication, public health should be designed to provide non-academic career experiences related to the student's career aspirations. Translational Rotation Experience proposal form must be submitted and approved prior to registration. Offered Every Term.
Prerequisites: PYC 7150 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

PYC 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

PYC 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

PYC 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: PYC 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

PYC 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PYC 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PYC 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: PYC 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

PYC 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

RDT - Radiologic Technology

RDT 3600 Clinical Education II Cr. 4
Application of didactic theory in practice on patients/clients under supervision of qualified technologists in a clinical setting. Offered Winter.
Prerequisites: RDT 4000 with a minimum grade of C, RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3305 with a minimum grade of C, and RDT 3400 with a minimum grade of C
Corequisite: RDT 3500
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $55

RDT 3700 Radiographic Procedures II Cr. 3
Continuation of RDT 3300. Additional advanced procedures, including skull, mammography, and gastrointestinal studies. Offered Spring/Summer.
Prerequisites: RDT 4000 with a minimum grade of C, RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3305 with a minimum grade of C, RDT 3400 with a minimum grade of C, RDT 3500 with a minimum grade of C, RDT 3200 with a minimum grade of C, RDT 4100 with a minimum grade of C, and RDT 3600
Corequisite: RDT 3705
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $35

RDT 3705 Radiographic Procedures II Lab Cr. 1
This course is designed to provide the student in Radiologic Technology with the application of information necessary to appropriately position patients for optimal radiographic imaging. Offered Spring/Summer.
Prerequisites: RDT 4000 with a minimum grade of C, RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3305 with a minimum grade of C, RDT 3400 with a minimum grade of C, RDT 3500 with a minimum grade of C, RDT 3200 with a minimum grade of C, RDT 4100 with a minimum grade of C, and RDT 3600
Corequisite: RDT 3700
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.

RDT 3800 Cross-Sectional Anatomy Cr. 3
Presentation of anatomical structures in sectional format, as encountered in computed tomography or magnetic resonance imaging. Offered Spring/Summer.
Prerequisite: RDT 3300 with a minimum grade of C and RDT 3700 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.

RDT 3900 Clinical Education III Cr. 6
Minimally supervised clinical experience. Skills practice to proficiency level; additional complex skills. Offered Spring/Summer.
Prerequisites: RDT 4000 with a minimum grade of C, RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3305 with a minimum grade of C, RDT 3400 with a minimum grade of C, RDT 3500 with a minimum grade of C, RDT 3200 with a minimum grade of C, RDT 4100 with a minimum grade of C, and RDT 3600
Corequisite: RDT 3700
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $55

RDT 4000 Radiographic Quality & Exposure I Cr. 2
This course is designed to provide the student in Radiologic Technology the introduction to practical and theoretical knowledge necessary to function in a radiographic room by setting technical factors, implementing accessory tools such as grids, filters, etc. This course will also provide knowledge of the relationship between radiographic exposure and image formation utilizing Computed Radiographic Imaging and Digital Radiography systems, as well as a historical summary of conventional methods. Upon successful completion of this course, the student will be introduced to various technical factors, variables, and radiographic equipment covered within, with the key aim of providing diagnostic radiographic image quality. Offered Fall.
Corequisite: RDT 3100
Restriction(s): Enrollment is limited to students with a major in Radiologic Technology.

RDT 4100 Radiographic Quality & Exposure II Cr. 2
Students will reference concepts from RDT 4000 Radiographic Quality/ Exposure I to critically evaluate image quality and production. This course is designed to provide the student in Radiologic Technology with the information necessary appropriately evaluate images for their respective diagnostic value. This course requires students to critically evaluate images for image deficiencies and variances in patient presentation. Offered Winter.
Prerequisites: RDT 4000 with a minimum grade of C, RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3305 with a minimum grade of C, and RDT 3400 with a minimum grade of C
Corequisite: RDT 3200
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $35

RDT 4200 Radiation Physics and Circuitry Cr. 3
Radiation physics; tubes and circuits of radiographic equipment. Offered Fall.
Prerequisite: RDT 3200 with a minimum grade of C and RDT 3500 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $40

RDT 4300 Clinical Education IV Cr. 6
Continuation of RDT 3900. Offered Fall.
Prerequisites: RDT 4000 with a minimum grade of C, RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3305 with a minimum grade of C, RDT 3400 with a minimum grade of C, RDT 3500 with a minimum grade of C, RDT 3200 with a minimum grade of C, RDT 4100 with a minimum grade of C, RDT 3600 with a minimum grade of C, RDT 3700 with a minimum grade of C, RDT 3705 with a minimum grade of C, RDT 6500 with a minimum grade of C, and RDT 3900 with a minimum grade of C
Corequisite: RDT 4200
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $65

RDT 4400 Radiographic Pathology Cr. 3
Disease process and how they manifest in imaging modalities. Clarification of modality preference. Offered Winter.
Prerequisite: RDT 3500 with a minimum grade of C and RDT 4500 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.

RDT 4500 Clinical Education V Cr. 6
Supervised clinical experience in performing radiographic procedures on patients in clinical setting. Evaluation of outcomes; application of knowledge at a progressive level. Offered Fall.
Prerequisites: RDT 4000 with a minimum grade of C, RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3305 with a minimum grade of C, RDT 3400 with a minimum grade of C, RDT 3500 with a minimum grade of C, RDT 3200 with a minimum grade of C, RDT 3600 with a minimum grade of C, RDT 3700 with a minimum grade of C, RDT 3705 with a minimum grade of C, RDT 6500 with a minimum grade of C, RDT 3900 with a minimum grade of C, and RDT 4300 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $95

RDT 4600 Radiology Seminar Cr. 1
Introduction to imaging modalities beyond the scope and practice of the general radiographer; emphasis on interventional procedures. Offered Fall.
Prerequisite: RDT 3500 with a minimum grade of C and RDT 3700 with a minimum grade of C and RDT 4100 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $40

RDT 4800 Independent Study Cr. 1
Independent research in radiology. Offered Fall.
Prerequisite: RDT 3090 with a minimum grade of C and RDT 3500 with a minimum grade of C and RDT 3700 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.

RDT 4900 Jurisprudence for Radiographers Cr. 3
Ethical and legal case studies; research and discussion correlated to philosophical theory and accepted best law practice for general situations in health care and those specific to radiography. Offered Winter.
Prerequisites: RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3400 with a minimum grade of C, RDT 3500 with a minimum grade of C, RDT 3200 with a minimum grade of C, RDT 3600 with a minimum grade of C, RDT 3700 with a minimum grade of C, RDT 6500 with a minimum grade of C, and RDT 3900 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.
Fees: $40

RDT 6500 Pharmacology for Radiographers Cr. 2
This course is designed to teach Bachelor of Radiologic Technology (RDT) students the following a) the basic principles of Pharmacology, which includes Pharmacotherapeutics and Toxicology. Special emphasis will be given to Pharmacotherapeutics, which is comprised of Pharmacokinetics and Pharmacodynamics; b) the process of drug discovery and testing; and c) the chemical, generic and trade names of drugs that are commonly taken by patients, the mechanisms and duration of action of these drugs, the side effects of these drugs, and the interactions of these drugs. Offered Spring/Summer.
Prerequisites: RDT 4000 with a minimum grade of C, RDT 3300 with a minimum grade of C, RDT 3100 with a minimum grade of C, RDT 3305 with a minimum grade of C, RDT 3400 with a minimum grade of C, RDT 3500 with a minimum grade of C, RDT 3200 with a minimum grade of C, RDT 4100 with a minimum grade of C, and RDT 3600
Corequisite: RDT 3700
Restriction(s): Enrollment limited to students in the BS in Radiologic Technology program.

RLL - Reading, Language and Literature Education

RLL 6121 Teaching Reading in the Content Areas: Grades 6-12 Cr. 3
Teaching reading across all content areas with particular attention to readers with special needs. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.

RLL 6700 Multilingual Learners and Literacy Development in PK-12 Classrooms Cr. 3
Examination of theories and instructional strategies involved in supporting language literacy development for multilingual students. Offered Yearly.

RLL 6801 Assessment and Differentiated Instruction for Diverse Learners: Pre-K-8 Cr. 3
Assessment of literacy competencies of diverse learners; use of assessments to plan and implement differentiated instruction in grades PreK-8. Implementation with students in field component; and evaluation. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.

RLL 6802 Assessment and Differentiated Instruction for Diverse Learners: 6-12 Cr. 3
Assessment of literacy competencies of diverse learners; use of assessments to plan and implement differentiated instruction in grades 6-12. Implementation with students in field component; and evaluation. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.

RLL 7100 Emergent Literacy Cr. 3
Variety of theories, organization and instructional strategies involved in the beginning stages of literacy; their application to the classroom. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

RLL 7200 Comprehension Cr. 3
Models of comprehension, factors that affect comprehension, instructional methods, reading/writing connection, evaluation (pre-K to adult). Offered Yearly.
Prerequisites: RLL 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

RLL 7300 Literacy Across the Curriculum Cr. 3
Theoretical bases for teaching literacy across the curriculum; strategies for organization and instruction. Action research as a tool for learning. Offered Yearly.
Prerequisites: RLL 7100 with a minimum grade of C and RLL 7200 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

RLL 7350 Literacy Coaching for the Classroom, School, and Community Cr. 3
Prepares educators to become literacy coaches who work with teachers, administrators, and community partners. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

RLL 7400 Practicum and Seminar in Evaluation and Instruction Cr. 3
Evaluation and literacy competencies of learners, methods of instruction, use of portfolios and reports to document progress; applied during supervised tutoring. Offered Yearly.
Prerequisites: RLL 7100 with a minimum grade of C and RLL 7200 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

RLL 7500 Theoretical Foundations for Literacy Cr. 3
Implications of theories from sociology, psychology, linguistics, semiotics and related fields, for the development of literacy. Offered Yearly.
Prerequisites: RLL 7100 with a minimum grade of C and RLL 7200 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

RLL 7600 Current Developments in Literacy Education Cr. 1-6
Topics of current interest; review of literature, discussion of educational implications. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

RLL 7720 Survey and Analysis of Current Literature for Children: PS-Grade 3 Cr. 3
Intensive examination of books appropriate for preprimary and primary school children. Analysis of the literary and extra-literary factors that affect the young child's experiences with fiction, nonfiction, and poetry. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

RLL 7740 Survey and Analysis of Literature for Older Children: Grades 4-8 Cr. 3
Intensive examination of books appropriate for children in grades four through eight. Analysis of literary and extra-literary factors affecting the older child's experiences with fiction, nonfiction, and poetry. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: INF 6520

RLL 7750 Reading the Word and World through Children's Literature Cr. 3
In this course we will critically examine current children's & adolescent literature through a critical lens by reading and discussing a plethora of literature. The genres, authors, illustrators, formats, and representations of books appropriate for children in grades PK-8; and the engagements that bring children and books together, will be explored through professional readings, discussions, and class experiences. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: RLL 7720, RLL 7740

RLL 7770 Literacy Assessment Cr. 3
Focuses on diagnosis of children's literacy skills. Students will examine standardized large-scale assessment results to determine areas in need of further diagnostic assessment. Students will administer, interpret, and score formal and informal literacy assessments, write case reports, and analyze literacy processes to monitor student progress. The course content meets the Michigan State school code PA 118 and has been approved by the Michigan Department of Education. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

RLL 7790 Literacy Instructional Design Cr. 3
Focuses on assessment-driven and research-based literacy instructional design. Students will match research supported instructional practices and materials to support student strengths and needs identified through assessment. Students will also implement and assess the effectiveness of the instruction and plan for future instruction. Offered Winter.
Prerequisite: RLL 7770 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

RLL 8600 Internship in Research and Teaching Cr. 3-6
Experiences in college-level teaching and/or research through internships teaching college courses and/or collaborative research with experienced faculty. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

RLL 8800 Seminar in Theory and Research in Literacy I: Foundational Theory and Research Cr. 3
Foundational theories and research in literacy and related fields such as psychology, sociology, literary criticism, linguistics, and semiotics that have shaped literacy theory, research, and instruction. Includes behavioral, cognitive/metacognitive, critical and constructivist theories and research. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

RLL 8810 Seminar in Theory and Research in Literacy II: Diversity, Contexts, and Communities Cr. 3
Examines issues of language, literacy, and culture in reading and literacy learning from preschool through adolescence with particular focus on diverse learners and linguistic diversity. Topics include emergent literacy, adolescence and youth culture, oral and written language, and the role of language in the home and community. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

RLL 8840 Practicum in Supervision and Administration of Programs in Literacy Development Cr. 3
Understanding the supervision and administration of literacy programs through investigation, experience supervising a literacy center in conjunction with faculty, and working with master's-level students who are tutors in that program. Offered Every Term.
Prerequisite: RLL 7400 with a minimum grade of C or RDG 7400 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC - Radiation Oncology

ROC 5010 Introduction to Radiological Physics Cr. 4
Nature of radiation and its interaction with matter. Theory of dosimetry and instrumentation for detection of radiation. Principles of radiation protection. Applications of radiation in radiology and related problems. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 5990 Directed Study in Medical Sciences Cr. 1-4
Introduction to modern methodology of cancer research. Students of the Division of Cancer Biology of the Department of Radiation Oncology conduct research projects under direction of research scientists. Areas of research include: molecular biology, enzyme purification, tumor biology, cellular biochemistry. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 6710 Physics in Medicine Cr. 3
Applications of physics in medicine including radioactivity; interaction of radiation in matter; x-ray, CT, MRI, ultrasound, and PET imaging; nuclear medicine; radiation oncology. Offered Winter.

ROC 7000 Imaging Physics I Cr. 5
Basic theory of medical imaging. Introduction to magnetic resonance imaging and spectroscopy, ultrasound; diagnostic radiology: radiography, fluoroscopy, CT, digital radiography, and mammography. Offered Fall.
Prerequisites: ROC 5010 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7010 Imaging Physics II: Nuclear Medicine Cr. 2
Physics of nuclear medicine, with emphasis on imaging. Offered Winter.
Prerequisite: ROC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7020 Physics of Radiation Therapy Cr. 3
Lecture and demonstration in physics of radiation therapy. Offered Winter.
Prerequisite: ROC 5010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7040 Radiation Dosimetry Cr. 2
Lecture and demonstration on principles of radiation dosimetry. Dosimetry of photons, electrons, neutrons and dose from radioactive materials. Offered Winter.
Prerequisite: ROC 5010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7060 Applied Radiobiology in Radiological Science Cr. 2
Fractionation, oxygen enhancement ratio, characterization of neutron beams and heavy particles for radiation therapy, radiosensitivity within cell division. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7070 Radiation Safety Cr. 2
Lectures on radiation safety procedures and practices; governmental regulations on radiation safety. Offered Spring/Summer.
Prerequisite: ROC 5010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7080 Radiotherapy Physics Laboratory Cr. 2
Practical laboratory exercises in ionometric and solid-state dosimetry techniques, quality assurance procedures for selected radiation therapy and diagnostic radiological equipment. Offered Spring/Summer.
Prerequisite: ROC 7020 with a minimum grade of C and ROC 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7110 Treatment Planning Cr. 2
Practical aspects of radiotherapy treatment planning. Lectures and exercises in patient data acquisition and computerized treatment planning for a variety of sites with both teletherapy and brachytherapy. Offered Fall.
Prerequisite: ROC 7020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7120 Radionuclide Therapy Cr. 2
Development of radionuclide technology and its medical use from its discovery to the latest developments. Offered Fall.
Prerequisite: ROC 5010 with a minimum grade of C and ROC 7020 with a minimum grade of C and ROC 7040 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7130 Nuclear Medicine Physics Laboratory Cr. 2
Laboratory experiments calibration, Q.A., etc., on isotope generators, isotope calibrators, counting systems, spectrometers, cameras, spect and PET systems, Counting statistics, spectrum analysis. Offered Spring/Summer.
Prerequisite: ROC 7010 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7150 Radiation Oncology Anatomy and Physiology Cr. 2
Independent study course covering radiological (CT/MRI) anatomy and basic anatomy and medical terminology pertinent to radiation oncology. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7160 Advanced Topics in Medical Physics Cr. 2
Advanced imaging principles for students pursuing careers in medical physics or any other profession related to diagnostic imaging. Offered Winter.
Prerequisite: ROC 5010 with a minimum grade of C and ROC 7000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7170 Professional Aspects of Medical Physics Cr. 2
Provide an overview of the professional aspects of clinical radiation oncology physics. Involvement in practical aspects of clinical radiation oncology physics including analysis of quality assurance and practice quality improvement initiatives, review of regulatory and external certification requirements, etc. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7890 Seminar Cr. 1
Presentations by graduate students, staff, visitors with emphasis on topics relevant to radiation biophysics and radiological health. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 7990 Directed Study Cr. 1-5
Independent study in the uses of new technologies in clinical radiology. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 5 Credits

ROC 7999 Essay Direction Cr. 3
Preparation of an in-depth paper on a subject in radiological physics. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Medical Physics or Radiological Physics; enrollment is limited to Graduate level students.

ROC 8990 Special Problems in Radiation Biophysics Cr. 1-7
Independent study in advanced topics to be selected by the student in consultation with instructor. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Medical Physics or Radiological Physics; enrollment is limited to Graduate level students.
Repeatable for 7 Credits

ROC 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

ROC 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

ROC 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: ROC 9991
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

ROC 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ROC 9992
Restriction(s): Enrollment is limited to Graduate level students.

ROC 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: ROC 9993
Restriction(s): Enrollment is limited to Graduate level students.

ROC 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Prerequisite: ROC 9994
Restriction(s): Enrollment is limited to Graduate level students.

ROC 9996 Radiation Oncology Physics Clinical Rotation I Cr. 9
Prereq: DMP candidate in department and written consent of the program director. Required in Fall term of Year 3 of Professional Doctorate program. Offered for S and U grades only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 9997 Radiation Oncology Physics Clinical Rotation II Cr. 9
Prereq: Satisfactory completion of ROC 9996 and written consent of the program director. Required in Winter term of Year 3 of Professional Doctorate program. Offered for S and U grades only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 9998 Radiation Oncology Physics Clinical Rotation III Cr. 7.5
Prereq: Satisfactory completion of ROC 9997 and written consent of the program director. Required in Fall term of Year 4 of Professional Doctorate program. Offered for S and U grades only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

ROC 9999 Radiation Oncology Physics Clinical Rotation IV Cr. 7.5
Prereq: Satisfactory completion of ROC 9998 and written consent of the program director. Required in Winter term of Year 4 of Professional Doctorate program. Offered for S and U grades only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

RSE - Research, Service and Engagement

RSE 1000 Engaged Learning for the 21st Century Cr. 1
This course-based learning community offers students a chance to refamiliarize themselves with their academic goals and career aspirations, engage with campus communities, and collaborate with other students and faculty for 21st century learning. Students will develop three key skills: critical thinking, communication, and collaboration. Offered Fall, Winter.

RSE 1010 Building a Foundation for College Success Cr. 1
Satisfies General Education Requirement: Wayne Experience
This course is designed to expose students to the Wayne State University undergraduate experience. Students will gain an understanding of campus resources, institutional values, and the merits of a liberal arts education from an urban research one university. This course will aid in the development of critical and analytical thinking skills necessary for college success while determining one's academic and professional goals. Offered Fall, Winter.
Restriction(s): Enrollment limited to students with a class of Freshman.
Equivalent: BE 1060, FPC 1020

RSE 2010 STEM Learning Assistant Pedagogy Cr. 2
This course is for students who have been selected to work as learning assistants in STEM courses. This course is a service-learning experience that will allow students to learn about evidence-based pedagogical strategies that support learning in STEM disciplines, and apply these strategies as learning assistants. Students must be selected as a learning assistant before enrolling in this course. To be selected as a learning assistant students must have earned a B+ or better in the course to be served, or have a B+ in an equivalent course. A minimum GPA of 3.5 is preferred, but students with GPAs between 3.0 and 3.5 may be accepted at the discretion of the instructor and faculty mentor. Strong interpersonal skills are required. An interest in creating an inclusive community where all students belong is required. Offered Fall, Winter.

RSE 2030 STEM Learning Assistant Advanced Pedagogy Cr. 2
This course is for students who have completed at least one semester as a learning assistant in a STEM course, and are now selecting to complete a second semester as a learning assistant. This course is a service-learning experience that allows students to apply evidence-based pedagogical strategies that support learning in STEM disciplines. Students in this advanced pedagogy course will extend their learning by completing a project on pedagogy, such as a new learning activity or assessment. To be selected as a learning assistant students must have earned a B+ or better in the course to be served, or have a B+ in an equivalent course. A minimum GPA of 3.5 is preferred, but students with GPAs between 3.0 and 3.5 may be accepted at the discretion of the instructor and faculty mentor. Strong interpersonal skills are required. An interest in creating an inclusive community where all students belong is required. Offered Fall, Winter.

RSE 3000 Research, Service and Engagement in Liberal Arts and Sciences Cr. 1
Allows undergraduate students to pursue mentored research, service and engagement experiences in Liberal Arts and Sciences. Students will meet regularly to prepare for success in applying to and participating in STEM-related PhD programs. Offered Every Term.
Repeatable for 4 Credits

RSE 4000 CLAS Undergraduate Research Portfolio Cr. 0
Students in all CLAS departments can take research for credit, or perform research as a paid assistant, or voluntarily, during their studies. The zero-credit RSE 4000 course provides the framework for students to get recognition on their transcript for completing a substantial research experience. Offered Every Term.

RSE 4100 From CLAS to Career Cr. 1
This course is specifically designed for students who are seeking professional full-time employment for at least 5 years upon graduation. Topics include: identifying your strengths and skills as a Liberal Arts and Sciences major; cover letters, résumés and LinkedIn profiles; electronic job searching, networking (both in person and online); interviewing; and professional etiquette and behavior. Offered Winter.

RSE 5000 Research, Service and Engagement in Liberal Arts and Sciences Cr. 1-4
Allows undergraduate students to pursue mentored research, service and engagement experiences in Liberal Arts and Sciences. Offered Every Term.
Repeatable for 4 Credits

RT - Radiation Therapy Technology

RT 3000 Concepts of Clinical Care Cr. 3
Procedures and ethics related to the care and examination of the radiation oncology patient. Topics include: basic pharmacology, drug administration, pain management, treatment side effects and their management. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $25

RT 3010 Introductory Radiation Physics Cr. 3
Basic introduction of radiation physics including the x-ray machine, physical principles and circuitry; principles of mathematics. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

RT 3020 Clinical Radiation Physics Cr. 3
Principles of radiation exposure; radiation producing and measuring devices; clinical application of radiation physics. Offered Winter.
Prerequisite: RT 3010 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

RT 3110 Clinical Aspects of Radiation Therapy Cr. 3
Basic concepts in oncology and radiation therapy technology. Topics include: cancer statistics, neoplasia, and principles of treatment and dosage. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $75

RT 3140 Topographic Anatomy and Medical Imaging Cr. 3
Procedures for imaging human structure and their relevance to radiation therapy; topographic and cross sectional anatomy, identification of anatomic structures as demonstrated through various imaging modalities and human anatomy lab sessions; fundamentals of radiographic exposure techniques and film processing. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $10

RT 3200 Therapeutic Interactions in Oncology Care Cr. 2
Issues related to professional interaction with oncology patients. Impact of cancer diagnosis on patient and family; subsequent role of radiation therapist. Approaches to effective communication. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $5

RT 3310 Clinical Practicum I Cr. 4
Introduction to clinical radiation therapy. Closely supervised patient-related activities. Emphasis on development of interpersonal communication skills in the clinical setting; medical terminology. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $79

RT 3320 Clinical Practicum II Cr. 4
Closely supervised practice in the delivery of prescribed doses of radiation utilizing common radiation equipment. Observation and performance of clinical care procedures; Development of communication skills in patient/therapist relationships. Correlation of medical imaging techniques to diagnostic workup and treatment planning. Completion of clinical competency requirements. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $79

RT 3330 Clinical Practicum III Cr. 4
Expanded supervised practice in the delivery of radiation therapy treatments. Submission of essay on radiation oncology topic. Completion of clinical competency requirements. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $132

RT 4110 Clinical Radiation Oncology Cr. 4
General presentation of malignant conditions, their etiology and methods of treatment; specific radiation treatment methodology including technical parameters of field size and direction, dosage, blocking, and patient positioning. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $15

RT 4120 Basic Clinical Dosimetry Cr. 4
Basic concepts of clinical dosimetry and treatment planning; various external beam techniques, depth dose data, and summation of isodose curves. Offered Winter.
Prerequisite: RT 4110
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $10

RT 4140 Oncologic Pathology Cr. 2
Basic principles of neoplasia, including types of growth, causative factors, biological behavior, and significance of staging procedures. Pathology of radiation injury. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $10

RT 4150 Radiobiology of Radiation Oncology Cr. 2
Biological effects of ionizing radiation on living tissue. Cell and tissue radiosensitivity; radiation syndromes and related effects. Basic radiobiological principles of radiation oncology and radiation protection. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

RT 4220 Radionuclide Physics Cr. 3
Natural radioactivity; isotopes and nuclear structure; techniques of radiation measurement. The clinical use of radionuclides. Radiation safety. Offered Fall.
Prerequisite: RT 3020 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.

RT 4240 Radiation Therapy Technology Seminar Cr. 3
Issues relevant to the practice and profession of radiation therapy technology explored through group discussion and case studies. Topics include: psychosocial, cultural, economic, physical, and educational factors which affect the patient; professional, administrative, legal, and bioethical issues which influence professional practice. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $15

RT 4300 Quality Assurance Cr. 2
Principles and application of a comprehensive quality assurance program, addressing general clinical and physics factors. Contents include: tasks to be performed, with their frequency and acceptable limits; model implementation program; and legal implications. Lecture and laboratory settings. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $10

RT 4350 Clinical Practicum IV Cr. 4
Continued supervised practice in a wide spectrum of clinical activities. Submission of a critical bibliography from current literature of radiation therapy, cancer management and related areas. Completion of clinical competency requirements. Offered Spring/Summer.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $126

RT 4360 Clinical Practicum V Cr. 4
Continued clinical practice under limited supervision. Submission of essay on radiation oncology topic. Completion of clinical competency requirements. Satisfies the University General Education Writing Intensive Course in the Major requirement. Offered Fall.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $67

RT 4370 Clinical Practicum VI Cr. 4
Continued clinical practice under minimal supervision. Practice of procedures related to the development of various treatment plans and methods of treatment planning. Submission of report on quality assurance activities. Completion of clinical competency requirements. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Fees: $69

RT 5650 Pathophysiology for Health Sciences Cr. 3
Fundamental knowledge of the nature of disease for the health sciences student; physiologic and morphologic changes accompanying disease processes; mechanisms of repair and recovery. Offered Winter.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Equivalent: OT 5650, PT 5650

RT 5990 Directed Study in Radiation Therapy Technology Cr. 1-5
Production of a paper, written assignment, or presentation to develop critical thinking, research, writing and presentation skills. Focus on career options within the field. Offered Every Term.
Restriction(s): Enrollment limited to students in the BS in Radiation Therapy Tech program.
Repeatable for 5 Credits

RUS - Russian

RUS 1010 Elementary Russian I Cr. 4
Development of practical skills in speaking, understanding, reading, and writing contemporary Russian. Offered Fall.
Fees: $5

RUS 1020 Elementary Russian II Cr. 4
Continuing development of the four skills in contemporary Russian. Offered Winter.
Prerequisites: RUS 1010 with a minimum grade of D-
Fees: $5

RUS 2010 Intermediate Russian I Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Continuation of RUS 1020 with emphasis on developing speaking and reading skills. Offered Fall.
Prerequisites: RUS 1020 with a minimum grade of D-
Fees: $5

RUS 2020 Intermediate Russian II Cr. 4
Objectives begun in RUS 2010; at more advanced level. Offered Winter.
Prerequisites: RUS 2010 with a minimum grade of D-
Fees: $5

RUS 2710 Introduction to Russian Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Global Learning Inquiry
Survey of Russian culture from the tenth century to the present day. Introduction to Russian history, art, architecture, literature, music, religious practices, intellectual thought, and cuisine, as well as various aspects of daily life from the Tsarist period to the present day. Offered Every Term.

RUS 2991 Understanding the Fairy Tale Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Introduction to the interdisciplinary context of major Russian fairy tales, exploring the different types of traditional Russian fairy tales, as outlined by Vladimir Propp, as well as the evolution of these fairy tales, emphasizing their transformation from oral and literary form into film, animation, opera, ballet, art, sculpture, and music. The course will also examine contemporary literary texts based on fairy tale motifs. All lectures and reading in English. Offered Fall, Winter.

RUS 3010 Intermediate-Advanced Russian I Cr. 4
Further development of skills; taught in two tracks at fifth and seventh semester levels. Offered Fall.
Prerequisites: RUS 2020 with a minimum grade of D-
Repeatable for 8 Credits

RUS 3020 Intermediate-Advanced Russian II Cr. 4
Further development of skills; taught in two tracks at sixth and eight semester levels. Offered Winter.
Prerequisites: RUS 2020 with a minimum grade of D-
Repeatable for 8 Credits

RUS 3050 Russian Practicum Cr. 3
Internship with local Russian businesses and non-profit organizations to enable students to use Russian in real-life settings and learn about Russian culture first-hand. Offered Fall, Winter.
Prerequisites: RUS 3010 with a minimum grade of D-
Repeatable for 9 Credits

RUS 3111 Digital Storytelling and Ethnic Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Students will learn about the ethnic, racial, and cultural history of Detroit and how to document elements of that history. This course introduces students to both theoretical and practical concepts around digital storytelling, drawing on extensive theoretical scholarship about placemaking, experiencing place, and the social production of heritage that spans the disciplines of anthropology, historical archaeology, heritage studies, historic preservation, media studies, and mobilities. Students will learn the practical steps involved in creating digital stories and will be introduced to best practices in multimedia development as discussed in the literature in the field of instructional technology. They will also explore the cultural, ethical and technological considerations involved in creating and disseminating digital stories. They will then create their own short digital story, which they will be able to share with the website Ethnic Layers of Detroit. Offered Yearly.
Equivalent: ANT 3111, GLS 3111, POL 3111

RUS 3410 New Soil, Old Roots: The Immigrant Experience Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. Offered Fall.
Equivalent: ARM 3410, GER 3410, POL 3410, SLA 3410

RUS 3600 Nineteenth Century Russian Literature Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Major Russian writers, including Pushkin, Dostoevsky, Tolstoy, Chekhov, and others. How literature reflects and grows out of history; how culture is affected by writers and poets. Taught in English; readings in English. Offered Fall.

RUS 3650 Russian Literature Since 1900 Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Twentieth century Russian literature as it explores the universal questions of love, death, rebirth, spirituality, and despair against a background of war, revolution, political oppression and economic collapse. Close analysis of major works of prose and poetry as well as literary currents such as Russian modernism, Socialist Realism, and post-modernism. Taught in English; readings in English. Offered Every Other Year.

RUS 3810 Topics in Slavic Studies Cr. 3
Special topics relating to Slavic languages, literatures and cultures, such as drama, the Gulag, and contemporary culture. Offered Yearly.
Equivalent: POL 3800, SLA 3800
Repeatable for 9 Credits

RUS 3990 Directed Study Cr. 1-3
For students desiring additional work in the language at the intermediate level; for programs of work not included in scheduled courses, either in language or literature. Offered Every Term.
Prerequisites: RUS 2010 with a minimum grade of D-
Repeatable for 6 Credits

RUS 5990 Directed Study Cr. 1-3
For students who wish credit for program of work not included in regularly scheduled courses, either in language or in literature. Knowledge of Russian required. Offered Every Term.
Repeatable for 12 Credits

RUS 5993 Writing Intensive Course in Russian Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a course designated as a corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Fall, Winter.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

RUS 5999 Internship in Russian Studies Cr. 3
Internship in a public or private organization related to Russian studies. Offered for undergraduate credit only. Offered Every Term.
Prerequisite: RUS 3010 with a minimum grade of C- or RUS 3020 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Slavic Studies or Slavic Studies Honors.

SAM - Sport Administration and Management

SAM 2020 History of Sport Cr. 3
Satisfies General Education Requirement: Social Inquiry
Examines the historical evolution of sport, from ancient to modern times in the United States and throughout the world. Offered Winter.

SAM 2100 Foundations of Sport Management Cr. 3
By combining theory and practical application, this course provides an overview of various facets of sports management and administration, including issues related to the recreational, amateur, interscholastic, collegiate, professional and lifestyle sports industries. Offered Fall.

SAM 3010 Ethics in Sport Cr. 3
Examines principles of ethics, and their application to sport, physical education, and sport. Students will acquire an awareness of ethical conduct and cultivate an effective, deliberative process for dealing with ethical issues in sport. Offered Winter.

SAM 3020 Sociology of Sport Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Examines the ways in which sports are entangled in social, cultural, political, and economic forces. Students will systematically investigate the complex connections among sports, society, and cultures. Offered Fall, Winter.

SAM 3030 Sports Promotion Cr. 3
This course explores foundational principles of promotions, marketing, and public relations in the sports and active lifestyle industries, including sports sponsorship and promotion, corporate motivation and involvement, and the reciprocal relationship between sports and the media. Demographics, market research, public relations, and promotional activity will be examined through an integrated approach to marketing. Offered Fall, Winter.

SAM 4020 Sport Governance Cr. 3
Covers governance structures and policy issues in sport and how policy development and strategic planning activities affect sport organizations, both amateur and professional. Offered Fall.
Prerequisite: SAM 2100

SAM 4030 Sport Finance Cr. 3
Introduces students to the concepts of financial management and sales as applied to the sports industry. Offered Winter.
Prerequisite: SAM 2100

SAM 4040 Sport Communication Cr. 3
General principles and strategies of sport communication are covered, including public relations, media relations, and publicity in a variety of settings. Effective use of technology in sport communication will be particularly emphasized. Offered Winter.
Prerequisite: SAM 2100

SAM 5000 Professional Practicum Cr. 3
Students will be introduced to various areas within the sports industry through guided fieldwork and service learning experiences. Students will analyze career placement opportunities, the internship process, and associate requirements while preparing professional materials for use in the sports industry. Offered Fall.
Prerequisite: SAM 2100

SAM 5510 Principles of Coaching Cr. 3
Specific topics on the coach and the athlete in areas of administration, motor learning, physical growth, motor skill acquisition, philosophy, psychology and sociology. Offered Spring/Summer.

SAM 5700 Sport Leadership Cr. 3
Combines theory and practical application to provide an introduction to the various segments of the sports industry, including youth, interscholastic, collegiate, professional, and commercial sports. Additionally, sociocultural, legal, historical and political concepts as applied to sport will be integrated into the curriculum to enable students to develop industry-appropriate competencies. Coursework will also emphasize strategies for career success within the sports industry. Offered Fall, Winter.

SAM 5750 Internship in Sports Management Cr. 1-6
Professional experience in public or private institutions relevant to student's field of industry specialization. Offered Fall, Winter.
Prerequisite: SAM 5000
Fees: $15
Repeatable for 6 Credits

SAM 6300 Interscholastic Athletic Directing Cr. 3
Michigan and national interscholastic athletic directing organizations; issues and skills to direct athletic programs in middle and secondary education. Philosophy, personnel, financial and general athletic policies and guidelines. Offered Yearly.
Prerequisites: SAM 2100 with a minimum grade of C

SAM 6310 Collegiate Athletic Administration Cr. 3
Provides an overview of intercollegiate athletic administration. Focuses on the history of college athletics, NCAA compliance rules and regulations, operations, finances, strategic planning, and critical issues and future trends that impact college sport. Offered Yearly.
Prerequisites: SAM 2100 with a minimum grade of C

SAM 6320 Youth Sports and Recreation Cr. 3
Explores issues related to organized and competitive sport for youth, with an emphasis on biological, psychological, and sociological perspectives. Emphasis is placed on the impact of sport managers and leaders in the delivery of youth sport programs. Offered Spring/Summer.

SAM 6410 Introduction to Sports Administration Cr. 3
Current categories of competitive sports and athletics identified and analyzed to determine potential administrative positions in their structures and the qualifications necessary for each position. Offered Fall, Winter.

SAM 6530 Professional Sport Administration Cr. 3
Introduction to the business strategies of a professional sports team, including an in depth look at breaking into the industry, the importance and value of community affairs, corporate sponsorship, business public relations and player relations. Offered Winter.
Prerequisites: SAM 2100 with a minimum grade of C

SAM 6531 Sports Event Management Cr. 3
Comprehensive study of the planning, maintenance, operations, financial considerations, customer engagement, and personnel management of sporting events and the facilities that host the events. Offered Spring/Summer.
Prerequisites: SAM 2100 with a minimum grade of C

SAM 6560 Media Design and Communication Cr. 3
Examines the impact sports and the media have on each other and explores the use of technology in promoting, marketing, and managing health, PE, recreation, and sports programs. Offered Winter.
Prerequisites: SAM 2100 with a minimum grade of C

SAM 6570 Sports Marketing Cr. 3
Concepts and principles of marketing as applied to sports. Topics include: structure of sports industry, sports markets and products, market research, and sports sponsorships. Offered Fall.
Prerequisites: SAM 2100 with a minimum grade of C

SAM 6640 Legal Issues in Health, Physical Education and Recreation Cr. 3
Identification and analysis of legal issues in the health, physical education, and recreation profession. Review of relevant litigation patterns. Offered Yearly.

SAM 6660 Risk Management in Physical Education and Sports Cr. 3
Fundamentals of safety and liability and the risks involved in managing activity-related programs. Development of knowledge and skills to recognize potential litigation in management, supervision and administration. Offered Fall.

SAM 6661 Equity and Access in Sport Cr. 3
Historical and contemporary sport and physical activity experience in context of race, socioeconomic class, gender, age, disability, and culture. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SAM 6750 Field Work in Sports Administration and Management Cr. 1-4
Professional experience in public or private institutions relevant to student's specialization. Supervision by professional supervisor and university faculty. Can be taken at any time during student's program. Offered Fall, Winter.
Repeatable for 8 Credits

SAM 7540 Concepts of Management in Health, Physical Education and Recreation Cr. 3
Responsibilities and concerns of administrators of health, physical education and recreation programs. Basic administrative procedures, policy-making and evaluation; establishment of program goals; alternative management styles; leadership principles. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SAM 7581 Sport Finance Cr. 3
Understanding financial management for planning, administering, and evaluating financial performance of sport-related entities. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SAM 8750 Internship in Sports Administration Cr. 1-8
Professional experience in public or private institutions relevant to student's field of specialization. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $15
Equivalent: KHS 8750
Repeatable for 8 Credits

SCE - Science Education

SCE 2100 Integrated Science Content PK-6 Cr. 3
Satisfies General Education Requirement: Natural Scientific Inquiry
This course will address core integrated science content topics, concentrating on PK-6 performance expectations; across all science disciplines: life/environmental science, physical science, earth/space science, and engineering/technology/design. Offered Every Term.
Corequisite: SCE 2105

SCE 2105 Integrated Science Lab PK-6 Cr. 1
This lab will provide the opportunity to authentically engage in science and engineering practices and scientific inquiry, use scientific modeling, and conduct controlled experiments; within and integrated across the science disciplines of life/environmental science, physical science, earth/space science, and engineering/technology/design. Offered Every Term.
Corequisite: SCE 2100
Fees: $15

SCE 5010 Biological Sciences for Elementary and Middle School Teachers Cr. 3
Significant biological principles, generalizations and understandings with relation to their use with children. Appropriate learning activities; experiments, field trips, text and reference materials, audio-visual resources, evaluation. Offered Every Term.
Fees: $10

SCE 5020 Physical Sciences for Elementary and Middle School Teachers Cr. 3
Significant principles, generalizations and understandings in the physical sciences with relation to their use with children. Appropriate learning activities including experiments, field trips, reference materials, audio-visual resources. Offered Every Term.
Fees: $10

SCE 5030 Earth/Space Science for Elementary and Middle School Teachers Cr. 3
Principles, generalizations and understandings related to teaching earth/space science to children. Learning activities, field trips, technology, and evaluation. Offered Every Term.
Fees: $10

SCE 5060 Methods and Materials of Instruction in Secondary School Science I Cr. 3
Role of science in the secondary curriculum. Problems and techniques of teaching science in the secondary schools; objectives, planning laboratory experiments, demonstrations, directed study, student projects, text and reference material, audio-visual resources, evaluation. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $10

SCE 5070 Methods and Materials of Instruction in Secondary School Science II Cr. 3
This course is designed to provide a foundation for instructional strategies that promote phenomenon-based learning with a focus on Engineering Design and Technology performance expectations specifically for grades 5 – 9 and 7-12 secondary science instruction. Offered Fall.
Prerequisite: SCE 5060 with a minimum grade of C
Corequisite: TED 5600
Restriction(s): Enrollment limited to students in the College of Education.

SCE 5100 Integrated Science Content (PK-6) Cr. 3
Addresses core integrated science content topics, concentrating on PK-6 performance expectations across all science disciplines: life/environmental science, physical science, earth/space science, and engineering/technology/design. Offered Every Term.
Corequisite: SCE 5105

SCE 5105 Integrated Science Lab (PK-6) Cr. 1
The lab provides the opportunity to authentically engage in science and engineering practices and scientific inquiry. Students will use scientific modeling, and conduct controlled experiments within, and integrated across, the science disciplines of life/environmental science, physical science, earth/space science, and engineering/technology/design. Offered Every Term.
Corequisite: SCE 5100
Fees: $15

SCE 6010 Safety in the Science Classroom Cr. 2
Principles of Laboratory safety in all K-12 science classrooms, including legal responsibilities related to the use, storage and disposal of chemicals and biological specimens as well as legal and ethical use of living organisms in the classroom. Offered Winter.
Restriction(s): Enrollment limited to students in the College of Education.

SCE 6030 Advanced Studies in Teaching Science in the Junior High and Middle School Cr. 3
Innovations and improvements in middle school and junior high school science teaching. Exploration of appropriate areas of study, development and selection of learning activities and materials; laboratory experiences in selected areas. Offered Every Other Year.
Restriction(s): Enrollment limited to students in the College of Education.

SCE 6040 Advanced Studies in Teaching Science in the High School Cr. 3
Emphasis on methods of teaching biology and the physical sciences in the high school. Recent curriculum studies, research, and current problems. Laboratory experiments, equipment, textual and reference material, audio-visual resources, and evaluation procedures. Offered Every Other Year.
Fees: $10

SCE 6080 Teaching Environmental Studies Cr. 3
Ecological concepts and environmental problems, possible solutions, and their implications for curriculum development and classroom teaching in K-12 educational settings. Science as a process is stressed throughout classroom activities, field trips, and assignments. Offered Every Other Year.
Fees: $10

SED - Special Education

SED 5000 History, Philosophy, and Ethics of Teaching Students with Disabilities Cr. 2
Historical developments leading to contemporary special and inclusive education. Philosophy of inclusive education. Ethical standards for special educators. This course is a prerequisite for all of the following courses: SED 5075, SED 5080, SED 5090, SED 5110, SED 5115, SED 5121, SED 5125, SED 5130, SED 6021, SED 6030, SED 6050, SED 6060, SED 6070, SED 7700, SED 7750, TED 6790, and TED 6795. Offered Fall, Winter.

SED 5075 Consultation and Collaboration for Inclusive Teaching Cr. 2
Knowledge and skills of consultation, collaboration, and co-teaching to support students in a variety of educational settings, particularly inclusive contexts. Offered Intermittently.
Prerequisites: SED 5000 with a minimum grade of C

SED 5080 Supportive Environments, Engaged Learning Cr. 2
Relationships between environment, student engagement, and learning. Approaches for creating supportive, inclusive learning environments and increasing student engagement in learning. Offered Winter.
Prerequisites: SED 5000 with a minimum grade of C

SED 5090 Transitions for Students with Disabilities Cr. 2
Strategies for supporting students with disabilities and special needs who are in transition between schools and from school to adult life in community settings. Offered Fall, Winter.
Prerequisites: SED 5000 with a minimum grade of C
Fees: $8

SED 5110 Introduction to Teaching Students with Moderate/Significant Support Needs Cr. 3
Medical terminology and interventions for students labeled cognitively impaired. Social model framework for understanding and supporting students with moderate to significant support needs (e.g., MARSE, cognitive impairment). Ten-hour clinical experience required. Offered Every Term.
Prerequisites: SED 5000 with a minimum grade of C

SED 5115 Observation and Assessment of Students with Moderate/Significant Support Needs Cr. 3
Using observation and assessment to monitor learning and plan instruction for learners with moderate to significant support needs (e.g., MARSE label cognitive impairment) in variety of educational contexts. Ten-hour clinical experience required. Offered Yearly.
Prerequisites: SED 5000 with a minimum grade of C

SED 5121 Language Development and Instruction for Students with Moderate/Significant Support Needs Cr. 2
Language-communication development and instruction for students with moderate to significant educational support needs (e.g., MARSE label cognitive impairment). Emphasis on utilizing augmentative and alternative communication systems. Offered Fall.
Prerequisites: SED 5000 with a minimum grade of C

SED 5125 Teaching Students with Significant/Multiple Support Needs Cr. 3
Curriculum and instructional for students with significant/multiple impairments in a variety of educational contexts (e.g., students with the label SXI). Offered Yearly.
Prerequisites: SED 5000 with a minimum grade of C

SED 5130 Teaching Students with Moderate Support Needs Cr. 3
Curriculum and instruction for students with moderate support needs (e.g., MARSE label cognitive impairment) in a variety of educational contexts. Offered Winter.
Prerequisites: SED 5000 with a minimum grade of C and SED 5110 with a minimum grade of C

SED 6021 Introduction to Teaching Students with Autism Spectrum Disorder Cr. 3
Historical and current research on autism spectrum disorder (ASD), with personal, family, and professional perspectives. Focus on supports, services, and quality of life outcomes. Prerequisite for SED 6030. Offered Every Other Year.
Prerequisites: SED 5000 with a minimum grade of C

SED 6030 Teaching Students with Cognitive, Behavior, and Communication Differences Cr. 3
Teaching students with cognitive and behavioral differences. Emphasis on strategies for supporting inclusive education. This course requires candidates to attend an off-campus placement for about 4 hours during the semester. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Intermittently.
Prerequisites: SED 5000 with a minimum grade of C and SED 6021 with a minimum grade of C

SED 6040 Introduction to Early Childhood Special Education Cr. 3
History, philosophy, legislation, and ""best practice"" of early intervention and educational programs for young children, birth to eight years old, who have developmental delays or disabilities. Offered Fall.

SED 6050 Teaching Students with Communication Differences Cr. 3
Teaching students with communication differences (i.e., students with autism spectrum disorder). Designing relationship based communication support, particularly in inclusive settings. Offered Fall.
Prerequisites: SED 5000 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SED 6060 Teaching Students with Movement and Sensory Differences Cr. 2
Movement and sensory differences in students with autism. Strategies for increasing student engagement in learning, social interaction, and inclusive educational contexts. Emphasis on supports for inclusion and supports provided by related service providers. Offered Yearly.
Prerequisites: SED 5000 with a minimum grade of C

SED 6070 Assessment and Evaluation of Students with Autism Cr. 3
This course examines assessment processes for students with autism in general and special education settings. It also examines the role assessment plays in identification, eligibility, IEP development, and student progress. Formal and informal methods for summative and formative assessments are also covered. Offered Yearly.
Prerequisites: SED 5000 with a minimum grade of C

SED 7700 Trends in Inclusion for Students with Moderate/Significant Support Needs Cr. 3
Advanced seminar in Special Education. Perspectives and applications of Disability Studies in Education for teaching students who have moderate/significant support needs. Offered Yearly.
Prerequisites: SED 5000 with a minimum grade of C, SED 5010 with a minimum grade of C, SED 5075 with a minimum grade of C, SED 5080 with a minimum grade of C, SED 5090 with a minimum grade of C, SED 5110 with a minimum grade of C, SED 5125 with a minimum grade of C, SED 5130 with a minimum grade of C, and TED 7060 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SED 7750 Trends in Inclusion for Students with Autism Spectrum Disorders Cr. 3
Advanced seminar in Special Education. Examines perspectives and applications of Disability Studies in Education for teaching students who have autism spectrum disorders. Offered Yearly.
Prerequisites: SED 5000 with a minimum grade of C, SED 5010 with a minimum grade of C, SED 5075 with a minimum grade of C, SED 5080 with a minimum grade of C, SED 5090 with a minimum grade of C, SED 6021 with a minimum grade of C, SED 6030 with a minimum grade of C, SED 6050 with a minimum grade of C, SED 6060 with a minimum grade of C, and TED 7060 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SED 7800 Practicum in Educating Students with Disabilities Cr. 1-24
Teaching students with disabilities with emphasis on inclusive teaching. Focus on area of certification/endorsement. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 24 Credits

SED 7801 Special Education Student Teaching: First Endorsement Cr. 3
Teaching students with disabilities with emphasis on inclusive teaching; focus on area of certification/endorsement. Intended for students earning their first special education endorsement at the master's level. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SED 8700 Advanced Seminar in Special Education Cr. 3
Students collaborate with faculty to explore key issues of policy and practice related to education of students with disabilities and special needs. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Education or Education Specialist Cert degrees.

SEM - Sport and Entertainment Management

SEM 5100 Introduction to Sport & Entertainment Management Cr. 3
Provides an overview of the sport & entertainment industry, and examines issues encountered by sport and entertainment managers with special emphasis on the use of business principles to identify, attract and retain consumers. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: MGT 5100

SEM 7100 Sport & Entertainment Management Cr. 3
Provides an overview of the sport & entertainment industry. Examines issues encountered by sport and entertainment managers. Emphasis on use of business principles to identify, attract, and retain consumers. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

SEM 7110 Sport & Entertainment Marketing Communications Cr. 3
Explores the role of sport and entertainment marketing in the attraction and retention of customers. Emphasizes branding and the linkages across marketing communications. Topical areas include advertising, sponsorship, public relations, direct marketing, social media, and sales promotion. Offered Yearly.
Prerequisite: SEM 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SEM 7120 Event Planning and Management Cr. 3
Explores the nature and role of events. History, significance, impacts and role of sporting events, festivals, the arts and cultural entertainment, and business events. Cultivate business skills involved in operations, marketing, sponsorship and fundraising for events. Offered Yearly.
Prerequisite: SEM 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SEM 7130 Managerial Finance in Sport & Entertainment Cr. 3
Application of financial skills and principles in sport and entertainment. Budgeting, revenue generation, profits and loss, and taxation. Offered Every Term.
Prerequisite: SEM 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SEM 7140 Sports & Entertainment Economics Cr. 3
Economic theory and principles applied to the business of sport and entertainment. Demand, costs and profit maximization, labor issues, antitrust, and tax policy examined. Strategic decision-making on current issues. Offered Yearly.
Prerequisite: SEM 7100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SEM 7995 Directed Study in Sport and Entertainment Management Cr. 3
Advanced independent readings and research under supervision of a graduate faculty member in areas of special interest to student and faculty member. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

SEM 8000 Special Topics in Sport and Entertainment Management Cr. 3
Current developments and emerging trends in Sport and Entertainment Management and Sales/Events Management. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

SLA - Slavic

SLA 2310 Short Fiction from Central Europe and Russia Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Explores how writers use short fictional forms, such as parable, short story, fairy tale, and satire, to express important themes in the Central European experience, including violence and cruelty, freedom and imprisonment, utopian visions, and urban life. Offered Fall.
Equivalent: GER 2310

SLA 3410 New Soil, Old Roots: The Immigrant Experience Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Global Learning Inquiry
Armenian, German, Jewish, Polish, Russian and Ukrainian immigration to the United States, its effects on the cultures (language, literature, religion, politics, music, art and theatre) of these ethnic groups and its influence upon American culture. Offered Fall.
Equivalent: ARM 3410, GER 3410, POL 3410, RUS 3410

SLA 3710 Russian and East European Film Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
Major Russian, Polish, Czech, Ukrainian and Armenian films viewed and discussed from political, historical, cultural and aesthetic points of view. Offered Yearly.

SLA 3750 Polish and Yugoslavian Cinema Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Two national cinemas introduced through milestone films and lesser-known cinematic gems produced before and after the fall of communism. Offered Every Other Winter.
Equivalent: POL 3750

SLA 3800 Topics in Slavic Studies Cr. 3
Special topics relating to Slavic languages, literatures and cultures, such as drama, the Gulag, and contemporary culture. Offered Yearly.
Equivalent: POL 3800, RUS 3810
Repeatable for 9 Credits

SLP - Speech and Language Pathology

SLP 1010 Elementary Sign Language: American Sign Language Cr. 4
This course introduces the basics of American Sign Language (ASL). It is designed to help students with no or minimal sign language skills develop both basic skills in use of ASL and knowledge of Deaf culture, and it reviews basic grammar coupled with classroom practice to learn to communicate in signs. Offered Intermittently.

SLP 1020 Advanced Sign Language Cr. 4
This course introduces advanced use of American Sign Language (ASL). Students develop receptive and expressive abilities and learn to recognize and demonstrate more sophisticated grammatical features of American Sign Language (ASL). Offered Intermittently.
Prerequisites: SLP 1010 with a minimum grade of C

SLP 3990 Directed Study Cr. 1-3
Undergraduate study in areas not covered in scheduled curriculum, including library and field work. Offered Fall, Winter.
Repeatable for 4 Credits

SLP 4998 Honors Seminar Cr. 3
Bibliographic and research experiences; review of recent literature; research project. Offered Yearly.

SLP 5080 Phonetics Cr. 3
Multisensory study of sounds in the English language, emphasizing acoustic, physiologic, kinesiologic approaches. Offered Fall, Winter.
Equivalent: LIN 5080

SLP 5090 Anatomy and Physiology of the Speech Mechanism Cr. 3
General science of normal speech; anatomy, physiology and mechanics of respiration, phonation, resonation, articulation. Offered Fall, Spring/Summer.

SLP 5120 Speech Science Cr. 3
Speech production, acoustics of sound, perception of the speech signal. Offered Fall, Winter.
Prerequisites: SLP 5080 with a minimum grade of C (may be taken concurrently) and SLP 5090 with a minimum grade of C (may be taken concurrently)

SLP 5300 Introduction to Speech-Language Pathology Cr. 3
Speech-language pathology in clinical and educational settings; classification of communication disorders and related management strategies. Offered Fall, Winter.

SLP 5310 Clinical Methods in Communication Disorders Cr. 3
Procedures and materials to apply the basic clinical processes involved in assessment for clinical diagnosis and intervention for speech and language deficits through written assignments. Offered Every Term.
Prerequisites: SLP 5080 with a minimum grade of C (may be taken concurrently), SLP 5090 with a minimum grade of C (may be taken concurrently), SLP 5300 with a minimum grade of C, and SLP 5320 with a minimum grade of C

SLP 5320 Normal Language Acquisition and Usage Cr. 3
Language development in children and the associated areas of emotional and motor development; language stimulation techniques and programs. Offered Fall, Winter.
Fees: $10

SLP 5360 Clinical Practice in Speech-Language Pathology Cr. 3
Supervised experience in application of methods of diagnosis and treatment of clinical cases. Offered Every Term.
Prerequisites: SLP 5310 with a minimum grade of B, SLP 6460 with a minimum grade of B, and SLP 6480 with a minimum grade of B
Fees: $60
Repeatable for 6 Credits

SLP 6360 Advanced Clinical Practice in Speech-Language Pathology Cr. 3
Supervised experience in application of methods of diagnosis and treatment of clinical cases. Offered for graduate credit only. Offered Every Term.
Prerequisite: SLP 5360 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $60
Repeatable for 12 Credits

SLP 6460 Language and Phonological Disorders Cr. 3
Introduction to the clinical management of articulation and language disorders. Offered Fall, Winter.
Prerequisites: SLP 5080 with a minimum grade of C (may be taken concurrently), SLP 5300 with a minimum grade of C, and SLP 5320 with a minimum grade of C

SLP 6480 Neurogenic Communication Disorders Cr. 3
Introduction to acquired neurogenic communication disorders that impact speech, language, cognition, and swallowing in adult populations with clinical emphasis on differential diagnoses, assessment, and treatment approaches. Offered Fall, Winter.
Prerequisites: SLP 5080 with a minimum grade of C (may be taken concurrently), SLP 5090 with a minimum grade of C, SLP 5300 with a minimum grade of C, and SLP 5320 with a minimum grade of C

SLP 6640 Language Development and Disorders: Infants and Preschool Children Cr. 3
Theory, assessment and intervention with young children and their families. Emphasizes clinical problem solving, diagnosis, prevention and management in the context of cognitive, linguistic and neurological development. Offered for graduate credit only. Offered Fall.
Prerequisite: SLP 5300 with a minimum grade of C+ and SLP 5320 with a minimum grade of C+
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7000 Research Methods in Communication Disorders Cr. 1
Introduction to methods of research design and methods of analysis (quantitative and qualitative) in speech and hearing sciences and disorders. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7100 Research Methods: Evidenced- Based Practice Cr. 1
Using evidence-based practice in communication disorders and on methods for conducting original research. Offered Winter.
Prerequisite: SLP 7000 with a minimum grade of C+
Restriction(s): Enrollment is limited to students with a major in Communication Sci & Disorders or Speech-Language Pathology; enrollment is limited to Graduate level students.

SLP 7155 Special Topics in Communication Disorders Cr. 1-4
Lecture and discussion of special topics in communication disorders across the lifespan. Offered Fall.
Prerequisite: SLP 6360 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

SLP 7320 Professional Issues in Speech-Language Pathology Cr. 1
Practice issues, including ethics, scope of practice, multicultural concerns, professional conduct, reimbursement, and professional resources. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7360 Internship in Speech Pathology Cr. 6
Advanced professional experience in clinical speech language pathology. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

SLP 7380 Clinical Process in Speech-Language Pathology Cr. 3
Development of clinical skills and knowledge in diagnostic and treatment processes. Introduction to professional issues, counseling and ethical practices in speech-language pathology practice. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10
Repeatable for 9 Credits

SLP 7520 Counseling in Speech-Language Pathology Cr. 1
Basic counseling principles and techniques applied to patients and their family members during evaluation and treatment of communication and swallowing disorders. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Special Educ-Speech Pathology or Speech-Language Pathology; enrollment is limited to Graduate level students.

SLP 7590 Dysphagia Cr. 3
Assessment and management of neurologic and mechanical swallowing disorders in children and adults. Offered Spring/Summer.
Prerequisite: SLP 5090 with a minimum grade of C+
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7600 Phonological Disorders Cr. 3
The etiology, diagnosis and advanced treatment regimens of phonological disorders in children and adults. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7610 Stuttering Cr. 3
The etiology, diagnosis and treatment of stuttering disorders in children and adults. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7620 Voice Disorders Cr. 2-3
The etiology, diagnosis and treatment of voice disorders in children and adults. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7621 Craniofacial Syndromes Cr. 2
Theoretical and applied issues in resonance disorders that result from oral clefting and other craniofacial syndromes. Offered Spring/Summer.
Restriction(s): Enrollment is limited to students with a major in Speech-Language Pathology; enrollment limited to students in the MA in Liberal Arts & Sciences program; enrollment is limited to Graduate level students.

SLP 7630 Neuroscience of Communication Disorders Cr. 3
Neuroscience, neurophysiology, neuropsychology, neuroimaging, normal aging processes and neurodevelopment in communication sciences and disorders. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: AUD 7630

SLP 7640 Language Disorders in the School-Age Population Cr. 3
Assessment and intervention in assessment, diagnosis, treatment, and management of language and speech disorders in school-age populations. Emphasis on service delivery in context of curriculum and role of speech-language pathologist in school-based practice. Offered Fall.
Prerequisite: SLP 6640 with a minimum grade of C+
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7660 Neuromuscular Speech Disorders Cr. 3
Theory, assessment and intervention in neurologic speech disorders in children and adults (dysarthria, acquired apraxia of speech). Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7680 Acquired Linguistic and Cognitive Disorders in Adults Cr. 4
Theory, assessment, and management/treatment of adult patients with aphasia, traumatic brain injury, right-hemisphere brain damage, and dementia. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7700 Advanced Research Methods in Communication Disorders Cr. 1
Development of advanced research writing skills, for presentation of research in written and oral format. Development of research presentation skills; presentation of research project in departmental forum. Offered Winter.
Prerequisite: SLP 7000 with a minimum grade of C+
Restriction(s): Enrollment is limited to Graduate level students.

SLP 7990 Directed Study Cr. 1-9
Graduate study in areas not covered in scheduled curriculum, including library and field work. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SLP 7991 Directed Study: PhD Cr. 1-9
Directed research for major, and pilot work for dissertation. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Speech-Language Pathology; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy degree.
Repeatable for 9 Credits

SLP 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

SLP 8390 Seminar in Speech-Language Pathology Cr. 3
Topics to be announced in Schedule of Classes. No topic may be repeated for credit. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

SLP 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

SLP 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

SLP 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

SLP 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: SLP 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

SLP 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: SLP 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

SLP 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: SLP 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

SLP 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

SOC - Sociology

SOC 1010 Understanding Human Society Cr. 3
Satisfies General Education Requirement: Social Inquiry
Analysis of basic sociological concepts and principles to give the student an understanding of the perspective that sociology brings to the study of human society. Offered Every Term.

SOC 1020 Social Problems Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
Consideration of major contemporary social problems which reveal structural strains, value conflicts, deviations and changes in society. Analysis of socio-cultural factors creating problems and of possible solutions. Offered Every Term.

SOC 2050 The Study of Non-Violence Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Intellectual and social roots of non-violence and the practice of non-violence in different people's life styles. Historical and political forces and movements related to non-violence. (Some sections linked to Peace and Justice Learning Community.) Offered Every Term.
Equivalent: HIS 2530, PCS 2050, PS 2550

SOC 2100 Topics in Sociology Cr. 3
Specialized and topical studies of sociological themes. Topics to be announced in Schedule of Classes. Offered Intermittently.
Repeatable for 15 Credits

SOC 2200 Sociology as a Vocation I Cr. 2
Introduces students to the sociological literacy framework, the curriculum in the sociology major, the potential career paths that sociology majors can pursue, and sociology as an academic discipline and a vocation rather than just a major. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Sociology or Sociology Honors.

SOC 2201 Race Relations in Metro Detroit Cr. 3
This course introduces how race relations are intertwined with the historical trajectory and social processes Metro Detroit. It provides historical and contemporary data about racial inequality and segregation in Metro Detroit. It also considers the role of various social institutions (e.g., educational system, religious institutions, criminal justice system) in resisting and perpetuating racial inequalities in Metro Detroit. Offered Yearly.

SOC 2202 Gendered Worlds Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Introduces the ideas that have been central to the sociological study of gender and society. Describes historical and contemporary gender inequalities, the role of various social institutions in perpetuating gender inequality, the social construction of gender, and the way gender roles vary both historically and across cultures. Offered Yearly.

SOC 2203 Social Psychology Cr. 3
Satisfies General Education Requirement: Social Inquiry
Introduction to the sociological study of social psychology. This course describes the sociological aspect of the self and explores how individuals experience the self in relation to society. Offered Yearly.

SOC 2204 Outsiders and Deviants Cr. 3
Provides an overview of the sociological study of deviance, emphasizing crime and other deviant behaviors and conditions. Offered Yearly.
Equivalent: CRJ 2204

SOC 2206 Political Sociology Cr. 3
Examines the sociology of politics and explores sociological analysis of political processes in the United States. Offered Every Other Year.
Equivalent: PS 2206

SOC 2207 Sociology of Development Cr. 3
This course covers the major sociological approaches to issues of development and social change, with a focus on the problems and prospects facing the Third World. Offered Yearly.

SOC 2208 Sociology of Sport Cr. 3
Satisfies General Education Requirement: Social Inquiry
Examines the relationship between sport and society, with an emphasis on the relationship of sport to social variables, social institutions, and social problems. Offered Yearly.

SOC 2209 Sociology of Religion Cr. 3
Satisfies General Education Requirement: Social Inquiry
Explores current sociological debates as they pertain to the complex and multi-faceted relationship between religion and other social institutions. Offered Yearly.

SOC 2210 Sociology of Health and Medicine Cr. 3
Satisfies General Education Requirement: Social Inquiry
Designed to introduce the field of medical sociology. The course investigates the impacts of social and institutional variables on health behaviors and outcomes. It also considers the cultural, organizational, and economic functioning of various healthcare institutions. Offered Yearly.

SOC 2211 Numbers in Society Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
To fully understand the use of numbers in society, we must consider that numbers and statistics are social products created through people's actions: people have to decide what to count and how to count it, people have to do the counting and the other calculations, and people have to interpret the resulting statistics, and decide what the numbers mean. This course offers a quantitative experience to students from various social science disciplines. Students do not need a strong mathematical, statistical, or computing background to succeed in this course. The aim is to cultivate critical thinking skills to assess and evaluate numbers and statistics, distinguish between claims with evidence and those without, and tell the information apart from misinformation. Offered Yearly.

SOC 2212 From Cradle to Grave: Drugs and Society Across the Life Course Cr. 3
Substance misuse and abuse is a costly social problem in the United States. This course will follow the life stage metaphor to analyze the effects of substance use and abuse on individuals, communities, organizations, and society. We will examine historical and institutional approaches to the problem as well the causes, consequences, prevention strategies, treatment programs, and policy debates currently comprising the field. Offered Yearly.

SOC 2214 Stress and Society: The Sociology of Mental Health Cr. 3
Satisfies General Education Requirement: Social Inquiry
This course considers the influence of social environment and social experience on mental health and illness. The course will focus especially on differences in mental health across social groups, and explanations of these differences in terms of the exposure to different types of stress and access to social and personal coping resources. We begin this course with an overview of the Stress Process Model, which for over four decades has guided efforts by researchers to identify social experiences and circumstances that are associated with variations in mental health outcomes. We then consider variations in mental health that are related to social position or category such as social class, gender, race, immigration, marital status, and age. Offered Yearly.

SOC 2245 Blacks and Sport in the United States Cr. 3
The intersection between race and sport in the United States, examined to better understand the role of sports in our socialization and cultural construction. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: AFS 2245

SOC 2300 Social Inequality Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
Structure and process in society, institutions, communities, and organizations. Scientific analysis of organization, conflict, and change in the economy, government, religion, education, and family. Offered Yearly.

SOC 2500 Introduction to Urban Studies Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
In this introductory urban studies course, students learn about the historic and contemporary forces driving urbanization with an emphasis on US cities and urban areas; the effects of these forces on diverse population groups; and challenges facing cities and strategies to resolve them. Although the course will draw from international contexts, wherever possible, experiences of and from the Detroit metro—city and suburbs—will be used to illustrate particular themes. Student learning centers on an examination of issues related to diversity, equity, and inclusion, and broader social phenomena. Offered Every Term.
Equivalent: GPH 2000, HIS 2000, PS 2000, US 2000

SOC 2510 People on the Move Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry, Social Inquiry
Birth, death and migration investigated with respect to their social causes and consequences for society and human behavior. International migration will be a major focus of this course, since populations are always shifting in global society. Population growth and development will also be covered. Offered Every Other Year.

SOC 2600 Race and Racism in America Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Examination of the nature and practice of racism in American society from its historical foundations to its contemporary institutional forms. Offered Every Other Year.
Equivalent: AFS 2600

SOC 3050 Basic Sociological Theory Cr. 3
Introduction to sociological theory from a general conceptual framework. Major concepts, theoretical positions and recent trends in theoretical sociology will be considered. Offered Fall, Winter.
Prerequisite: SOC 1010 with a minimum grade of D- or SOC 1020 with a minimum grade of D-

SOC 3101 Special Topics in Sociology Cr. 1
Covers introductory topics in Sociology. Offered Intermittently.
Repeatable for 3 Credits

SOC 3200 Methods of Social Research Cr. 3
An elementary research methods course that covers the process of doing social research, including research design, data collection techniques, processing and analysis of data, as well as the interpretation of data. Offered Every Term.

SOC 3220 Introduction to Social Statistics Cr. 3
Introduction to major concepts in social statistics including level measurement, distributions, probability and bivariate hypothesis testing. Discussion of the role that statistics play in discussions and popular understandings of social issues. Offered Yearly.

SOC 3400 Exploring Marriage and Other Intimate Relationships Cr. 3
Students examine, from a sociological perspective, issues concerning intimate relationships. Major emphasis on description and analysis of changes in monogamous marriage. Non-traditional marital forms also examined. Focus upon the intimate relationships as they relate to personal, functional concerns of the student. Offered Every Other Year.

SOC 3440 American Medicine in the Twentieth Century Cr. 3
Major historical benchmarks in the making of the medical system in the U.S., including developments in medicine and medical knowledge, as well as social and political factors that influenced their reception and implementation. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: HIS 3440

SOC 3710 Learning About Your Community Through Research Cr. 4
Blend of participatory, in-service, and classroom work to enhance undergraduate research skills by linking social science theories and concepts to hands-on community-based learning opportunities. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: LAS 3710

SOC 3840 Corrections Cr. 3
Description and analysis of legal, social and political issues affecting contemporary correctional theory and practice. Topics include: history of corrections, function and social structure of correctional institutions, institutional alternatives including diversion, probation and parole. Field trips to institutions and community correctional settings normally required. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: CRJ 3350

SOC 3900 LGBTQ Health Cr. 3
This course centers LGBTQ+ voices and uses an intersectional socioecological lens to reveal the diverse factors that influence health. Students will explore key frameworks for understanding LGBTQ health disparities across the lifespan while examining implications for public health research, policy, and practice. Students will learn how tailored public health efforts can more effectively promote equity and address the unique challenges faced by LGBTQ+ individuals. Offered Fall.
Equivalent: PH 3900

SOC 3990 Directed Study Cr. 1-3
For students who show evidence of ability and interest, and desire to do advanced reading. Part-time and student instructors are ineligible to supervise directed study. Offered Every Term.
Repeatable for 12 Credits

SOC 4010 Sociology as a Vocation II Cr. 1
Provides an opportunity change for students to think retrospectively about their experiences in sociology and to think prospectively about their next steps in their careers. Students will systematically document the courses they took, projects they participated in, and assignments they completed in the past to build a personal academic portfolio. Offered Fall, Winter.
Prerequisite: SOC 2200 with a minimum grade of P
Restriction(s): Enrollment limited to students with a class of Junior or Senior.

SOC 4201 Seminar in Race and Ethnicity Cr. 3
Introduces contemporary, empirical, and sociological research within the sociology of race and ethnicity. Offered Yearly.

SOC 4202 Seminar in the Sociology of Gender Cr. 3
Provides an overview of the current state of knowledge in the sociology of gender with an emphasis on recent empirical research. Offered Yearly.

SOC 4203 Seminar in Global Inequality and Development Cr. 3
The primary goal of this course is to introduce students to the sociological research on global inequality and development with an emphasis on recent empirical studies. Offered Yearly.

SOC 4204 Seminar in Aging and the Life Course Cr. 3
Provides students with an overview of some major issues and research findings relating to aging and the life course with an emphasis on recent empirical studies. Offered Yearly.

SOC 4205 Seminar in Medical Sociology Cr. 3
Provides students with an overview of the current state of knowledge in medical sociology with an emphasis on recent empirical papers. Offered Yearly.

SOC 4206 Gangs, Bowling Alleys, and the Internet: Seeing Sociology Everywhere Cr. 3
This seminar provides students with a broad overview of the vast breadth and evolution of topics, perspectives, and methodologies encompassed within the discipline of sociology and related fields, by an intensive study of some of the classic works in the sociological literature. Offered Intermittently.

SOC 4207 Cameras and Classrooms: Methods of Visual Sociology Cr. 3
How many times a day do you interact with visuals? Likely, a lot. Photographs on social media, scenes from movies, attention-grabbing posters on campus, or thought-provoking book covers are all around you. In this class, you are going to be asked to slow down your process of interacting with these types of visuals. You will work through visual sociological theory and methodology to consider a new lens in processing visuals and be encouraged to ask questions like why is this specific visual used in its particular context? What may we assume from it? How does it relate to our own lives, or challenge our previously held assumptions? Offered Yearly.

SOC 4208 All About Class Cr. 3
Social class fundamentally shapes our lives and American society, yet we don't talk about it (or rarely talk about it). This class gives us a chance to understand and explore what it is, how it operates, and why it maters so much. We will cover definitions, concepts, and statistics related to social class. Perhaps more importantly, we will learn about the narratives that weave these pieces into ideologies that can inspire protest and rebellion, give us ambition, or push us into apathy. Offered Every Other Winter.
Equivalent: ELR 4200

SOC 4600 Internship in Sociology Cr. 3
Sociology majors or minors volunteer at a local organization or agency that relates to their career interests. Assignments include completing internship hours, keeping a journal, completing a resume, and writing a research paper. Offered Fall, Winter.
Prerequisite: SOC 1010 with a minimum grade of D or SOC 2300 with a minimum grade of D or SOC 3200 with a minimum grade of D
Restriction(s): Enrollment is limited to students in the Department of Sociology.
Repeatable for 9 Credits

SOC 4996 Sociology Capstone Cr. 3
This course reviews and extends the sociological knowledge that students have gained throughout the sociology curriculum. Students will discuss contemporary sociological issued in relation to classic sociological ideas. Offered Fall, Winter.
Prerequisites: SOC 1010 with a minimum grade of D-, SOC 2200 with a minimum grade of D-, SOC 3200 with a minimum grade of D-, and SOC 3000-4999 with a minimum grade of D-
Restriction(s): Enrollment is limited to students in the Department of Sociology.
Repeatable for 6 Credits

SOC 4999 Sociology Honors Thesis Cr. 3
Serves as a culminating experience honors students in sociology. Honors students in this course pursue original research under the tutelage of a faculty member of their choosing. Offered Every Term.
Prerequisites: SOC 1010 with a minimum grade of D-, SOC 2200 with a minimum grade of D-, SOC 3200 with a minimum grade of D-, and SOC 3000-4999 with a minimum grade of D-
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students with a major in Sociology Honors.
Equivalent: SOC 4996
Repeatable for 6 Credits

SOC 5010 Selected Sociological Topics Cr. 1-4
Topics to be announced in Schedule of Classes. Offered Yearly.
Repeatable for 20 Credits

SOC 5580 Law and the African American Experience Cr. 4
In-depth examination of the African American experience with law in the U.S.; historical development of the U.S. Constitution; legal barriers to equality and the influence of race on the law; use of law as a political instrument; participation of blacks in the legal process; comparisons with other countries. Offered for undergraduate credit only. Offered Every Other Year.
Restriction(s): Enrollment is limited to Undergraduate level students.
Equivalent: AFS 5580

SOC 6280 Social Statistics Cr. 3
Basic techniques for organizing and describing social data, measures of central tendency and dispersion, probability theory and hypothesis testing, tests of significance and confidence intervals, measures of association for two variables, analysis of variance. Offered Yearly.

SOC 7000 Internship in Applied Sociology Cr. 3
Guided internship with Detroit metropolitan private and public organizations arranged and supervised through the Program in Applied Sociology and Urban Studies. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7010 Special Topics Cr. 1-16
Topics to be announced in Schedule of Classes . Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 16 Credits

SOC 7030 Introduction to Graduate Studies in Sociology Cr. 1
Introduction to the profession of sociology and areas of specialization. Workshops include conference presentations, mentoring, external grants, proposal development, academic job market and publishing. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Sociology; enrollment is limited to Graduate level students.

SOC 7050 Comparative Schools of Sociological Theory Cr. 3
This course will analyze and compare diverse theories and schools from a broad perspective. It examine early origins of sociological thought and progression of sociological theory of the 19th and 20th centuries. By studying the writings of classical social theorists like Marx, Weber, Durkheim, Du Bois, and early feminists, it will connect with 20th century social theorists (e.g., Simmel, Mead, Cooley, Parsons, Goffman, Bourdieu, Foucault) and major schools of thought (e.g., structural functionalism, symbolic interactionism, phenomenology). Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7200 Advanced Survey of Approaches and Techniques of Social Research Cr. 3
Advanced conceptual treatment of the primary concerns of social research: perspectives and types of social research, research designs, sampling techniques, data-gathering techniques and instrument construction, data analysis and presentation, interpretation and reporting of the results. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7260 Qualitative Sociology Cr. 3
Introduction to qualitative theories and methods through a series of research projects. Students collect their own data, process and analyze it. Projects are presented in class; relevant literature and debates are read and discussed. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7270 Analysis of Evaluation Data Cr. 3
Focuses on the analysis of causal effects for program evaluation data using both experimental and observational data. Models for the estimation of causal effects from experimental design are presented, including models for individual and cluster-level randomized trials, models for factorial and fractional experimental designs, and models for implementation fidelity. Models for the estimation of causal effects from non-experimental observational data include regression discontinuity analysis, propensity score methods, inverse probability weighting, sensitivity analysis to estimate selection bias and the estimation of effect bounds. Offered Intermittently.
Prerequisites: SOC 6280 with a minimum grade of B, SOC 7200 with a minimum grade of B, SOC 7260 with a minimum grade of B, and SOC 7290 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7280 Analysis of Complex Survey Data Cr. 3
Provides students the tools for analyzing complex, and often longitudinal, data sets with the use of statistical software packages such as SPSS and SAS. Offered Intermittently.
Prerequisites: SOC 6280 with a minimum grade of B, SOC 7200 with a minimum grade of B, SOC 7260 with a minimum grade of B, and SOC 7290 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7290 Advanced Social Statistics Cr. 3
Multiple and partial correlation and multiple regression, dummy variable analysis, analysis of covariance, causal models for multi-dimensional contingency tables, path analysis techniques, introductory factor analysis, Markov chains, selected additional topics. Offered Yearly.
Prerequisite: SOC 6280 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7500 Advanced Qualitative Methods Cr. 3
Advanced analysis of qualitative methods, including but not limited to in-depth interviewing, focus groups, ethnography, discourse analysis, field research, narrative analysis. Stages of sampling, data collection, coding, and data analysis. Offered Intermittently.
Prerequisite: SOC 7260 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7510 Advanced Statistics II Cr. 3
Explores three of the most widely used advanced statistical methods in the social sciences: hierarchical linear modeling (HLM), also known as multi-level modeling; event history analysis (EHA); and structural equation modeling (SEM). We will also learn logistic regression and possible extensions to other categorical outcome techniques. Each of these techniques has been developed to handle situations, data structures, outcomes, and research questions that are difficult, inappropriate, or impossible to handle using typical regression models (both linear and categorical). Offered Intermittently.
Prerequisite: SOC 6280 with a minimum grade of B and SOC 7220 with a minimum grade of B and SOC 7290 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7520 Advanced Field Research Cr. 3
This graduate course is designed as a practice oriented, interactive seminar. Students are expected to select their own social group or geographic location in the Detroit Metro area and perform both participant observations and interviewing. We explore issues and dilemmas encountered in ethnographic research, including ethics, choosing a site, entry/access/exit, analyses, and writing about your data. This course is far more focused on the practice of doing ethnography than it is on exploring the philosophical or methodological justifications of this approach over other methodologies. Consequently, students should begin this course with an idea for a qualitative study so the material is relevant to a particular project. Offered Intermittently.
Prerequisite: SOC 7260 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7530 Social Network Analysis Cr. 3
Social Network Analysis (SNA) has roots in sociology and anthropology, and representative early works will be examined. Recent interdisciplinary endeavor with contributions from physicists, computer scientists, mathematicians, and statisticians make the network paradigm more accessible to empirical researchers now, and these will be introduced. Specific network applications to be discussed include health networks, collaboration networks, online social networks, communication networks, and terrorist networks. The course materials are intended to be of interest to students from a wide range of disciplinary backgrounds, including sociology, anthropology, criminal justice, public health, statistics, physics, computer science, and related fields. Offered Intermittently.
Prerequisite: SOC 6280 with a minimum grade of B and SOC 7290 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7760 Health and Life Course Cr. 3
Focuses on life course theory, methods, and their application. Working from a life course perspective, students will learn various theoretical and methodological approaches to analyze health as well as explain health inequality and disparities. Key concepts, such as age, period, and cohort, found in the life course literature will be covered. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7780 Topics in the Sociology of Health and Illness Cr. 3
Considers the influence of social environment and social experience on health and illness, emphasizing the unique perspectives sociology offers in the larger inter-disciplinary discussion of health and focusing on differences in health across social groups. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SOC 7800 Topics in the Sociology of Sex and Gender Cr. 3
Explores the sociology of gender, as one of the most basic organizing mechanisms in society. Covers a broad overview of gender, including the following: themes: feminist theory, bodies, masculinities, work, work & family, families, migration, and politics. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SOC 7810 Race Relations in Urban Society Cr. 3
Covers the historical and contemporary effects of racial segregation on racial inequality in U.S. urban environments, with a special focus on Metro Detroit. The course also assesses the role social institutions like religious organizations, politics, economics, education, and the family have played in pushing for greater racial and social equality in the region. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7820 International Migration Cr. 3
Offers a comprehensive overview of the key current theoretical and empirical debates in the study of international migration. The goal is to explore the possibilities of a comparative (historical and cross-national) research program in the field, linking North America, European and other global experiences of migration. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7830 Seminar in Political Sociology Cr. 3
At its core, the field of political sociology seeks to understand the societal determination of political processes, outcomes, and institutions. Political sociology also concerns relationships between states and civil societies, how best to conceptualize power and understand its workings. In this course, we will study how states form and transform society though interventions such as membership and citizenship laws, social welfare policies, and inclusion and exclusion of particular groups in political processes. Students will learn about the structure of democracy and the ways in which civil society groups influence and contest the state through social movements, formal and informal institutions, and the media which may lead to policy change, regime transitions, wars, and revolutions. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7840 Topics in the Sociology of Race and Ethnicity Cr. 3
Sociological scholarship in the area of race and ethnicity is robust and varied both methodologically and topically. The diversity of scholarship in this area is expected given the range of micro-, meso-, and macro-level implications that are associated with individuals' self-identified and socially ascribed race and ethnicity. In recognition of such diversity this course will offer students the opportunity to acquire in-depth knowledge of the methodological, empirical, and theoretical literature related to a specific topics that are located within the broad area of sociology of race and ethnicity. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

SOC 7860 Global Social Inequality Cr. 3
This course examines social inequality around the world and its relationship to globalization, which refers to the increasing connectedness of social and economic life across borders. Global social inequality is the systematic differences in the distribution of resources among people living in different areas of the globe. Using a critical lens of intersectionality to understand the nuances of global social inequality, we consider the following: (1) What kinds of inequalities exist? (2) Why do they exist? (3) How does gender, race/ethnicity, class, and sexuality play out in a global context? We start from the premise that these are more than individual characteristics; they are socially constructed systems of inequality that intertwine with each other, and with other social inequalities like age, ability, and nationality. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7990 Directed Study Cr. 1-6
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

SOC 7995 Directed Teaching in Sociology Cr. 1
Students work under the direction of a member of the graduate faculty; planning lectures, handling class discussions, preparing exams, and grading introductory sociology students. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 7999 Master's Essay Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

SOC 8200 Mixed Methods Cr. 3
Exposes students to research on mixed methods including methodologies, research design, and empirical applications in published work. Half of the course will focus on learning about the most commonly utilized qualitative and quantitative methodologies and the other half will focus on mixed methods approaches. Offered Intermittently.
Prerequisite: SOC 6280 with a minimum grade of B and SOC 7200 with a minimum grade of B and SOC 7260 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 8250 Longitudinal Data Analysis Cr. 3
Examines common models of longitudinal data analysis in sociology, which are also commonly used within the broader social sciences. Key topics covered in this class include linear panel analysis, event history analysis, and the analysis of repeated cross-sectional data. Offered Intermittently.
Prerequisite: SOC 6280 with a minimum grade of B and SOC 7200 with a minimum grade of B and SOC 7290 with a minimum grade of B
Restriction(s): Enrollment is limited to Graduate level students.

SOC 8710 Advanced Seminar in Race/Ethnicity Cr. 3
Topics include advanced theoretical and methodological debates in the sociology of race and ethnicity, an analysis of the social construction of race, and the structural implications of subordination, discrimination and privilege. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 8730 Demography of Aging Cr. 3
This seminar is focused on the demography of aging from an interdisciplinary health perspective. Population aging is expected to be one of the major demographic changes affecting social institutions throughout the world in the 21st century. To develop a clear understanding of the patterns, causes, and consequences of population aging, students will be introduced to theoretical and empirical population health and aging research from fields of demography, sociology, economics, epidemiology, psychology, and public health. Topics covered include basic foundations of population aging, including historical and macro-patterns as well as trends in mortality, health, and disability. Attention will also be given to possible mechanisms and disparities underlying these population patterns of health and aging. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SOC 8990 Directed Study Cr. 1-6
Directed study in sociology. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

SOC 8999 Master's Thesis Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

SOC 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

SOC 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SOC 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: SOC 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

SOC 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: SOC 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

SOC 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: SOC 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

SOC 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

SPA - Spanish

SPA 1010 Elementary Spanish I Cr. 4
Introduction to the Spanish language and Hispanic culture through interactive and communicative reading, writing, listening and speaking activities to develop language and cultural proficiency. No experience with Spanish is needed. Offered Every Term.
Fees: $5

SPA 1020 Elementary Spanish II Cr. 4
Continuing study of the Spanish language and Hispanic culture through interactive and communicative reading, writing, listening and speaking activities to develop language and cultural proficiency. Offered Every Term.
Prerequisites: SPA 1010 with a minimum grade of C-
Fees: $5

SPA 1060 Elementary Spanish I and II Cr. 6
Designed for students with previous experience with Spanish or another Romance language who would like an abbreviated review before continuing their studies. The first third of the semester is an accelerated review of SPA 1010; the remainder of the semester covers SPA 1020 coursework. Offered Every Term.
Fees: $5

SPA 2010 Intermediate Spanish Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Continuing study of the Spanish language and Hispanic culture through interactive and communicative reading, writing, listening and speaking activities to develop language and cultural proficiency. Completion of this course fulfills the General Education requirement for foreign language and culture. Offered Every Term.
Prerequisites: SPA 1020 with a minimum grade of C- or SPA 1060 with a minimum grade of C-

SPA 2025 Cultural Connections, Grammar and Composition I Cr. 3
Cultural readings and situations to continue to improve ability to speak, read, write and listen in the Spanish language. Offered Every Term.
Prerequisites: SPA 2010 with a minimum grade of C

SPA 2400 Chicano/a Literature and Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry, Global Learning Inquiry
Examination of Chicano/a literature. Themes and figures in a social and historical context. Offered Every Other Year.
Equivalent: LAS 2100

SPA 2500 Puerto Rican Literature and Culture Cr. 3
Satisfies General Education Requirement: Cultural Inquiry, Diversity Equity Incl Inquiry
Examination of Puerto Rican literature. Themes and figures in a social and historical context. Offered Every Other Year.
Equivalent: LAS 2110

SPA 2700 Anguish and Commitment: European Existentialist Literature Cr. 3-4
Satisfies General Education Requirement: Cultural Inquiry
A team-taught interdisciplinary study in English of representative works by European existentialist writers: Dostoevsky, Hesse, Kafka, Pirandello, Sartre, Camus and Unamuno. Offered Every Other Year.
Equivalent: FRE 2700, GER 2700, ITA 2700

SPA 3025 Cultural Connections, Grammar and Composition II Cr. 3
Cultural readings and situations to continue to improve ability to speak, read, write and listen in the Spanish language, with an emphasis on vocabulary building and critical thinking. Offered Every Term.
Prerequisites: SPA 2025 with a minimum grade of C

SPA 3040 Spanish for Business and the Legal Professions Cr. 3
Commercial Spanish for basic business, legal and banking transactions and correspondence; terminology used in banking, commerce, accounting and marketing; emphasis on translation and format of commercial documents and letters. Offered Yearly.
Prerequisites: SPA 2025 with a minimum grade of C

SPA 3050 Spanish for the Health Care Profession Cr. 3
General review of pertinent grammar and specific vocabulary groups relating to specific tasks in the health care professions. Discussions leading to cultural competencies. Exploration of cultural and social factors for communicating with Spanish-speaking patients. Offered Yearly.
Prerequisites: SPA 2025 with a minimum grade of C

SPA 3200 Conversation Cr. 3
Informal class conversations, debates and oral reports to reinforce grammatical principles and to improve pronunciation through practice and imitation. Offered Yearly.
Prerequisites: SPA 3025 with a minimum grade of C

SPA 3300 Introduction to Cultural and Literary Analysis Cr. 3
Discussion of literary and cultural readings from Spain and Spanish America; vocabulary building; speaking and reading emphasized. Offered Every Term.
Prerequisites: SPA 3025 with a minimum grade of C or SPA 3100 with a minimum grade of C

SPA 3800 Spanish for Heritage Learners Cr. 3
Review of grammar and composition for Spanish heritage learners. Conducted entirely in Spanish. Offered Intermittently.
Prerequisites: SPA 2025 with a minimum grade of C
Equivalent: LAS 3800

SPA 4610 Introduction to Early Modern Spanish Literature Cr. 3
Spanish literature from the Renaissance to 1700. Offered Yearly.
Prerequisites: SPA 3300 with a minimum grade of C

SPA 4620 Introduction to Modern and Contemporary Spanish Literature Cr. 3
Spanish literature from 1700 to the present. Offered Yearly.
Prerequisites: SPA 3300 with a minimum grade of C

SPA 4630 Introduction to Colonial Latin American Literature Cr. 3
A historically and culturally situated introduction to the literature of Early Latin America. Offered Yearly.
Prerequisites: SPA 3300 with a minimum grade of C

SPA 4640 Introduction to Modern and Contemporary Latin American Literature Cr. 3
Literature in the twentieth and twenty-first century. Offered Every Other Year.
Prerequisites: SPA 3300 with a minimum grade of C

SPA 5000 Minor Language Practicum Cr. 3
Controlled application of active language skills for students electing a Ph.D. minor in Spanish. No degree credit toward Ph.D. Offered for graduate credit only. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SPA 5100 Advanced Composition Cr. 3
Study and utilization of Spanish in written form: colloquial usage, literary Spanish, commercial Spanish, idiomatic expressions. Brief compositions and translation exercises. Conducted entirely in Spanish. Offered Yearly.
Prerequisites: SPA 3025 with a minimum grade of C

SPA 5200 Spanish Phonetics Cr. 3
A systematic study of Spanish sounds; conducted in Spanish. Offered Yearly.
Prerequisites: SPA 3025 with a minimum grade of C

SPA 5300 Advanced Grammar and Stylistics Cr. 3
Intensive study of grammar and syntax. Free composition and conversation. Conducted in Spanish. Offered Every Other Year.
Prerequisites: SPA 5100 with a minimum grade of C or SPA 3025 with a minimum grade of C

SPA 5400 Introduction to Professional and Literary Translation Cr. 3
Introduction to the practice and principles of translation, both from English to Spanish and Spanish to English, for intermediate to advanced Spanish students. Practice in translating: literary works, legal and medical documents, commercial advertisements, and other texts, while becoming familiar with the history and aspects of the theory of translation. Students will become aware of the importance of translation in areas such as cultural diplomacy, literary studies, law, business and medicine. Offered Every Other Year.
Prerequisites: SPA 3025 with a minimum grade of C

SPA 5550 Spanish Culture and Its Tradition Cr. 3
Spain's cultural history: painting, sculpture, architecture and music, through films, records, newspapers, and other texts. Offered Every Other Year.
Prerequisites: SPA 3300 with a minimum grade of C

SPA 5560 Spanish American Cultures and their Traditions Cr. 3
Spanish America before and after the discovery of the New World. Art, music, customs, contemporary institutions, through films, records, newspapers, gallery visit to Detroit Institute of Art, and the text. Offered Every Other Year.
Prerequisites: SPA 3300 with a minimum grade of C
Equivalent: LAS 5560

SPA 5570 Topics in Hispanic Culture or Language Cr. 3
Specific themes, genres, movements or periods. Topics to be announced in Schedule of Classes. Offered Intermittently.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 5600 Advanced Conversation Cr. 3
Development of advanced conversation skills for Spanish majors and minors. Students will learn strategies to effectively engage in conversations, discussions, debates, and oral presentations. The course is also designed to increase students' awareness of current cultural processes in the Hispanic world through the oral discussion and analysis of readings, cinema, digital media, and other forms of cultural production. Offered Every Other Year.
Prerequisites: SPA 3300 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students.

SPA 5990 Directed Study Cr. 1-4
Offered Every Term.
Repeatable for 8 Credits

SPA 5999 Internship in Spanish Cr. 3
Internships allow students to apply the knowledge they have acquired through the Program and to gain practical experience in their scholarly and professional areas of interest. An internship can also allow students to explore possible areas in which they would like to pursue a career. Offered Every Term.
Prerequisite: SPA 3025 with a minimum grade of C-

SPA 6400 Introduction to Hispanic Linguistics Cr. 3
Principles of linguistics and their application to Spanish. Offered Every Other Year.
Prerequisite: SPA 5200 with a minimum grade of C

SPA 6410 Spanish Medieval Literature: Origins to 1500 Cr. 3
Main currents and masterworks of Spanish literature from its origins to 1500. (Formerly SPA 6500.) Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6420 Early Modern Spanish Studies Cr. 3
Literary genres of the early modern period (poetry and narrative: picaresque, pastoral, morisco, and chivalric). Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6440 Spanish Literature of the Eighteenth Century Cr. 3
Literature of the Spanish Enlightenment; major works and literary trends and movements in the Spanish eighteenth century up to Romanticism. (Formerly SPA 6520.) Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6450 Spanish Romanticism Cr. 3
Origins and development of Romanticism in Spain: theatre, poetry, costumbrismo, and other narrative. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6470 The Spanish Novel of the Twentieth Century Cr. 3
Novelists of the twentieth century, including those of the Silver Age (1900-1936) and those associated with Tremendismo, Social Realism, and the contemporary experimental novel. (Formerly SPA 6993.) Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6490 Spanish Poetry of the Nineteenth and Twentieth Centuries Cr. 3
Representative figures and trends in Modern and contemporary Spanish poetry. Post-Romanticism, Symbolism, the Silver Age (1900-1936), and contemporary poetry. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6560 Cervantes Cr. 3
A detailed study of Don Quijote. Other short works of Cervantes. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6570 The Comedia Cr. 3
Analysis of plays by Lope de Vega, Tirso de Molina, Calderon, Maria de Zayas and other dramatists of Spain's Golden Age. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6590 Genres and Topics in Peninsular Spanish Literature Cr. 3
Topics such as twentieth-century Spanish theatre, the Picaresque novel, and eighteenth-century Spanish theatre, to be announced in Schedule of Classes. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C
Repeatable for 9 Credits

SPA 6600 Colonial Latin American Studies Cr. 3
The writing of Colonial Latin America. Cultural encounter and negotiation seen through literature, history and the arts. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6610 Latin American Novel to 1900 Cr. 3
Development of the Latin American novel in the 19th century. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6620 Latin American Novel in the 20th and 21st Centuries Cr. 3
Roots of the modern novel in Spanish America; its stages of evolution through the vanguard period into the contemporary stage, with emphasis on representative figures such as Carpentier, Cortazar, and Garcia Marquez. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6630 Spanish American Poetry Cr. 3
Major figures of the twentieth century and their texts, from the Vanguard period to contemporary poetry. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6690 Genres and Topics in Spanish American Literature Cr. 3
Topics in the literature of Spanish America, such as the short story or theatre, to be announced in Schedule of Classes. Offered Every Other Year.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C
Repeatable for 9 Credits

SPA 6700 Spanish Literature of the Silver Age: 1900-1936 Cr. 3
Writers of the first three decades of the twentieth century; current narratological theories applied to intertextual maneuvers and philosophical concepts. Offered Intermittently.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 6710 Unamuno's Existential Fiction Cr. 3
Important novels of Miguel de Unamuno; emphasis on characters and their agonization in a circumscribed area. Offered Intermittently.
Prerequisites: SPA 4610 with a minimum grade of C, SPA 4620 with a minimum grade of C, SPA 4630 with a minimum grade of C, or SPA 4640 with a minimum grade of C

SPA 7010 Introduction to Literary Theory Cr. 3
Graduate-level introduction to key critical perspectives, theories, problems, and questions that have informed the discussions and analyses of twentieth- and twenty-first-century literary and cultural scholars. Specific theoretical paradigms used to determine the task of textual interpretation, locate the limits of each approach, trace the emergence of subsequent theoretical paradigms, and think about how such theories might or might not be relevant in the study of specific texts. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: FRE 7010, GER 7010, ITA 7010

SPA 7510 History of the Spanish Language Cr. 3
Origins, development and linguistic status of the Spanish language in Spain and Spanish America. Offered Every Other Year.
Prerequisite: SPA 5200 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SPA 7996 Research Project Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

SPA 7999 Master's Essay Direction Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

SPA 8420 Seminar in Hispanic Linguistics Cr. 3
Seminar topics will vary according to the principal divisions of Spanish linguistics: phonology, morphology, lexicography, syntax, and dialectology. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: LIN 7320
Repeatable for 9 Credits

SPA 8510 Seminar in the Golden Age Cr. 3
Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SPA 8550 Seminar in Spanish Literature of the Twentieth Century Cr. 3
Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SPA 8610 Seminar in Spanish American Narrative Cr. 3
Narrative genres in Spanish America including short story, essay, novel, short novel; development, history, period characterization. Topics to be announced in Schedule of Classes. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SPA 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

SPA 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 12 Credits

SPA 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SPA 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Offered Every Term.
Prerequisite: SPA 9991 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 18 Credits

SPA 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: SPA 9992 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

SPA 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term.
Prerequisite: SPA 9993 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

SPA 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 0 Credits

SSE - Social Studies Education

SSE 5720 Social Studies Disciplines for Elementary Teachers I Cr. 3
Students explore the content knowledge and major concepts of American History, Michigan Studies, and Geography to help prepare PK-6 learners to make informed decisions as citizens of a culturally diverse, democratic society and interdependent world. Offered Every Term.

SSE 5800 Introduction to Social Studies Education Cr. 1
Introduction to Social Studies Education is designed to prepare middle childhood and secondary social studies candidates to make decisions about curriculum, instruction, and assessment according to an understanding of the unique nature and needs of adolescents. This includes understanding the role of SES, race, and culture in the classroom. Students will apply theories and concepts related to the cognitive, social, emotional, and cultural characteristics of adolescents throughout coursework as they begin to envision who they are becoming as social studies educators. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.

SSE 6710 Secondary Social Studies Methods I Cr. 3
This course focuses on the foundations of social studies instruction and curriculum. Students are exposed to methods of teaching in middle and senior high school, including the use of state standards in the design of instruction and teaching approaches in the various social studies disciplines. Interdisciplinary application, diversity, and appreciation of other cultures will also be explored throughout the social sciences as well. Offered Winter.
Corequisite: TED 6620
Restriction(s): Enrollment limited to students in the College of Education.

SSE 6720 Social Studies Disciplines for Elementary Teachers II Cr. 3
Students explore the content knowledge and major concepts of Political Science (Civics and Government) and Economics to help prepare PK-6 learners to make informed decisions as citizens of a culturally diverse, democratic society and interdependent world. Offered Fall.

SSE 6730 Secondary Social Studies Methods II Cr. 3
Development of curricular lesson plans, unit plans, and other teaching strategies utilizing current approaches in social studies education. Offered Fall.
Prerequisite: SSE 6710
Corequisite: TED 5600
Restriction(s): Enrollment limited to students in the College of Education.

STA - Statistics

STA 1020 Elementary Statistics Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp Descriptive statistics, correlation and regression, notions in probability, binomial and normal distributions, testing hypothesis. Offered Every Term.

STA 2210 Probability and Statistics Cr. 4
Satisfies General Education Requirement: Quantitative Experience Comp Basic probability theory (definition of probability, conditional probability, independence, random variables, expectation and variance, normal distribution, law of large numbers, central limit theorem), descriptive statistics (histograms, scatter plots, box plots, mean, variance, quantiles, empirical rule, z-scores), statistical inference (confidence intervals for mean, t-tests, chi-square tests, linear regression, analysis of variance) and data analysis. Offered Every Term.
Prerequisites: MAT 1800 with a minimum grade of C-, MAT 2010-2350 with a minimum grade of C-, MAT Permit to Reg ACT/SAT with a test score minimum of 4, or Math Permit to Reg - (L1-L4) with a test score minimum of 4

STA 5030 Statistical Computing and Data Analysis Cr. 3
Computational aspect of statistics and data analysis for advanced undergraduate and beginning graduate students. Topics include descriptive statistics, probability distributions, hypothesis testing, ANOVA, linear regression and logistic regression. Data analysis by use of statistical packages such as R, SAS, Python, SPSS or Minitab. Satisfies Society of Actuaries Validation by Educational Experience (VEE) in Applied Statistics for regression component with a B- or better. Offered Fall.
Prerequisites: (MAT 2250 with a minimum grade of C- or MAT 2150 with a minimum grade of C-) and (MAT 2210 with a minimum grade of C-, STA 2210 with a minimum grade of C-, MAT 5700 with a minimum grade of C-, BE 2100 with a minimum grade of C-, ECO 5100 with a minimum grade of C-, or PH 3200 with a minimum grade of C-)

STA 5800 Introduction to Mathematical Statistics Cr. 4
A one-semester course for senior undergraduate and master's degree students. Introduction to basic mathematical theory of statistics. Topics include survey sampling, estimation theory, data analysis and sample statistics, testing hypothesis, two sample cases, analysis of variance, regression analysis, Bayesian inference. Satisfies Society of Actuaries Validation by Educational Experience (VEE) in Applied Statistics for regression component with a B- or better. Offered Winter.
Prerequisites: MAT 5700 with a minimum grade of C- and (MAT 2150 with a minimum grade of C-, MAT 2250 with a minimum grade of C-, or MAT 2350 with a minimum grade of C-)

STA 5820 Introduction to Data Science Cr. 3
An applied statistical learning course designed for upper level undergraduate students and graduate students in mathematics and other quantitative fields. Topics include: bias-variance trade-off, regression, classification, cross-validation, bootstrap, model selection, regularization, splines, generalized additive models, tree-based methods, support vector machines, principal component analysis and clustering. Computer implementation will be discussed for each of the methods, and students will run their own data analysis projects. Offered Winter.
Prerequisite: STA 5030 with a minimum grade of C or STA 5800 with a minimum grade of C or MAT 5800 with a minimum grade of C

STA 5830 Applied Time Series Cr. 3
Time series models, moving average models, autoregressive models, non-stationary models, and more general models; point estimators, confidence intervals, and forecast in the time domain. Statistical analysis in the frequency domain; spectral density and periodogram. Satisfies Society of Actuaries Validation by Educational Experience (VEE) in Applied Statistics for regression component with a B- or better. Offered Intermittently.
Prerequisites: (MAT 2250 with a minimum grade of C- or MAT 2150 with a minimum grade of C-) and (MAT 2210 with a minimum grade of C-, STA 2210 with a minimum grade of C-, BE 2100 with a minimum grade of C-, ECO 5100 with a minimum grade of C-, or PH 3200 with a minimum grade of C-)

STA 6830 Design of Experiments Cr. 3
Randomized blocks; Latin and Graeco-Latin squares; factorial designs; confounding; split plot; fractional replication; balanced incomplete blocks. Offered Intermittently.
Prerequisites: (MAT 2250 with a minimum grade of C- or MAT 2150 with a minimum grade of C-) and (MAT 2210 with a minimum grade of C-, STA 2210 with a minimum grade of C-, BE 2100 with a minimum grade of C-, ECO 5100 with a minimum grade of C-, or PH 3200 with a minimum grade of C-)

STA 6840 Applied Regression Analysis Cr. 3
Multiple linear regression; generalized linear models; random effect models; repeated measurements; mixed effect models; non-parametric additive models. Computer implementation using statistical software R; student project on real data analysis. Offered Fall.
Prerequisites: STA 5030 with a minimum grade of C- or STA 5800 with a minimum grade of C-

STA 7800 Data Science and Analytics Practicum Cr. 6
Apply theoretical knowledge and skills acquired throughout the Data Science and Business Analytics MS program to a challenging project involving real-world business problems/opportunities and data analytics in a reliable, scalable, distributed computing environment for optimal outcomes. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Advanced Analytics, Data Computing, Data-Driven Business or Statistics; enrollment is limited to Graduate level students.
Equivalent: DSA 7500, DSB 7500, DSE 7500

STA 7810 Advanced Statistics Theory I Cr. 3
First of two basic courses for Ph.D. students in the Mathematics Department who are interested in statistics. Topics include sample distribution theory, point and interval estimations, optimal estimates, theory of hypothesis testing, and most powerful tests. Offered Every Other Fall.
Prerequisite: MAT 5610 with a minimum grade of C and MAT 5700 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

STE - Sustainable Engineering

STE 5410 Energy, Emissions, Environment (E3) Design Cr. 3
Provides students the tools to uncover the relation between energy consumption and energy generation and optimize processes to take most advantage of low emitting energy options. Exposes students to design tools and methodologies from a diverse group of sources including US EPA, DOE, EIA, and the latest in emerging research. Offered Fall.
Equivalent: AET 5410, CE 5410

STE 6270 Sustainability Assessment and Management Cr. 3
Sustainability assessment and management for engineering design and development; theoretical, regulatory, and practical implications; Detroit and global applications. Offered Yearly.
Equivalent: CE 6270

STS - Study Skills

STS 0900 President M. Roy Wilson Summer Build Program Cr. 0
Provides an introduction to research for Wayne State University's Summer BUILD program. Elements include university and library navigation, financial literacy, math, english composition, physics, chemistry, biology, bio-chemistry, research topics and methods. Offered Spring/Summer.

SW - Social Work

SW 1010 Introduction to Social Work and Social Welfare Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Survey of selected social welfare programs in the United States; history and development; focus on issues related to poverty and dependence. This course explores issues of fairness and equality in economic, political and social systems, and identifies the values, ethics, and practice principles of the social work profession. Students attend out-of-the-classroom events on campus and in the community to learn from social workers and social justice leaders who are engaging in work with vulnerable and at-risk populations in Detroit. Offered Every Term.

SW 3010 Social Work Practice Method I Cr. 4
This is the first in a sequence of four courses (SW 3010, 3020, 4010, and 4020) designed to develop the practice knowledge and skills necessary for BSW students to begin professional social work practice, including a service-learning project and professional skills simulation laboratory.#The purpose of this course is to introduce the eight-step planned change process, a problem-solving guide for effecting situational change within the generalist intervention model. This course introduces students to the person-in-environment framework and the urban context, and emphasizes planned change steps one (engagement), five (intervention), and seven (evaluation). The course introduces students to the value, philosophy, and knowledge base considerations of social work practice. Offered Fall.
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 3020 Social Work Practice Method II Cr. 3
This is the second course in a four-course sequence (SW 3010, 3020, 4010, and 4020) designed to introduce assessment, the second stage of the planned change process, and reinforces social work-client interactions during the middle and ending phases of social work intervention, the third planned change step. Comparing and contrasting knowledge, skills, and dynamics in the micro level of social work practice with individuals and families. This course includes an interprofessional assignment. Offered Winter.
Prerequisite: SW 3010 with a minimum grade of D-
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 3030 Professional Writing for Social Workers Cr. 2
Introduces social work students to professional social work writing. Designed to create a foundation for grammar, usage, style, and genre-specific writing for use in all practice settings. Offered Fall.
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 3110 Diversity, Oppression and Social Justice Cr. 3
Diverse cultures, family structure, roles, immigration and assimilation experiences of marginalized groups; influence of dominant culture on these groups. Offered Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Social Work or Social Work & Social Justice.

SW 3410 Foundations of Ethics and Values in Social Work Cr. 3
Beginning course in the principles, values and ethics which underlie the profession of social work. Meaning of concepts and process of thinking about and resolving ethical dilemmas, the promotion of ethical questions, and knowledge of their historical contexts. Critical interpretation and evaluation of philosophical texts, positions, and arguments. Offered Winter.
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 3510 Human Behavior in the Social Environment Cr. 3
Ecological systems perspective presented. Knowledge and theories of human development across the life span. Human behavior studied within the context of the social systems in which people live, including families, peer groups, organizations, and communities. Emphasis on how social systems promote and deter human development and the influence of diversity on human development. Offered Fall.
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 3710 Social Welfare and the Social Work Profession: History, Trends and Basic Concepts Cr. 3
History of social welfare in the United States. Basic concepts of social welfare. The profession of social work in historical perspective. Current trends and issues in social welfare and in the profession of social work. Offered Fall, Spring/Summer.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Social Work or Social Work & Social Justice.

SW 3810 Research Methods, Data Analysis, and Practice Evaluation I Cr. 3
Descriptive research methods for social work concepts and skills of problem formulation; research design; description and critical analysis of research studies; integration of descriptive statistics and data analysis within social work context. Offered Winter, Spring/Summer.
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 4010 Social Work Group Theory and Practice Cr. 3
This is the third course in a four-course sequence This is the third course in a four-course sequence (SW 3010, 3020, 4010, and 4020). It builds upon the knowledge, theories, skills, and values learned in the mezzo system level of social work practice related to groups. This includes the use of systems and problem-solving approaches to plan for and apply appropriate social work intervention with emphasis on the utility of varied groups in mezzo practice. This course emphasizes a simulation laboratory approach to develop problem-solving intervention skills in facilitating groups in systems necessary for generalist social work practice. Offered Fall.
Prerequisite: SW 3020 with a minimum grade of D-
Corequisite: SW 4995
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 4020 Social Work Macro Theory and Practice Cr. 3
This is the final course in a four-course sequence (SW 3010, 3020, 4010, and 4020). The course emphasizes knowledge, theory, and practice skills related to service delivery and generalist planned change process in macro systems. Students will learn a range of practice, assessment, and intervention skills to solve problems in social service organizations, social welfare systems, and communities for the purpose of empowerment, social and economic justice, and social change. Offered Winter.
Prerequisite: SW 4010 with a minimum grade of D-
Corequisite: SW 4996
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 4441 Practicum Education Seminar I Cr. 1
Understanding the learning experience through critical reflection on field and course work. Offered Fall.
Corequisite: SW 4995
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 4442 Practicum Education Seminar II Cr. 1
Understanding the learning experience through critical reflection on practicum and course work. Offered Winter.
Prerequisite: SW 4995 with a minimum grade of D-
Corequisite: SW 4996
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 4710 Social Welfare in the United States: Current Programs Cr. 3
Description and analysis of major social welfare programs in the United States. Overview of the policymaking process and strategies for advocacy for policy change. Offered Fall, Spring/Summer.
Prerequisite: SW 3710 with a minimum grade of D-
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 4810 Research Methods, Data Analysis, and Practice Evaluation II Cr. 3
Continuation of S W 3810. Integration of descriptive and inferential statistics and components of quantitative and qualitative designs appropriate for evaluating service delivery and related policy. Offered Fall, Spring/Summer.
Prerequisite: SW 3810 with a minimum grade of D-
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 4990 Directed Study Cr. 1-4
Individual direction in reading and research on selected topics. Offered Every Term.
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.
Repeatable for 4 Credits

SW 4991 Special Topics in Social Work Cr. 1-4
Topics of current interest to be announced in Schedule of Classes . Offered Every Term.
Repeatable for 4 Credits

SW 4995 Practicum Practice in Social Work Cr. 5
The ratio of clock hours to credits is 46 to 1. Practicum Education for senior-level students in the BSW program. Practicum placements assigned by the Director of Practicum Education. Offered Fall.
Prerequisite: SW 3020 with a minimum grade of D-
Corequisite: SW 4010
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.
Repeatable for 10 Credits

SW 4996 Practicum Practice in Social Work Cr. 5
The ratio of clock hours to credits is 46 to 1. Practicum Education for senior-level students in the BSW program. Practicum placements assigned by the Director of Practicum Education. Offered Winter.
Prerequisite: SW 4995 with a minimum grade of M
Corequisite: SW 4020
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.
Repeatable for 10 Credits

SW 4997 Integrative Seminar in Social Work Cr. 3
This capstone course reinforces a person-in-environment framework to assist students in reviewing, analyzing, and integrating their theoretical knowledge with the planned change process and the generalist intervention model at all system levels. Students develop an engagement plan, assessment plan, comprehensive intervention plan, and evaluation plan. Students demonstrate that they have acquired the knowledge, skills, and values needed to be competent and ethical generalist practitioners. Offered Winter, Spring/Summer.
Prerequisites: SW 4010 with a minimum grade of D-, SW 4020 with a minimum grade of D- (may be taken concurrently), and SW 4996 with a minimum grade of M (may be taken concurrently)
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.

SW 4998 Practicum Practice in Social Work Cr. 5
The ratio of clock hours to credits is 46 to 1. Practicum Education for senior-level students in the BSW program. Practicum placements assigned by the Director of Practicum Education. Offered Every Term.
Restriction(s): Enrollment limited to students in the Bachelor of Social Work program.
Fees: $35
Repeatable for 10 Credits

SW 5720 Social Services for Older Adults Cr. 3
Identification, description and analysis of the problems associated with aging; development of social work services to address these needs. Offered Fall, Spring/Summer.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Graduate Certificate, Senior or Post Bachelor.

SW 5755 Introduction to Child Welfare Cr. 3
Introduction and overview of child welfare services and practice with focus on a wide range of Issues related to children and youth in care and those in need of protection from abusive and/or neglectful caretakers and environments. Offered Fall, Spring/Summer.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6010 Equitable Partnerships with Families and Communities Cr. 3
Theory and research-based strategies that support equitable collaboration between professionals and families to best meet the needs of children. Explores family and community contexts as assets for learning. Emphasis on culturally and linguistically responsive approaches to learn about and leverage family strengths and priorities, as well as communication strategies for making shared decisions with families. Offered Fall.
Equivalent: ELE 6010, PSY 6010

SW 6015 Crisis, Disaster and Trauma with a Focus on Adults Cr. 1
Examination of cross-discipline perspectives providing trauma-informed crisis response services to children and families in the aftermath of a disaster across micro, mezzo, and macro levels. Development and application of skills for conducting screening and assessments, as well as short-term interventions and crisis counseling services with disaster-impacted children and families within an ecological and cultural context. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6020 Trauma-Informed Crisis Response for Disasters: Focus on Children and Families Cr. 1
Examination of cross-discipline perspectives providing trauma-informed crisis response services to children and families in the aftermath of a disaster across micro, mezzo, and macro levels. Development and application of skills for conducting screening and assessments, as well as short-term interventions and crisis counseling services with disaster-impacted children and families within an ecological and cultural context. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6100 Child Welfare and Social Systems: Context for Case Management Practice Cr. 3
This course provides a knowledge base for Child Welfare practice within the context of mental health, education, juvenile justice and other social systems with a significant focus on the social problems of domestic violence and substance abuse. Core case management intervention skill sets utilized for effective child welfare practice will be taught. Offered Fall.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6310 Behavioral Health Crisis Provider Cr. 3
This course is designed to prepare you to effectively respond and support individuals, families, and communities during behavioral health crisis situations. The course will equip participants with best practices for crisis intervention using the CARES model: Connecting with those in crisis, Assessing concerns, conducting Risk assessments, Engaging in collaborative response planning, and providing Support post-crisis. This is a hybrid course that includes 11 self-paced modules, 3 synchronous online sessions, and a final in-person eight-hour skills day. Students completing this course will meet the Michigan Department of Health and Human Services' initial training requirement for working on a mobile crisis team or at a crisis stabilization unit. Offered Intermittently.

SW 6500 Social Work and the Law Cr. 2
Study of the relationship between law and social work practice. Emphasis on understanding the legal processes, the relationship and interdependence of law and social work practice and the knowledge and skill needed to help integrate law into social work practice. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6535 Youth, Delinquency, and Juvenile Justice Cr. 3
Provides an in depth understanding of the causes and implications of youth involved in the juvenile justice arena, focusing on assessments and social work interventions in a transcultural, multisystem context. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6540 Effects of Drugs and Alcohol on Physical and Social Functioning Cr. 3
Types of substances most frequently abused, their effects on physiological, psychological, social and physical functioning, and patterns of use among different age groups and populations. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6551 Behavioral Health and the Criminal/Legal System Cr. 3
This course is aimed at students who seek competence in forensic behavioral health, particularly within the context of social work practice, policy, and services. The class will build upon the recent neuroscience of criminality, violence, child maltreatment, partner violence, addiction, and related mental disorders. Additionally, relevant theories will be applied to provide a socio-cultural context for understanding the judicial system. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6555 Social Justice and Health: Implications for Social Work Cr. 3
This course provides students with the knowledge and skills to assess social determinants of health as upstream factors that impact the lives of vulnerable populations and communities. The course will contextualize "health justice" by focusing on the right to health, health services and health insurance; the social factors that affect individual and community health; economic inequality; and the criminalization of social need. Offered Fall.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6575 Violence Prevention and Intervention Cr. 3
Addresses the ways that social work intervenes to prevent violent perpetration and reduce the harm associated with victimization by interpersonal violence such as youth violence, stalking, sexual violence, gun violence, relationship violence, bullying, and self-directed violence. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6585 Introduction to International Social Work Cr. 3
Introduction to global social work practice and international social welfare systems including discussion of global topics such as international adoption, immigrant populations, and human trafficking. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6700 Disabilities in Urban Society: Special Topics Cr. 3
Topics central to understanding living with intellectual, developmental and or neurodevelopmental disabilities across the life span in an urban society. Implications for persons with disabilities, their families and advocates, and their service providers. Offered for graduate credit only. Offered Fall.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6735 Environmental & Climate Justice: Past, Present, Future For Social Workers Cr. 1
This course explores sustainable climate solutions centered on equity and justice, emphasizing the leadership of impacted communities. Students will examine the disproportionate effects of climate change on communities and the systemic factors driving these disparities. They will develop skills in advocating for community-led policies, applying intersectional frameworks, and understanding social workers' roles in climate justice. Using texts like Revolutionary Power by Shalanda H. Baker, students will learn to design inclusive projects, assess the psychological impacts of climate change, and build partnerships to advance climate action. The course empowers students to reflect on their growth and envision their role in climate advocacy and justice within social work. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6810 Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Health and Well-Being Cr. 1
Applies concepts from multiple frameworks to understand the health inequities of lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6815 Mind-Body-Spirit Approaches and Social Work Practice Cr. 3
Explores the historical and cultural roots of mind-body-spirit approaches – often called complementary and alternative medicine, or integrative approaches – in contrast to the philosophical foundation of the western medical model; considers contemporary use and reviews multiple specific approaches; and presents research about their use and effectiveness. Considers application in micro, mezzo and macro social work practice. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6883 Social Work Practice with Very Young Children and Families Cr. 1
The relationship between theory, assessment and practice in the field of infant mental health. Course covers interventions for use with infants, toddlers and families, as well as the identification of appropriate interventions based upon the infant and family's needs, cultural histories and capacities. Offered Intermittently.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 6991 Special Topics in Social Work Cr. 1-4
Topics of current interest to be announced in Schedule of Classes. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Applicant Masters, Candidate Masters, Unranked Grad, Graduate Certificate, Senior or Post Bachelor.

SW 7025 Infant Mental Health: Theory to Practice across Early Childhood Settings Cr. 2
Theories and research-based information on infant mental health practices applied to various early childhood settings. Emphasis on interdisciplinary, relationship-based interventions aimed to promote development and learning in infants and young children. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7040 Methods of Social Work Practice Cr. 3
Basic theories and principles of practice including a strengths perspective with diverse individuals and families. Emphasis on basic values, roles, skills of generalist social work practice; and on ecological systems perspective and practice principles with at-risk and oppressed populations. Skills of empowerment to achieve individual and collective social and economic justice. Offered Fall.
Corequisite: SW 7998
Restriction(s): Enrollment is limited to Graduate level students.

SW 7055 Social Work Practice with Groups Cr. 3
Ecological systems perspective used to critically assess influence of mezzo systems on human behavior and their consistency with social values and ethics. Use of strengths perspective with diverse groups within generalist practice. Group types, process, dynamics, leadership. Planning of groups, interventions, social and economic justice. Offered Winter, Spring/Summer.
Prerequisites: SW 7998 (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

SW 7065 Generalist Macro Theory and Practice Cr. 3
Ecological systems perspective used to critically assess influence of macro system on human behavior and their consistency with social values and ethics. Generalist practice and strengths perspective. Practice with diverse communities and organizations, particularly at-risk populations. Needs assessment skills; promotion of macro change and social and economic justice in an urban context. Offered Winter.
Prerequisites: SW 7040 with a minimum grade of C and SW 7998 with a minimum grade of M (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

SW 7085 Social Work Leadership Strategies Cr. 3
Leadership theories, applications and skill development. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7095 Social Entrepreneurship Cr. 3
Social entrepreneurs are change agents who challenge the status quo by using social enterprise and social innovation to address protracted social problems. This course is designed for students who want to explore social enterprise start-ups, as well as those students who are just curious about the field and want to learn more about entrepreneurship and explore career opportunities. Students will learn the requisite knowledge and skills to develop their own business feasibility plan that explores starting a new social venture, nonprofit or commercial enterprise. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7115 Special Topics: Interprofessional Education Cr. 2
This interprofessional course is for health professional student learners in the areas of advanced practice. The course allows health professional students to learn about, from and with each other, how each discipline contributes to the healthcare team, the importance of effective communication, the role of team collaboration and preparing health care professionals for collaborative practice with a focus on clinical decision making in interdisciplinary teams. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate, Medical or Professional level students.
Equivalent: MD4 8115, NUR 7115, PAS 7115, PPR 7115

SW 7140 Biomedical Components of Substance Use and Addiction Cr. 3
An examination of the bio-psychosocial aspects of substance use, addiction and recovery. Provides a broad scientific perspective on different classes of drugs and misused substances. Focuses on understanding brain anatomy and mechanisms of action in the brain, genetic factors related to substance use and addiction, physiological effects of alcohol and drug misuse, and pharmacological interventions for recovery. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7150 Health Disparities and Substance Use Cr. 3
An introduction to health disparity frameworks and an overview of the unique problems and needs of diverse populations who misuse alcohol, tobacco and other drugs. Focuses on the application of culturally sensitive intervention and prevention strategies. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7160 DSM in Clinical Social Work Practice Cr. 3
Reviews the classification, epidemiology, etiology and course of a range of mental and behavioral disorders across the life span. Emphasizes the critical analysis of existing and emerging theory and provides guidelines for the critical application and limitations of the DSM diagnostic assessment and classification system of mental and behavioral disorders in clinical social work practice. Offered Winter, Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7560 Lifespan Development in the Social Context Cr. 3
An examination of theories of human development and behavior and development across the lifespan through the lens of an ecological systems perspective within the context of how social systems including families, peer groups, organizations, communities and culture promote and deter human development. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7680 Human Rights, Social Justice, and Diversity in an Urban Context Cr. 3
Introduces concepts of human rights and social justice as foundational to social work practice. Offers historical and contemporary perspective of the social work profession and its role in promoting human rights and social, economic, and environmental justice. Examines theory and perspectives on the dynamics of oppression, conflict, and social change from a social work perspective. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7700 Trauma-Informed Child Welfare Practice Cr. 3
Introduces students to the core concepts informing evidence-based assessment and intervention for traumatized children and adolescents who are in the child welfare system. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7720 Social Policy and Advocacy Cr. 3
Historical development of social welfare viewed dynamically as a function of social, economic, political and cultural transitions. Evolution of professional social work. Framework of analysis for social welfare policies, programs and agencies. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7770 Palliative Care and Elder Law Cr. 3
Overview of palliative and hospice care, fundamentals of advanced care planning, and local and national laws and policies that concern older adults and their families. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7820 Evidence for Social Work Practice Cr. 3
Examination of the basic concepts and methods of scientific inquiry used to build knowledge and evaluate the impact of social work policy and practice. Use of practice knowledge to inform social work research and the use of research findings to inform social work practice is a primary focus of the course. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7840 Community and Organizational Measures Cr. 3
Knowledge and skills for practice informed research to assess communities and organizations and how measures are used in evaluation. Students will learn basic data analytics and visualization using R. Offered Winter, Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7850 Evaluation Research Cr. 3
History, conceptual approaches, techniques, and methods in evaluation of professional practice interventions and social work programs. The focus is on relevant application to current practice environment. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7880 Infant/Family Mental Health Assessment Cr. 2
Using a relationship-based model, assessments of infant and toddler socio-emotional development and parental health is emphasized. Interdisciplinary dialogue about the infant mental health perspective and the impact of culture. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7885 Ethics and Professionalism for Social Work Practice Cr. 3
Graduate seminar on social work as a profession with ethical considerations. Articulation of professional practice issues in such areas as: competencies, standards, ethics, technology, professional organization, social sanction, autonomy, accountability, inter-professional practice, or social action. Offered Spring/Summer.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7990 Directed Study Cr. 1-4
Individual direction in reading and research on selected topics. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

SW 7995 Introduction to Gerontology Cr. 3
Required introductory course for Graduate Certificate in Gerontology. Multidisciplinary conceptual framework for study of gerontology. Students develop knowledge and skills needed to understand gerontological theory, research, and practice. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

SW 7998 Practicum Work for Social Workers I Cr. 4-6
Practicum of M.S.W. program integrated with courses in social work method, human behavior and the social environment, social welfare organization and policy, and research. Internship assignments assigned by staff within the Office of Practicum Education, overseen by the Director of Practicum Education. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Social Work degree; enrollment limited to students in the School of Social Work.
Fees: $35
Repeatable for 12 Credits

SW 7999 Master's Research Essay Direction Cr. 1-3
Two-semester course completed during the Advanced Year of the M.S.W. Program. Essay reflects an original synthesis of an already-published work, demonstrating a thorough understanding and mastery of a sub-area of social work, including the relevance of the problem and adequacy of intervention. Offered Fall, Winter.
Prerequisites: SW 7160 with a minimum grade of C (may be taken concurrently) or SW 7840 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment limited to students in the Master of Social Work program; enrollment is limited to Graduate level students.
Repeatable for 3 Credits

SW 8015 Intervention/Program Planning and Grant Writing Cr. 3
Strategies and approaches to comprehensive program development within the context of community and organizational practice. Offered Winter.
Prerequisites: SW 7840 with a minimum grade of C or SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8046 Community Data Analysis, Interpretation, and Presentation Cr. 3
This course will prepare social workers to analysis, interpret, and present information about communities, organizations, neighborhoods, and other social groups using empirically substantiated social science techniques. The course will build upon techniques learned in prior foundation research courses and utilize social justice-oriented, community-driven, data analysis, and presentation methods. Instruction will include the use of advanced statistical procedures from a range of software programs such as R/RStudio and open-source geospatial software. Offered Winter.
Prerequisites: SW 7840 with a minimum grade of C or SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8048 Social Action Research and Evaluation Cr. 3
Concepts, practices, and methodological approaches that are central to empowerment and action-oriented research and evaluation. Students are prepared to intervene into communities, institutions, neighborhoods, and other social groups through the use of empirically substantiated social science techniques. Offered Fall.
Prerequisites: SW 7840 with a minimum grade of C or SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8065 Leadership for Organizational and Systems Change: Advanced Theories and Practice Cr. 3
This course examines advanced theories and leadership practices for organizational and systems change in human service settings. Students integrate systems thinking, organizational theory, adaptive leadership, and organizational learning to analyze complex social problems and design change strategies grounded in social work values and social justice. Emphasis is placed on diagnosing systems, understanding technical and adaptive challenges, and leading change within and across organizations and complex systems. The course builds upon the ideas and concepts of general systems theory in social work taught in generalist courses. Through applied assignments and collaborative labs, students develop practical skills for leading organizational and systems change in real-world contexts. Offered Winter.
Prerequisites: SW 7840 with a minimum grade of C and SW 8998 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

SW 8075 Theories and Practice of Community Building and Development Cr. 3
Best practice and theories on community development and engagement. Offered Fall.
Prerequisites: (SW 7160 with a minimum grade of C or SW 7840 with a minimum grade of C) and SW 8998 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

SW 8085 Theories and Practice of Social Policy and Social Action Cr. 3
Theoretical frameworks and best practices to engage in social policy and social action. Offered Fall, Winter.
Prerequisites: (SW 7160 with a minimum grade of C or SW 7840 with a minimum grade of C) and SW 8998 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

SW 8180 Social Services in the Schools Cr. 3
Structure and history of education in relation to social work; implications of current legislation; identification of educational disabilities; programs and services to remediate disabilities and assist students. Offered Yearly.
Prerequisites: SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8305 Assessment for Interpersonal Social Work Practice Cr. 3
Focus on development of knowledge and skills for interpersonal social work practice. Quantitative and qualitative methods for assessment in multiple contexts with an emphasis on how assessment is a part of evidence-based practice. Offered Fall.
Prerequisites: SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8315 Integrative Theories and Practice Approaches for Interpersonal Social Work Practice Cr. 3
Introduces theories and practice approaches commonly used in interpersonal social work practice with individuals, families, and groups. Students will examine theories of change practice approaches derived from four broad categories: Cognitive-behavioral theories, humanistic theories, psychodynamic/developmental theories, and theories of systems and groups. Offered Fall.
Prerequisites: SW 7160 with a minimum grade of C
Corequisite: SW 8998
Restriction(s): Enrollment is limited to Graduate level students.

SW 8325 Cognitive Behavioral Interventions in Social Work Practice Cr. 3
Theoretical knowledge and practice skills for cognitive-behavioral treatment in interpersonal social work practice, focusing on treatment of children, adolescents and adults. Offered Winter.
Prerequisites: SW 8315 with a minimum grade of C
Corequisite: SW 8998
Restriction(s): Enrollment is limited to Graduate level students.

SW 8330 Psychosocial Assessment of Children and Youth Cr. 3
Holistic approach to assessment of children and youth; focus on various aspects of assessment including interpretation of psychological test data; social work administration of behavioral scales; observation; interpretation of drawings; socialized assessment areas such as ADHD and autism. Offered Yearly.
Prerequisites: SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8335 Client-Centered Interventions in Social Work Practice Cr. 3
An introduction to humanistic psychotherapies and techniques for interpersonal social work practice. Includes experiential, existential, relational, and phenomenological approaches in addition to contemporary approaches. Offered Winter.
Prerequisites: SW 8315 with a minimum grade of C
Corequisite: SW 8998
Restriction(s): Enrollment is limited to Graduate level students.

SW 8345 Psychodynamic Interventions in Social Work Practice Cr. 3
Focuses on essential principles for client engagement, assessment and interventions used in psychodynamic psychotherapy. Offered Winter.
Prerequisites: SW 8315 with a minimum grade of C
Corequisite: SW 8998
Restriction(s): Enrollment is limited to Graduate level students.

SW 8355 Family Interventions in Social Work Practice Cr. 3
This course will focus on the theoretical knowledge and practice skills of family systems treatment with a particular emphasis on treatment delivery to families with multiple psychosocial concerns within the urban context. Through various methods of learning (case examples, role plays, class discussions), students will develop practice skills in family system level interventions including assessment and case conceptualizations, interventions, structural family therapy, strategic family interventions, Cognitive Behavioral intervention at the family system level, trauma and the family, and attachment-based family interventions. The course will examine social work values and ethics as they relate to intervening at the family system level. Offered Winter.
Prerequisites: SW 8315 with a minimum grade of C
Corequisite: SW 8998
Restriction(s): Enrollment is limited to Graduate level students.

SW 8381 Interpersonal Practice with Children and Adolescents Cr. 3
This course will examine key evidence-based interventions for children and adolescent mental health and wellbeing. The course offers a structure to develop essential practice skills, such as engagement, treatment planning, and monitoring and evaluation of client outcomes. Students will learn the role of prevention, treatment, recovery, and long-term support to reduce and alleviate distressing symptoms and enhance health and safety of children and adolescents. The course will focus on best practices for internalizing, externalizing, and neurodevelopmental problems, child vulnerabilities and as well as environmental risk and protective factors, including bullying, child maltreatment, and trauma. Students will also learn how issues of diversity, culture, and social justice may impact the quality of therapeutic relationships. Offered Yearly.
Prerequisites: SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8550 Social Functioning: Human Sexuality Cr. 2
Human sexuality as it affects individuals in their relationships to others in terms of development, orientation and dysfunction. Offered Intermittently.
Prerequisites: SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8585 Advanced Interpersonal Practice in Trauma and PTSD Cr. 3
Examination of the major trauma therapy models and theories for advanced interpersonal social work practice across micro, mezzo, and macro levels. Advanced application of theories and intervention models for working with trauma-exposed individuals and those with trauma-related disorders across the life span and within an ecological and cultural context. Offered Intermittently.
Prerequisites: SW 7160 with a minimum grade of C or SW 7840 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8620 Interpersonal Practice with Couples Cr. 2
Application of interpersonal practice theories in couples therapy utilizing behavioral and social science content in relation to marriage and committed relationships, to the functional and dysfunctional aspects of marital and couple relationships, and their effects on the couple and other affected family members. Offered Intermittently.
Prerequisites: SW 7055 with a minimum grade of C or SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8690 Interpersonal Practice in Substance Use Cr. 3
Application of interpersonal practice theories to social work interventions with substance abuse related problems; procedures and strategies for assessment and planning; methods of intervention with individuals, families, and groups; prevention and education. Offered Yearly.
Prerequisites: SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8770 Advanced Policy Analysis Cr. 3
Students have the opportunity to conduct a policy analysis in an area of interest (e.g., welfare reform, corrections, homelessness, health, domestic violence) and prepare policy documents to communicate analysis findings to key stakeholders and policy makers. Offered Winter.
Prerequisites: SW 7160 with a minimum grade of C or SW 7840 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8771 Advanced Policy Analysis in Aging Cr. 3
This course builds on policy practice content presented in the generalist social work curriculum, focusing on policy that affects programs and services for older adults. Students conduct a policy analysis in an area pertinent to older adults (e.g., retirement, community-based services, long-term care, Medicare, elder abuse and neglect, age-friendly communities) and prepare policy documents to communicate analysis findings to key stakeholders and policy makers. Offered Winter, Spring/Summer.
Prerequisites: SW 7840 with a minimum grade of C or SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8772 Advanced Policy Analysis in Child and Family Wellbeing Cr. 3
This course builds on the content gained in the generalist social work curriculum related to policy practice. It focuses on policy that affects programs and services for children and families. Students have the opportunity to conduct a policy analysis in an area pertinent to children and families (e.g., child welfare, immigration, poverty, workforce participation for parents, early childhood development, educational access, juvenile justice, school-to-prison pipeline, bullying, etc.) and prepare policy documents to communicate analysis findings to key stakeholders and policy makers. Offered Winter, Spring/Summer.
Prerequisites: SW 7840 with a minimum grade of C or SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8773 Advanced Policy Analysis in Mental Health and Substance Use Cr. 3
This course builds on the content gained in the generalist social work curriculum related to policy practice. It focuses on policy that affects programs and services for people with mental health and substance use disorders. Students have the opportunity to conduct a policy analysis in an area pertinent to people with mental health and substance use disorders and prepare policy documents to communicate analysis findings to key stakeholders and policy makers. Offered Winter, Spring/Summer.
Prerequisites: SW 7840 with a minimum grade of C or SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8860 Grief and Loss Issues in Social Work Practice Cr. 3
Knowledge and skills needed to provide social work services to individuals, groups and families coping with a range of loss experiences, including those around death, dying and bereavement. Offered Fall, Winter.
Prerequisites: SW 7160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8880 Infant Mental Health Practice Cr. 3
Advanced knowledge and skills in theory, assessment and practice in the field of infant mental health with emphasis on evidence-based practices. Offered Winter.
Prerequisite: SW 7025 with a minimum grade of C or SW 7880 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8883 Infant Mental Health Seminar I Cr. 2
Understanding and integration of knowledge and skills developed through courses and field placement experiences focused on infant mental health. Offered Fall.
Prerequisites: SW 8998 with a minimum grade of M (may be taken concurrently)
Restriction(s): Enrollment is limited to students with a major in Dual Title Infant Mental Hlth; enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Philosophy or Master of Social Work degrees; enrollment limited to students in the School of Social Work.

SW 8884 Infant Mental Health Seminar II Cr. 2
Supports Infant Mental Health Dual-Title students in the understanding and integration of knowledge and skills developed through courses and field placement experiences focused on infant mental health. Offered Winter.
Prerequisites: SW 8883 with a minimum grade of C and SW 8998 with a minimum grade of M (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.

SW 8991 Advanced Special Topics in Social Work Cr. 1-4
Topics of current interest for students in advanced year of M.S.W. program, Ph.D. program in social work or doctoral programs in related disciplines. Topics to be announced in Schedule of Classes. Offered Every Term.
Prerequisites: SW 7055 with a minimum grade of C or SW 7070 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 8996 Group Project Research and Direction Cr. 1-4
This two-semester course assists students in developing advanced competency in conducting research aimed at advancing social work practice and/or social welfare policy. Small groups of students (3-4) come together to work on an already existing research project with faculty. Project depends on the faculty. Examples of activities include: literature review, data collection, data analysis, and data presentation. The project must be discussed with faculty before registration. Offered Every Term.
Prerequisites: SW 7160 with a minimum grade of C (may be taken concurrently) or SW 7840 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 4 Credits

SW 8998 Practicum Work for Social Workers II Cr. 4-6
The ratio of clock hours to credits is 56.25 to 1. Practicum of M.S.W. program integrated with courses in social work method, human behavior and the social environment, social welfare organization and policy, and research. Internship placements are assigned by staff within the Office of Practicum Education overseen by the Director of Practicum Education Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Social Work degree.
Fees: $35
Repeatable for 12 Credits

SW 8999 Master's Thesis Research and Direction Cr. 1-6
The master's thesis provides students with the opportunity to conduct a scholarly study and contribute to the knowledge base associated with some aspect of social work theory, practice, or policy. A thesis must be supervised by a faculty member. Students should register for 3 credits in the fall and 3 credits in the winter of their advanced year. Offered Every Term.
Prerequisites: SW 7160 with a minimum grade of C (may be taken concurrently) or SW 7840 with a minimum grade of C (may be taken concurrently)
Corequisite: SW 8325
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

SW 9000 Directed Study: Doctoral Cr. 1-6
Independent study under guidance of a faculty member. Offered Every Term.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.
Repeatable for 6 Credits

SW 9050 Social Work PhD First Year Seminar Cr. 1
The goal of the first year seminar is to assist students in developing the skills and professional socialization to be successful in doctoral education. The seminar will assist students in engaging in events and personal behaviors to support professional growth to enhance productivity, build professional networks, and maintain work-life balance. Offered Winter.
Restriction(s): Enrollment limited to students in the PhD in Social Work program.

SW 9100 Social Statistics and Data Analysis Cr. 3
Application of univariate and bivariate statistics and analysis of variance to analyze data obtained from social work practice settings. Students learn to formulate appropriate research questions and hypotheses before data collection, to use SPSS to conduct analysis, and to interpret analyses and communicate findings to academics and practitioners. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

SW 9160 Knowledge Creation and Theory Development for Social Science Research Cr. 3
This doctoral-level seminar is designed to introduce students to philosophies of science that are fundamental to the development of knowledge and theory in social science disciplines. Students will leave this course with an understanding of the conceptual nature of theory and the ways theory can be applied in knowledge development. By the end of this course students will have an understanding of the evolution and history of theory development related to social work and social welfare. The course emphasizes critical thinking and understanding of the theoretical and conceptual frameworks that inform scholarly inquiry. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.

SW 9170 Theories of Problems and Change across the Micro-Macro Continuum Cr. 3
This doctoral-level seminar is designed to introduce students to theories commonly used in social work research that span the micro-macro continuum. Students will leave this course with an understanding of the underlying concepts and assumptions associated with commonly utilized theories and the ways that these theories have been applied to social work research. In this course students will explore the ways that individual theories understand and define problems, the underlying assumptions of specific theories, and the nature of change as defined by each theory. By the end of the semester students will be able to design a multi-level research project to address a social science problem utilizing theories that span the micro-macro continuum. Offered Every Other Winter.
Prerequisite: SW 9160 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 9210 Theories for Practice and Research with Individuals Cr. 3
Major theoretical systems currently used in clinical social work practices presently used with individuals, examined from six vantage points: model origin; conceptual framework; view of person-in-environment; philosophy of treatment; model effectiveness; practice controversies. Offered Yearly.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SW 9220 Theories for Practice and Research with Groups and Families Cr. 3
Theories, models and perspectives guiding social work practice with families. Offered Yearly.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SW 9230 Theories for Practice and Research with Communities and Organizations Cr. 3
Practice theory at the macro level. Two perspectives: how macro serves as a context of social work practice at levels of policy, community, organization; and theories of practice with macro systems. How a scholar imparts content and undertakes research at these levels. Offered Yearly.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SW 9240 Social Work Education Cr. 3
Standards, trends and issues of contemporary and future social work education. Critical analysis of articulation among bachelor's, master's, doctoral education. Emphasis on course development, designing effective learning experiences. Offered Every Other Year.
Restriction(s): Enrollment limited to students in the PhD in Social Work program.

SW 9260 Current and Historical Trends in US Social Welfare Policy Cr. 3
Critical analysis in order to understand policy contexts that frame contemporary social work problems and practice. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

SW 9300 Applied Regression Analysis and Generalized Linear Models Cr. 3
Classic regression models, generalized linear models, including weighted least-squares, hierarchical linear models, logistic regression. Using SPSS to analyze social work practice data; interpretation of findings; communication of findings to scholars and practitioners. Offered Yearly.
Prerequisite: SW 9100 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

SW 9400 Qualitative Research Methods in Social Work Cr. 3
Examination of social work practice through case study, action research, and qualitative approaches to knowledge building. Offered Every Other Year.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SW 9410 Quantitative Research Methods in Social Work Cr. 3
Understanding and application of knowledge and skills in quantitative research methods aimed at increasing knowledge for social work practice and social welfare policy; clear, researchable questions; use of appropriate theory; selection of design; drawing of sample; and development of appropriate measures and operations within person-in-environment framework. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

SW 9420 Research Practicum Cr. 2-3
The goal of the research practicum is to provide students with an applied research opportunity with the mentorship of a Social Work faculty member. The student project that is expected to be the outcome of the practicum should be manuscripts and abstracts appropriate for dissemination to a professional audience. Offered Every Term.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SW 9430 Dissertation Seminar Cr. 1
Development, presentation and critique of dissertation research questions, in context of social work practice or social welfare policy. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

SW 9450 Writing for Publication and Presentation Cr. 1
The goal of the writing seminar is to strengthen healthy and productive writing habits to facilitate the development, presentation and critique of research, in context of social work practice or social welfare policy. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SW 9650 Preparing for the Job Search Cr. 1
The goal of the job search seminar is to prepare students for the job market. Although much of the class will focus on the academic job market, other options outside academia will be explored. The seminar will assist students in preparing materials and practicing skills to assist in both searching for job opportunities and preparing for conference interviews and job talks. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

SW 9697 Integrative Seminar in Social Work and Anthropology Cr. 3
Graduate-level integrative seminar that explores the intersection between social work and anthropology by critically analyzing relevant ethnographic scholarship. Offered Every Other Year.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SW 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Preliminary research relevant to proposed area of dissertation research. Offered Every Term.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.
Repeatable for 12 Credits

SW 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 3-9
Dissertation research of a major social work or social welfare issue or problem. Offered Every Term.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.
Repeatable for 9 Credits

SW 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 1-18
Dissertation research of a major social work or social welfare issue or problem. Offered Every Term.
Prerequisite: SW 9991 with a minimum grade of S
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.
Repeatable for 18 Credits

SW 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Dissertation research of a major social work or social welfare issue or problem. Offered Every Term.
Prerequisite: SW 9992 with a minimum grade of S
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SW 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Dissertation research of a major social work or social welfare issue or problem. Offered Every Term.
Prerequisite: SW 9993 with a minimum grade of S
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SW 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Continuation of dissertation research. Offered Every Term.
Restriction(s): Enrollment limited to students in the PhD in Social Work program; enrollment is limited to Graduate level students.

SWA - Swahili

SWA 1010 Elementary Swahili I Cr. 4
Training in pronunciation, aural comprehension, oral and written expression. Supervised laboratory period for part of class preparation. Offered Fall.
Fees: $5

SWA 1020 Elementary Swahili II Cr. 4
Continuation of SWA 1010. Offered Winter.
Prerequisites: SWA 1010 with a minimum grade of D-
Fees: $5

SWA 2010 Intermediate Swahili Cr. 4
Satisfies General Education Requirement: Global Learning Inquiry
Conversational Swahili and grammar review; reading of Swahili literature. Continuation of SWA 1020. Offered Spring/Summer.
Prerequisites: SWA 1020 with a minimum grade of D-
Fees: $5

SYE - Systems Engineering

SYE 5470 Creative Problem Solving in Design and Manufacturing Cr. 3
Concepts of laws of natural development of engineering systems. Algorithm for inventive (creative) problem-solving (AIPS-85). Creative use of physical and geometrical effects in design of mechanical and manufacturing systems. Concepts of strength, stiffness, vibratory effects, reliability in mechanical design. Offered Yearly.
Equivalent: IE 5490, ME 5470

SYE 6490 Introduction to Systems Engineering in Design Cr. 3
Provides an introduction to the engineering and analysis of human-made systems with an emphasis on the process of bringing systems into being. Includes an introduction to systems sciences and engineering and will follow the engineering process from conceptual systems design through concept selection, concept validation, life-cycle acquisition, life-cycle costing, software development, system architecture, and risk management. Addresses system engineering program evaluation including: evaluation requirements, evaluation of the system engineering organization, and program reporting, feedback, and control. Offered Fall.
Restriction(s): Enrollment limited to students in the College of Engineering.

SYE 6491 Systems Engineering Thinking and Concepting Cr. 3
This course aims to provide students with an understanding of the engineering approach of systems thinking and concepting. This is the art of looking at connected wholes rather than separate parts of a problem. Knowledge and skills will be developed to use in performing a deep analysis of a problem or opportunity situations where system responses are required. The course will provide an understanding of the essential properties of a systems thinker and the complete aspects of a problem in defining the needs and required functionality, documenting them, designing, and validating the product/system solution accordingly for a successful launch. Offered Yearly.

SYE 6492 Adaptive Acquisition Cr. 3
This course aims to provide students with an understanding of the adaptive acquisition process of complex system development. This includes the pathways and transitions to pathways to deliver a product or system and future updates. Students learn how Systems Engineering programs may tailor, combine, and transition between acquisition pathways to deliver system capabilities (including complexity, risk, and urgency) to satisfy user requirements. Offered Yearly.
Prerequisite: SYE 6491 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

SYE 7491 Systems Engineering Processes – Early to Mid-Design Cr. 3
This course aims to provide students with an understanding of the Systems Engineering approach to the engineering and analysis of human-made systems. This course provides students with an emphasis on the process of bringing systems into being from product/system inception into preliminary design. The course provides the systems engineering process operating over primary system life-cycle functions that will be addressed and broken down in detail. The course will then assess a student's proper practical use of the processes and tools. Offered Yearly.
Prerequisite: SYE 6491 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

SYE 7492 Systems Engineering Processes – Late to Post-Design Cr. 3
This course aims to provide students with an understanding of the Systems Engineering approach to the engineering and analysis of human-made systems. This course provides students with an emphasis on the process of bringing systems into being from product/system preliminary design to post design. The course provides the systems engineering process operating over primary system life-cycle functions that will be addressed and broken down in detail. The course will then assess a student's proper practical use of the processes and tools. Offered Yearly.
Prerequisite: SYE 6491 with a minimum grade of C and SYE 6492 with a minimum grade of C and SYE 7491 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

SYE 7495 Systems Engineering Capstone Cr. 3
This course aims to provide students with a detailed review of Systems Engineering major processes, management, and lifecycle processes. Students will conduct an individual capstone project to create a systems engineering and management plan for a major product/system design and development effort for a commercial or defense program. Offered Yearly.
Prerequisite: SYE 6491 with a minimum grade of C and SYE 6492 with a minimum grade of C and SYE 7491 with a minimum grade of C and SYE 7492 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the College of Engineering.

TED - Teacher Education

TED 2020 Technology Integration in Teaching Cr. 3
An introduction to various experiences exploring current technologies used to inform and support instructional strategies and practices, and content pedagogy in K-12 classrooms. Offered Every Term.

TED 2200 Foundations I: Foundations of Education in Urban Spaces Cr. 2
An examination of issues surrounding social justice in urban schools and society through the exploration of the historical, political and social trends that influence education. Offered Every Term.
Corequisite: TED 2205
Equivalent: TED 2250

TED 2205 Foundations Field Experience Cr. 1
This course is a school-based clinical experience for students interested in becoming a teacher. This experience includes but is not limited to, relevant classroom observations, collaborating with a cooperating teacher in a PreK through Grade 12 school setting, working with individual and small groups of students, and four face-to-face meetings with a course instructor. This course requires students to attend an off-campus placement, assigned by the Office of Educational Partnerships and Experiences. All students must have a clear background check through CastleBranch prior to being provided their placement information. Students must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Fall, Winter.
Corequisite: TED 2200

TED 2210 Foundations II: Intersections of Culture, Language, Identity & Schooling Cr. 2
This course is designed to increase students' knowledge and appreciation of the cultural, social, political and economic realities of our complex, pluralistic society in relation to our educational system. Students will examine the historical foundations of U.S. education, with attention to groups who have historically been denied access to equitable educational experiences. This course will examine educational policies, practices, and beliefs underlying inequities in schooling. The principles of multicultural education, culturally responsive pedagogy, universal design and socio-emotional learning will be introduced as frameworks for classroom organization and instructional planning. Offered Every Term.
Equivalent: BBE 1005

TED 2220 Foundations III: Foundations of Inclusive Schooling Cr. 2
Philosophy and practices of inclusive schooling, including legal and ethical responsibilities of teachers of marginalized learners, history of disability rights movement, inclusive teaching practices, Universal Design for Learning (UDL). Offered Every Term.

TED 2250 Becoming an Urban Educator Cr. 3
Examination of issues surrounding social justice in urban schools and society through the exploration of the historical, political, and social trends that influence education. Course includes a 40-hour service learning field experience. Offered Every Term.
Restriction(s): Enrollment limited to students in the College of Education.

TED 2500 Introduction to Asian American Studies Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
This course will provide an overview of the historical and contemporary experiences of Asian Americans and Asian migrants in the United States. We will examine major themes, including race and racism, exclusion and assimilation, ethnic and pan-ethnic identities and communities, intersectionality and comparative racialization, as well as activism and social movements. We will analyze these themes within the broad dynamics of empires, wars, globalizations, migrations, and the making of the U.S. as a nation-state and a global power. Offered Yearly.
Equivalent: ASN 2500

TED 5100 Professional Engagement, Advocacy, and Instructional Planning Cr. 2
Identify sources and impact of teaching beliefs, knowledge, and practices. Design curriculum to organize and enact knowledge, experience, and standards. Develop approaches for student engagement for learning and assessment. Analyze strategies of teacher agency and advocacy. Offered Every Term.

TED 5150 Analysis of Elementary Teaching Cr. 3,5
Organization and management of classrooms. Lesson planning, teaching strategies and testing procedures. Work in classroom assigned by both an experienced public school teacher and a University faculty member. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Education.
Fees: $29

TED 5350 Topics in Racial Justice in Education Cr. 3
Topics, theories, pedagogies, and research methodologies related to racial justice in PK-12 schools and in pre-service and in-service teacher education, including white supremacy, racialization, antiracism, and decolonization. Applications to educational policies, curriculum, instruction, and co-curricular activities that are relevant to racial/ethnic minority students and educators in PK-12 schools. Implications for students and educators from diverse and intersectional perspectives. Offered Every Term.
Repeatable for 12 Credits

TED 5400 Topics in LGBTQ+ Studies in Education Cr. 3
Topics, theories, and issues related to sexual orientation, gender identity, and gender expression in PK-12 schools and in pre-service and in-service teacher education. Applications to educational policies, curriculum, instruction, and co-curricular activities that are relevant to lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ+) students and educators in PK-12 schools. Implications for students and educators from diverse and intersectional perspectives. Offered Every Term.
Repeatable for 12 Credits

TED 5600 Assessment for Middle and Secondary Education Cr. 3
Candidates will learn about varying assessment techniques, their utility in the classroom, and appropriate strategies for their implementation. Candidates will also develop their knowledge of standardized testing and teacher evaluation systems. Offered Yearly.
Prerequisite: TED 6620
Corequisite: TED 6670
Restriction(s): Enrollment limited to students in the BS in Education or MA in Teaching programs.

TED 5650 Pre-Student Teaching Field Experience for Secondary Majors Cr. 5
Field experience in secondary school settings prior to full-time student teaching. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Education.

TED 5780 Directed Teaching and Conference Cr. 1-12
Directed teaching in schools at level for which students are preparing for certification. Includes regular conference in which teaching methods in various fields are explored. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Education.

TED 5790 Directed Teaching and Conference for Special Groups Cr. 1-15
Directed teaching in schools at level for which advanced students are preparing for certification; discussion of educational issues. For students seeking endorsements in special areas; for example: special education, early childhood, art. Students interested in completing general elementary and special education field experiences in the same semester should see advisor for eligibility requirements. Offered Fall, Winter.
Restriction(s): Enrollment limited to students in the College of Education.
Repeatable for 15 Credits

TED 5791 Directed Teaching and Conference for Pre-Kindergarten Cr. 6
This course is a preschool level field experience for students who are working toward the Birth-Kindergarten Endorsement for certification. Offered Yearly.
Corequisite: ELE 6080
Restriction(s): Enrollment limited to students in the College of Education.

TED 5792 Directed Teaching and Conference for Early Intervention and Early Childhood Special Education Cr. 6
Directed teaching in early intervention (EI) and/or early childhood special education (ECSE) for advanced students who are preparing for teaching certification in the Birth-Kindergarten grade band; discussion of educational issues. Offered Yearly.

TED 5900 Post-Certification Clinical Experience Cr. 1
This course offers a school-based clinical experience for PK-12 teachers seeking to add an additional content area endorsement (i.e., ESL/BBE, math, social studies, etc.) and/or grade band endorsement (i.e., K-8, 6-12, K-12) to an existing Michigan teaching certification. Experience includes relevant classroom observations; data collection on student learning, instruction, assessment; lesson plan implementation; and collaboration with the course instructor and mentor educators. Offered Every Term.
Repeatable for 4 Credits

TED 5998 Undergraduate Field Studies Cr. 1-8
This course provides students with initial fieldwork experience by offering community-centered, clinical experience for students pursuing initial teacher certification or endorsement. The field experience may include relevant BK-12 observations, classroom participation, and reflective activities. The course facilitates practical learning in various learning settings allowing students to apply theoretical knowledge in real-world scenarios. The fieldwork is complemented by a seminar, which provides a space for reflection, discussion, and further learning. Offered Intermittently.
Repeatable for 8 Credits

TED 6020 Technology Integration in Teaching Cr. 3
An introduction to various experiences exploring current technologies used to inform and support instructional strategies and practices, and content pedagogy in K-12 classrooms. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

TED 6140 Local School Curriculum Planning Cr. 1-6
For classroom teachers and teacher educators. Consideration of local problems in elementary and secondary school programs. Planning for better teaching and learning. Offered Intermittently.
Repeatable for 12 Credits

TED 6200 Foundations I: Foundations of Education in Urban Spaces Cr. 2
Examines issues surrounding social justice in urban schools and society through the exploration of the historical, political and social trends that influence education. Offered Every Term.
Corequisite: TED 6205

TED 6205 Foundations Field Experience Cr. 1
This course is a school-based clinical experience for students interested in becoming a teacher. This experience includes but is not limited to, relevant classroom observations, collaborating with a cooperating teacher in a PreK through Grade 12 school setting, working with individual and small groups of students, and four face-to-face meetings with a course instructor. This course requires students to attend an off-campus placement, assigned by the Office of Educational Partnerships and Experiences. All students must have a clear background check through CastleBranch prior to being provided their placement information. Students must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Every Term.
Corequisite: TED 6200

TED 6210 Foundations II: Intersections of Culture, Language, Identity and Schooling Cr. 2
This course is designed to increase students' knowledge and appreciation of the cultural, social, political and economic realities of our complex, pluralistic society in relation to our educational system. Students will examine the historical foundations of U.S. education, with attention to groups who have historically been denied access to equitable educational experiences. This course will examine educational policies, practices, and beliefs underlying inequities in schooling. The principles of multicultural education, culturally responsive pedagogy, universal design and socio-emotional learning will be introduced as frameworks for classroom organization and instructional planning. Offered Winter.

TED 6220 Foundations III: Foundations of Inclusive Schooling Cr. 2
Philosophy and practices of inclusive schooling, including legal and ethical responsibilities of teachers of marginalized learners, history of disability rights movement, inclusive teaching practices, Universal Design for Learning (UDL). Offered Every Term.

TED 6370 Equity and Inclusion in Diverse Urban Education Settings Cr. 4
Clinical based course, using inclusive instructional practices for all students including, but not limited to, students with disabilities, English Language Learners, and special populations such as: at-risk, and gifted and talented in inclusive urban settings. Offered Fall.

TED 6380 Integrating Content Cr. 1-12
Current issues and trends related to integrating content areas; theory, methods, materials and strategies. Content areas announced in Schedule of Classes. Offered Yearly.
Repeatable for 12 Credits

TED 6610 Elementary Education P-3 Clinical Methods I Cr. 2
This is a school-based clinical experience. This course is for candidates accepted into the Elementary Education P-3 certification program. Teacher candidates will be mentored by a university supervisor (supervisor) and cooperating teacher (CT) in the certification area. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in an elementary setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups and the whole class. This course requires candidates to attend an off-campus placement for one (1) full day per week or 2 half-days (4 hours each) each week for 15 weeks. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Prerequisites: TED 2205 with a minimum grade of C and ELE 6370 with a minimum grade of C (may be taken concurrently)
Corequisite: ELE 6210

TED 6615 Elementary Education 3-6 Clinical Methods I Cr. 2
This is a school-based clinical experience. This course is for candidates accepted into the Elementary Education 3-6 certification program. Teacher candidates will be mentored by a university supervisor (supervisor) and cooperating teacher (CT) in the certification area. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in an elementary setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups and the whole class. This course requires candidates to attend an off-campus placement for one (1) full day per week or 2 half-days (4 hours each) each week for 15 weeks. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Prerequisites: TED 2205 with a minimum grade of C and ELE 6380 (may be taken concurrently)
Corequisite: ELE 6215

TED 6620 Middle and Secondary Education Clinical Methods I Cr. 2
This is a school-based clinical experience. This course is for candidates accepted into a Middle Childhood or Secondary Education certification program. Teacher candidates will be mentored by a university supervisor (supervisor) and cooperating teacher (CT) in the certification area. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in a middle or secondary setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups, and the whole class. This course requires candidates to attend an off-campus placement for one (1) full day per week. The College will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Winter.
Prerequisites: (TED 2205 with a minimum grade of D- or TED 6205 with a minimum grade of C) and (EED 6330 (may be taken concurrently), MAE 5150 (may be taken concurrently), SCE 5060 (may be taken concurrently), or SSE 6710 (may be taken concurrently))
Restriction(s): Enrollment limited to students in the BS in Education or MA in Teaching programs.

TED 6630 Multi-Age Education Clinical Methods I Cr. 2
This is a school-based clinical experience. This course is for candidates accepted into a Multi-Age Education certification program. Teacher candidates will be mentored by a university supervisor and cooperating teacher (CT) in the certification area. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in a multi-age setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups, and the whole class. This course requires candidates to attend an off-campus placement for one (1) full day per week. The College will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Winter.
Prerequisites: TED 2205
Corequisite: AED 5500
Restriction(s): Enrollment is limited to students with a major in Multi-Age Education.

TED 6640 Deaf and Hard of Hearing Clinical Methods I Cr. 1
This is a school-based clinical experience for candidates accepted into the Deaf & Hard of Hearing endorsement program. Candidates will be mentored by a university supervisor (supervisor) and cooperating teacher (CT) in the certification area. Candidates will assist in planning, organizing, delivering, and assessing instruction in a setting that includes students who are deaf or hard of hearing. They will apply pedagogical content knowledge to their coursework when working with individuals, small groups, and a whole class. Candidates must apply for a clinical placement, for which they will attend an off-campus placement for four (4) hours per week. The Office of Educational Partnerships & Experiences (O3P) will assign the placement. Candidates must have a clear background check through the COE prior to being informed of their placement. Candidates must have their own transportation. Offered Yearly.
Prerequisites: ASE 3040 with a minimum grade of D-
Corequisite: ASE 5080

TED 6660 Elementary Education Clinical Methods II Cr. 2
This is a school-based clinical experience. This course is for candidates accepted into the Elementary Education certification program. Teacher candidates will be mentored by a university supervisor (supervisor) and cooperating teacher (CT) with like certification. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in an elementary setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups, and the whole class. This course requires candidates to attend an off-campus placement for 1 full day per week. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Prerequisites: (TED 2205 with a minimum grade of C or TED 6205 with a minimum grade of C), (TED 6610 with a minimum grade of C or TED 6615 with a minimum grade of C), (TED 6370 with a minimum grade of C or TED 6380 with a minimum grade of C), and (object Object)

TED 6670 Middle and Secondary Education Clinical Methods II Cr. 3
This is a school-based clinical experience. This course is for candidates accepted into a Middle Childhood or Secondary Education certification program. Teacher candidates will be mentored by a university supervisor (supervisor) and cooperating teacher (CT) with like certification. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in a middle or secondary setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups, and the whole class. This course requires candidates to attend an off-campus placement for 2 full days per week. The College will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Fall.
Prerequisite: TED 6620
Restriction(s): Enrollment limited to students in the BS in Education or MA in Teaching programs.

TED 6680 Multi-Age Education Clinical Methods II Cr. 3
This is a school-based clinical experience. This course is for candidates accepted into a Multi-Age Education certification program. Teacher candidates will be mentored by a university supervisor and cooperating teacher (CT) with like certification. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in a multi-age setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups, and the whole class. This course requires candidates to attend an off-campus placement for 2 full days per week. The College will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Fall.
Corequisite: AED 5510
Restriction(s): Enrollment is limited to students with a major in Multi-Age Education.

TED 6710 Middle and Secondary Education Student Teaching Seminar Cr. 3
This course is designed (1) to support you in the process of becoming a teaching professional, (2) to provide you with a space to share your experiences, questions, discoveries, and reflections, and (3) to synthesize the material learned in university courses and what is happening in PK-12 classrooms. A focus is placed on the process of finding a teaching job, the components of a teaching portfolio, how to prepare for a successful interview, and what to expect as a first-year teacher. Offered Winter.
Corequisite: TED 6760

TED 6720 Multi-Age Education Student Teaching Seminar Cr. 3
This course is designed (1) to support you in the process of becoming a teaching professional, (2) to provide you with a space to share your experiences, questions, discoveries, and reflections, and (3) to synthesize the material learned in university courses and what is happening in PK-12 classrooms. A focus is placed on the process of finding a teaching job, the components of a teaching portfolio, how to prepare for a successful interview, and what to expect as a first-year teacher. Offered Winter.
Corequisite: TED 6770

TED 6730 Early Childhood Preschool Apprenticeship Cr. 6
This school-based experience is for Early Childhood Education certification candidates. Candidates are mentored by a supervisor & cooperating teacher (CT) with like certification. Candidates transition into taking the lead in a classroom setting. They plan, deliver & assess instruction in an ECE setting. They apply pedagogical content knowledge and work with individuals, small groups, and the whole class. Candidates must attend the COE Early Childhood Center for one-half day, every day for the entire semester. The College of Education assigns the placement. All candidates must have a clear background check through CastleBranch prior to confirming their placement. Candidates must meet all requirements for Michigan childcare licensing, including comprehensive background check with FBI fingerprints, first aid and CPR certification, and completing required health and safety modules in MiRegistry.org. Candidates must have their own transportation. Offered Yearly.
Prerequisites: (ELE 2020 with a minimum grade of C or ELE 6020 with a minimum grade of C), (ELE 2055 with a minimum grade of C or ELE 6055 with a minimum grade of C), ELE 6041 with a minimum grade of C, and ELE 6100 with a minimum grade of C
Corequisite: ELE 6080
Restriction(s): Enrollment is limited to Graduate level students.

TED 6735 Graduate Early Childhood Preschool Apprenticeship Cr. 4
This school-based experience is for Early Childhood Education certification candidates. Candidates are mentored by a supervisor & cooperating teacher (CT) with like certification. Candidates transition into taking the lead in a classroom setting. They plan, deliver & assess instruction in an ECE setting. They apply pedagogical content knowledge and work with individuals, small groups, and the whole class. Candidates must attend the COE Early Childhood Center for one-half day, every day for the entire semester. The College of Education assigns the placement. All candidates must have a clear background check through CastleBranch prior to confirming their placement. Candidates must meet all requirements for Michigan childcare licensing, including comprehensive background check with FBI fingerprints, first aid and CPR certification, and completing required health and safety modules in MiRegistry.org. Candidates must have their own transportation. Offered Yearly.
Prerequisites: (ELE 2020 with a minimum grade of C or ELE 6020 with a minimum grade of C), (ELE 2055 with a minimum grade of C or ELE 6055 with a minimum grade of C), ELE 6041 with a minimum grade of C, and ELE 6100 with a minimum grade of C
Corequisite: ELE 6080
Restriction(s): Enrollment is limited to Graduate level students.

TED 6740 Early Childhood Special Education Student Teaching Cr. 12
This is a school-based Student Teaching experience, for candidates accepted into the Early Childhood Education certification program. Candidates will be mentored by a university supervisor and cooperating teacher (CT) with like certification. Candidates slowly transition into taking the lead in the classroom setting. They are responsible for planning, delivering, and assessing instruction in an early childhood setting. They apply pedagogical content knowledge to their coursework and work with individuals, small groups, and the whole class. Candidates are required to attend an off-campus placement every day, all day for an entire 15-week semester. The College of Education will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Prerequisite: TED 6730 with a minimum grade of S

TED 6745 Graduate Early Childhood Special Education Student Teaching Cr. 8
This is a school-based Student Teaching experience, for candidates accepted into the Early Childhood Education certification program. Candidates will be mentored by a university supervisor and cooperating teacher (CT) with like certification. Candidates slowly transition into taking the lead in the classroom setting. They are responsible for planning, delivering, and assessing instruction in an early childhood setting. They apply pedagogical content knowledge to their coursework and work with individuals, small groups, and the whole class. Candidates are required to attend an off-campus placement every day, all day, for an entire 15-week semester. The College of Education will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Prerequisite: TED 6735 with a minimum grade of S
Restriction(s): Enrollment is limited to Graduate level students.

TED 6750 Elementary Education Student Teaching Cr. 12
This is a school-based Student Teaching experience. Teacher candidates will be mentored by a university supervisor and cooperating teacher with like certification. Candidates will slowly transition into taking the lead in the classroom setting. They will be responsible for planning, delivering, and assessing instruction in an elementary level setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups, and the whole class. Candidates are required to attend an off-campus placement every day, all day, for an entire 15-week semester. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Yearly.
Prerequisites: ELE 6805 with a minimum grade of C or TED 6660 with a minimum grade of C
Restriction(s): Enrollment limited to students in the BS in Education program.

TED 6755 MAT Elementary Education Student Teaching Cr. 8
This is a school-based Student Teaching experience. Teacher candidates will be mentored by a university supervisor and cooperating teacher (CT) with like certification. Candidates will slowly transition into taking the lead in the classroom setting. They will be responsible for planning, delivering, and assessing instruction in an elementary level setting. They will apply pedagogical content knowledge to their coursework, working with individuals, small groups, and the whole class. Candidates must attend an off-campus placement every day, all day, for an entire 15-week semester. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Yearly.
Prerequisite: ELE 6805 with a minimum grade of C or TED 6660 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Elementary Education; enrollment limited to students in the MA in Teaching program.

TED 6760 Middle and Secondary Education Student Teaching Cr. 12
This is a school-based Student Teaching experience. This course is for candidates accepted into a Middle Childhood or Secondary Education certification program. Candidates will be mentored by a university supervisor and cooperating teacher with like certification. Candidates will slowly transition into taking the lead in a classroom setting. They will be responsible for planning, delivering, & assessing instruction in a middle or secondary setting. They will apply pedagogical content knowledge from their coursework - working with individuals, small groups, & the whole class. Candidates must attend an off-campus placement every day, all day, for an entire 15-week semester. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Fall, Winter.
Prerequisite: TED 6670
Corequisite: TED 6710
Restriction(s): Enrollment is limited to students with a major in Middle Childhood Education or PB Teaching Cert; enrollment limited to students in the BS in Education program.

TED 6765 MAT Middle and Secondary Education Student Teaching Cr. 8
This is a school-based Student Teaching experience. Candidates must be accepted into an MAT Middle Childhood or Secondary Education certification program. Candidates will be mentored by a university supervisor and cooperating teacher with like certification. Candidates will slowly transition into taking the lead in the classroom setting. They will be responsible for planning, delivering, and assessing instruction in a middle or secondary setting. They apply pedagogical content knowledge to their coursework - working with individuals, small groups, and the whole class. Candidates must attend an off-campus placement every day, all day, for an entire 15-week semester. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Fall, Winter.
Prerequisite: TED 6670
Corequisite: TED 6710
Restriction(s): Enrollment is limited to students with a major in Middle Childhood Education or Secondary Education.

TED 6770 Multi-Age Education Student Teaching Cr. 12
This is a school-based Student Teaching experience. This course is for candidates accepted into a Multi-Age Education certification program. Teacher candidates will be mentored by a university supervisor and cooperating teacher (CT) with like certification. Candidates will slowly transition into taking the lead in the classroom setting. They will be responsible for planning, delivering, and assessing instruction in a multi-age setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups, and the whole class. Candidates are required to attend an off-campus placement every day, all day, for an entire 15-week semester. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Winter.

TED 6775 MAT Multi-Age Education Student Teaching Cr. 8
This is a school-based Student Teaching experience. This course is for candidates accepted into an MAT Multi-Age Education certification program. Teacher candidates will be mentored by a university supervisor and cooperating teacher (CT) with like certification. Candidates will slowly transition into taking the lead in the classroom setting. They will be responsible for planning, delivering, and assessing instruction in a multi-age setting. They will apply pedagogical content knowledge to their coursework. They will work with individuals, small groups, and the whole class. Candidates are required to attend an off-campus placement every day, all day, for an entire 15-week semester. The Office of Educational Partnerships and Experiences will assign the placement. All candidates must have a clear background check through CastleBranch prior to being provided with their placement information. Candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Multi-Age Education.

TED 6780 Content Endorsement Practicum Cr. 1
This is a school-based clinical practicum. This course is for candidates who are adding a content endorsement to their initial teacher certification. Candidates are mentored by a cooperating teacher (CT) with like endorsement certification. Candidates must be accepted into one of the EPP Endorsement programs. Candidates assist in planning, organizing, delivering, and assessing of instruction at their endorsement setting. They apply pedagogical content knowledge from their coursework, working with individuals, small groups, and the whole class. This course requires students to attend an off-campus placement for 30 hours within one semester. Placements will be made by the Office of Educational Partnerships, and Experiences or hours will be completed as 'on-the-job.' Candidates must have a clear background check through CastleBranch prior to the beginning of the semester. Candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Fall, Winter.

TED 6785 Grade Band Endorsement Practicum Cr. 1
This is a school-based clinical endorsement. This course is for candidates who are adding a grade-band endorsement to their initial teacher certification. Candidates are mentored by a cooperating teacher (CT) with like endorsement. Candidates must be accepted into one of the EPP Endorsement programs. Candidates will assist in planning, organizing, delivering, and assessing of instruction at their endorsement setting. They apply pedagogical content knowledge from their coursework and work with individuals, small groups, and the whole class. This course requires students to attend an off-campus placement for 50 hours within one semester. Placements will be made by the Office of Educational Partnerships and Experiences or completed as 'on-the-job'. Candidates must have a clear background check through CastleBranch prior to the beginning of the semester. Students must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Fall, Winter.

TED 6790 Special Education Internship Cr. 6
This is a school-based internship. This course is for candidates accepted into one of the Special Education Endorsement programs. Teacher candidates will be mentored by a university supervisor (supervisor) and cooperating teacher (CT) with like certification. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in a special education setting. They will apply pedagogical content knowledge from their coursework. They will work with individuals, small groups, and the whole class. This course requires students to attend an off-campus placement for eight (8) full-time consecutive weeks. The College will assign the placement. All students must have a clear background check through CastleBranch prior to being provided with their placement information. Students must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Yearly.
Prerequisites: (SED 5000 with a minimum grade of C, SED 5075 with a minimum grade of C, SED 5080 with a minimum grade of C, and SED 5090 with a minimum grade of C) and (5 of SED 5110 with a minimum grade of C, SED 5115 with a minimum grade of C, SED 5121 with a minimum grade of C, SED 5125 with a minimum grade of C, and SED 5130 with a minimum grade of C or 5 of SED 6021 with a minimum grade of C, SED 6030 with a minimum grade of C, SED 6050 with a minimum grade of C, SED 6060 with a minimum grade of C, and SED 6070 with a minimum grade of C)
Restriction(s): Enrollment is limited to students with a major in PB Cert Endorsement, Special Education, Special Education Honors or PB Teaching Cert.

TED 6795 Graduate Special Education Internship Cr. 4
This is a school-based internship. This course is for candidates accepted into one of the Graduate Special Education Endorsement programs. Teacher candidates will be mentored by a university supervisor (supervisor) and cooperating teacher (CT) with like certification. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in a special education setting. They will apply pedagogical content knowledge from their coursework. They will work with individuals, small groups, and the whole class. This course requires students to attend an off-campus placement for eight (8) full-time consecutive weeks. The College will assign the placement. All students must have a clear background check through CastleBranch prior to being provided with their placement information. Students must have their own transportation and may be placed within a 25-mile radius of Wayne State University. Offered Fall, Winter.
Prerequisites: (SED 5000 with a minimum grade of C, SED 5075 with a minimum grade of C, SED 5080 with a minimum grade of C, and SED 5090 with a minimum grade of C) and (5 of SED 5110 with a minimum grade of C, SED 5115 with a minimum grade of C, SED 5121 with a minimum grade of C, SED 5125 with a minimum grade of C, and SED 5130 with a minimum grade of C or 5 of SED 6021 with a minimum grade of C, SED 6030 with a minimum grade of C, SED 6050 with a minimum grade of C, SED 6060 with a minimum grade of C, and SED 6070 with a minimum grade of C)
Restriction(s): Enrollment is limited to students with a major in Curriculum and Instruction or Teaching and Learning; enrollment is limited to Graduate level students.

TED 6810 Special Education Practicum Cr. 3
This is a school-based practicum. This course is for candidates accepted into one of the Special Education Endorsement programs. Teacher candidates will be mentored by a cooperating teacher (CT) with matching certification. Candidates will assist in the planning, organizing, delivering, and assessing instruction in a special education setting. They will apply pedagogical content knowledge from their coursework. They will work with individuals, small groups, and the whole class. This course requires teacher candidates to attend an off-campus placement for 180 hours within one semester. Depending on circumstances, placements will be made by the Office of Educational Partnerships, and Experiences or hours will be completed as 'on-the-job.' All candidates must have a clear background check through CastleBranch prior to the beginning of the semester. Teacher candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Fall, Winter.

TED 6815 Graduate Special Education Practicum Cr. 2
This is a school-based practicum. This course is for candidates accepted into one of the Special Education Endorsement programs. Teacher candidates will be mentored by a cooperating teacher (CT) with matching certification. Candidates will assist in the planning, organizing, delivering, and assessing instruction in a special education setting. They will apply pedagogical content knowledge from their coursework. They will work with individuals, small groups, and the whole class. This course requires teacher candidates to attend an off-campus placement for 180 hours within one semester. Depending on circumstances, placements will be made by the Office of Educational Partnerships, and Experiences or hours will be completed as 'on-the-job.' All candidates must have a clear background check through CastleBranch prior to the beginning of the semester. Teacher candidates must have their own transportation and may be placed within a 25-mile radius of WSU. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Curriculum and Instruction or Teaching and Learning.

TED 6820 BBE-ESL Endorsement Clinical Cr. 2
This is a school-based clinical experience for candidates who are adding a content endorsement to their initial teacher certification & accepted into one of EPP endorsement programs. Teacher candidates will be mentored by a cooperating teacher (CT) with like endorsement & assist in the planning, organizing, delivering, & assessing of instruction in their endorsement setting. They will apply pedagogical content knowledge from their coursework while working with individuals, small groups, & the whole class. This course requires students to attend an off-campus placement for 50 hrs within one semester & complete the Sheltered Instruction Observation Protocol modules. Placements will be made by the Office of Educational Partnerships & Experiences or hours will be completed as 'on-the-job'. All candidates must have a clear background check through CastleBranch prior to being provided their placement information & their own transportation as they may be placed within a 25-mile radius of WSU. Offered Yearly.
Prerequisites: LED 6565 with a minimum grade of C

TED 6840 Special Education-General Education Student Teaching Cr. 12
This is a school-based internship. This course is for candidates accepted into a Special Education program that includes a general education certification and SED endorsement. Teacher candidates will be mentored by a university supervisor and cooperating teacher with like certification. Candidates will assist in the planning, organizing, delivering, and assessing of instruction in a special education setting. They will apply pedagogical content knowledge from coursework to work with individuals, small groups, and the whole class. This course requires students to attend an off-campus placement, assigned by the Office of Professional Practice & Partnership, for an entire semester. All students must have a clear background check through the COE prior to being informed of their placement. Candidates must have their own transportation and will be placed in a school to support the development of skills working with students within their certification & endorsement area. Offered Fall, Winter.

TED 7000 Introductory Master's Seminar Cr. 2-3
Skill development in the three primary areas: information access through the variety of resources available in a university library; comprehension and evaluation of technical literature; employment of APA style in technical writing. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Graduate level students.

TED 7030 Foundations of Teaching and Learning Cr. 3
Theoretical foundations guiding classroom teaching and learning with applications to curricular and instructional practices and their implications for the experiences of children of cultural heritages. Offered Every Term.
Restriction(s): Enrollment limited to students in a Doctor of Education, Doctor of Philosophy, Education Specialist Cert or Master of Education degrees.

TED 7060 Inclusive Education, Curriculum and Pedagogy Cr. 3
This course has two emphases. First, it provides graduate students with foundational knowledge about the philosophy and sociology of inclusive education as it relates to students who are members of marginalized groups. Second, it provides students with opportunities to learn a basic framework for inclusive education, curriculum, and pedagogy. Offered Every Term.
Restriction(s): Enrollment limited to students in a Doctor of Education, Doctor of Philosophy, Education Specialist Cert or Master of Education degrees.

TED 7990 Directed Study Cr. 1-8
Directed study for teacher education allows the student to explore a topic of interest under the close supervision of a faculty member. The course may include directed readings, applied work, assisting a faculty member with a research project, carrying out an independent research project, co-teaching a class, or other activities deemed appropriate. Regardless of the nature of the experience, the work must culminate in a formal paper. The specific course requirements are described in the Independent Studies Proposal form to be completed by the student and faculty supervisor. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

TED 7996 Directed Research in Teacher Education Cr. 1-8
This course allows the student to explore a research topic of interest under the close supervision of a faculty member. The course may include assisting a faculty member with a research project, carrying out an independent research project, or other research-oriented activities deemed appropriate. Regardless of the nature of the experience, the work must culminate in a formal paper. The specific course requirements are described in the Independent Studies Proposal form to be completed by the student and faculty supervisor. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

TED 7998 Graduate Field Studies Cr. 1-8
This course covers the broad range of topics associated with best education practices. It provides students with fieldwork experience by offering community-centered, clinical experience for students pursuing initial teacher certification or endorsement. The field experience may include relevant BK-12 observations, classroom participation, and reflective activities. The course facilitates practical learning in various learning settings allowing students to apply theoretical knowledge in real-world scenarios. The fieldwork is complemented by a seminar, which provides a space for reflection, discussion, and further learning. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

TED 7999 Master's Seminar and Essay or Project Cr. 3
Skill development in the four primary areas: information access through the variety of resources available in a university library; comprehension and evaluation of technical literature; conducting a research project related to current educational theories and practices, and employment of APA style in technical writing. Offered Yearly.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Teacher Education.

TED 8100 Doctoral Seminar: Thought, Language, Power, Social Interaction and Learning Cr. 3
Examines the relationships between thought, language, power, and social interaction as they relate to teaching and learning. The seminal works of educational theorists who address these topics will be explored and applied to present day curricula and issues in education. This seminar will introduce socio-cultural theories and theorists and the influence their stances have had and continue to have on education across time and place. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Educational Studies; enrollment is limited to Graduate level students.

TED 8150 Pro-Seminar I: Introduction to Research in Educational Studies Cr. 1
Introduction to doctoral research in educational studies including: research and inquiry processes; educational issues and problems addressed by educational studies scholars; and tools of educational research. Offered Fall.
Restriction(s): Enrollment is limited to students with a major in Educational Studies; enrollment is limited to Graduate level students.

TED 8200 Doctoral Seminar: Education in Socio-Political Culture Cr. 3
Investigates educational issues within the social, political, and cultural arena; examines mechanisms, policies, and practices that impact teaching and learning. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Educational Studies; enrollment is limited to Graduate level students.

TED 8250 Pro-Seminar II: Introduction to Research in Educational Studies Cr. 1
Introduction to research in educational studies with emphasis on problem identification, literature review, and academic positions for educational researchers. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Educational Studies; enrollment is limited to Graduate level students.

TED 8270 Seminar: Issues in Curriculum and Instruction Cr. 2-6
For specialist and doctoral students. Analysis of basic issues in curriculum and instruction and their implications for program: early childhood, K-12, adult curricula. Critique of recent research and development efforts. Application to problems of leadership in school-wide curricular improvements. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

TED 8280 Intersectional and Critical Qualitative Methods in Education Cr. 3
To implement knowledge of critical qualitative methodologies for research across educational contexts and spaces. To understand ethics of qualitative educational research with and for youth and communities. To practice approaches to critical qualitative research design, implementation, data collection, and data analysis. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

TED 8350 Basic Principles of Curriculum and Instruction Cr. 3
Theoretical bases of curricular development and instructional innovation. Their application to the tasks of the curriculum maker explored as various education positions are taken and examined. Offered Intermittently.
Restriction(s): Enrollment is limited to students with a major in Educational Studies; enrollment is limited to Graduate level students.

TED 8400 Issues in Urban Education Cr. 3
Explores urban issues of global, national, and regional importance in the field of curriculum and critical social inquiry from the perspective of those who are often the least served by current educational and social arrangements. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

TED 8500 Integrating STEM Content Cr. 3
Current issues and trends related to integrating STEM content areas; theory, methods, materials, and strategies. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

TED 8550 Doctoral Seminar: STEM Education and Research Cr. 3
Critical analysis of policy, theory, practice, and research in STEM education disciplines; Integrating STEM education deliberation, policymaking, practice, and research; Cultural/social/political and historical/contemporary bases of STEM education; Nodes of intersection of policies, theories, practice, and research as integrated STEM education. Offered Every Other Year.
Restriction(s): Enrollment is limited to students with a major in Educational Studies; enrollment is limited to Graduate level students.

TED 9130 Doctoral Seminar in Curriculum and Instruction Cr. 3
An examination of curriculum theory and concepts that apply to the development of content and instructional strategies relevant to contemporary education. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

TED 9620 Doctoral Internship in Curriculum and Instruction Cr. 3-6
Planned and supervised professional field-based experience relevant to doctoral program and projected profession. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

THD - Theatre and Dance

THD 5141 State of the Arts: Contemporary Creative and Curatorial Practices Cr. 3
This course offers students an in-depth exploration of the creative and curatorial economy, focusing on the complex dynamics of artist relations, ethical considerations within cultural and creative industries, and the balance between work, life, and community. This course examines traditional and emerging trends in the arts, providing a thoughtful analysis for models that address the challenges artists, curators, directors, and historians face in today's dynamic art environment. Offered Intermittently.

THD 5651 Leadership and Team Building in the Creative Industries Cr. 3
This course explores effective leadership, engaging students in critical thinking, readings, and discussions to develop an understanding of essential leadership skills, consensus building, and innovative models for visioning. Students will have the opportunity to learn from artists, creative practitioners, and case studies, while analyzing various leadership styles, skills, and the dynamics of working in various sectors of the creative industry. Offered Intermittently.
Restriction(s): Enrollment limited to students in the Fine, Performing & Comm. Arts.

THD 5661 Artistic Movements and Cultural Futures: Shaping Structural Change Cr. 3
This web-based course examines the intersection of artistic movements and cultural movements, exploring how creativity can drive structural change in societies. Students will analyze the forces behind cultural shifts throughout the 20th and 21st centuries and consider how art molds, transforms, and reflects these changes. By focusing on historical and future contexts, the course equips learners to envision and influence cultural development. Offered Intermittently.
Restriction(s): Enrollment is limited to students in the Department of Theatre and Dance.

THD 5662 Art as Social Action: Realizing Impact Through Community-Driven Art Cr. 3
This course will explore a wide range of artistic methods that serve as a catalyst for social and community change. We will learn about specific theories and principles of social justice and community engagement and apply them to real world arts contexts. Offered Intermittently.

THD 5665 Grant Writing and Fundraising for the Arts Cr. 3
By engaging in critical analysis, readings, and discussions, students will gain insights into the fundamentals of fundraising, grant writing and resource sharing in the arts. The course offers students the chance to learn from each other, artists, creative professionals, and various case studies, while also examining different skills for the challenging arts funding landscape. Offered Intermittently.
Restriction(s): Enrollment is limited to students in the Department of Theatre and Dance.

THD 5674 Writing for the Arts: Narrative Strategies for Artists and Entrepreneurs Cr. 3
This web-based course equips artists and entrepreneurs with narrative strategies to engage audiences and effectively communicate their vision and ideas. Students will apply these techniques to real-world artistic and business projects, enhancing their ability to convey compelling stories that inspire action and connection. Offered Intermittently.

THD 5675 Marketing and Public Relations in The Arts Cr. 3
This course examines strategies for marketing and public relations specific to the arts, focusing on promoting organizations and events while engaging diverse audiences. Students will develop skills in branding, media relations, and digital marketing tailored to the creative sector. Offered Intermittently.
Restriction(s): Enrollment is limited to students in the Department of Theatre and Dance.

THD 5690 Performance Studies and Collaborative Thinking Cr. 3
This course offers an immersive exploration into Performance Studies, providing an opportunity for students to implement critical thinking around arts leadership and organization, while offering points of connection between disciplinary practices and the broader artistic and administrative landscape. Offered Intermittently.
Restriction(s): Enrollment is limited to students in the Department of Theatre and Dance.

THD 5961 Research in Art Creation and Production Cr. 3
This class delves into the critical role of research methodologies in the artistic process, offering students a comprehensive understanding of how to integrate research into their artistic and leadership endeavors. Students will learn to conduct effective research that enhances creativity, leading to the production of informed and innovative art projects. Offered Intermittently.
Restriction(s): Enrollment is limited to students in the Department of Theatre and Dance.

THD 7901 Research Methods in Theatre and Dance Cr. 3
Principles and methods of research; use of published research as examples in dance and theatre study and practice. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Theatre and Dance.

THD 7951 Foundations of Theatre and Dance Pedagogy Cr. 3
Historical, philosophical, cultural, and ethical dimensions of teaching and learning in multiple dance and theatre environments. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Theatre and Dance.

THD 8875 Seminar: Research Topics in Theatre and Dance Cr. 3
In-depth research on selected topics in theatre and dance. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Theatre and Dance.

THD 8951 Arts and Human Development Cr. 3
Integrated approaches to the arts for early childhood, youth and adolescents, and older adults. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Theatre and Dance.

THD 8965 Principles of Teaching Artistry Cr. 3
Research-based seminar on aspects of management administration, integrated arts, and assessment in multiple dance and theatre teaching artist environments. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Theatre and Dance.
Repeatable for 6 Credits

THR - Theatre

THR 1010 Introduction to the Theatre Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Historical, critical and cultural aspects of theatre and drama discussed relative to play attendance. No credit after THR 1111. Offered Every Term.
Fees: $60

THR 1030 Introduction to Black Theatre and Performance Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Origins, development, and current trends with production techniques and problems related to the special area of the drama. Offered Every Term.
Fees: $45

THR 1041 Musical Theatre Appreciation Cr. 3
Satisfies General Education Requirement: Cultural Inquiry
Survey of American musical theatre from its multiple historical origins to the present. Development of musical theatre understanding and critical observational skills through focus on the ways in which the genre has emerged through interactions between musical theatre artists and their audiences. Offered Fall, Winter.
Fees: $10

THR 1111 Fundamentals of Theatre Cr. 3
Introduction to the aesthetic principles of theatre as an art form: with special focus on the design principles and theatre spaces. Required for theatre majors. No credit after THR 1010. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $10

THR 1121 Play Analysis Cr. 3
Reading and structural analysis of plays. Selected nineteenth and twentieth century plays. Offered Winter.
Fees: $10

THR 1211 Acting I Cr. 3
An introduction to the vocabulary of the stage, the process of acting, improvisation, and ensemble work. Offered Yearly.

THR 1215 Acting II Cr. 3
Continuation of THR 1040 or THR 1211; scene study, improvisation in development of actor's craft. Offered Yearly.
Prerequisites: THR 1040 with a minimum grade of C- or THR 1211 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.

THR 1411 Fundamentals of Crafts: Scenery and Costumes Cr. 3
An introduction to stagecraft techniques and practices used in the creation of scenery and costumes for the performing arts. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $45

THR 1451 Principles of Makeup Cr. 1
Fundamentals of theatre makeup. Laboratory projects coordinated with University Theatre productions. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Arts or Bachelor of Fine Arts degrees.
Fees: $30

THR 1461 Fundamentals of Crafts: Lighting and Stage Management Cr. 3
An introduction to stagecraft techniques and practices used in the performing arts for lighting, sound, and stage management. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $45

THR 2130 Stagecraft Cr. 3
Principles of scenic construction and painting. Types and utilization of stage scenery. Laboratory projects coordinated with University Theatre productions. Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Theatre or Theatre Honors; enrollment limited to students in the BA in Fine Arts or Bachelor of Fine Arts programs; enrollment limited to students in a Bachelor of Arts or Bachelor of Fine Arts degrees.
Fees: $30

THR 2211 Acting: Scene Study Cr. 3
Continuation of THR 1211 with concentration on working on a role; breakdown of text into actions, objectives, beats; sensory work through scene work. Offered Every Term.
Prerequisites: THR 1211 with a minimum grade of C- or THR 1040 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $25

THR 2220 Fundamentals of Voice and Movement Cr. 3
Basic explorations of movement and voice focusing on the experiential study of a variety of movement and vocal techniques in order to expose the student to differing approaches and styles of voice and movement work that are commonly practiced in contemporary theatre. Offered Every Term.
Prerequisites: THR 1211 with a minimum grade of C- or THR 1040 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $25

THR 2221 Stage Movement I Cr. 2
Introduction to the principles, practices, and exercises in body technique and stage movement. Offered Fall.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $15

THR 2231 Voice Lab I Cr. 2
Introduction to vocal production. Emphasis on relaxation, breathing techniques, and the production of vocal sounds. Offered Fall.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25

THR 2251 Musical Theatre Performance: Contemporary Cr. 2
This foundational musical theatre course addresses the singing and acting styles of contemporary American Musical Theatre. Emphasis will be placed on current industry standards and the recent evolution of performance styles. Offered Fall.
Prerequisite: THR 1211
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $25

THR 2255 Musical Theatre Performance: Golden Age Cr. 2
This musical theatre course addresses the singing and acting styles of American Musical Theatre from 1930s-1970s. Emphasis will be placed on the development of the musical form and its specific styles against the historical backdrop from which they emerged. Offered Winter.
Prerequisite: THR 1211
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $50

THR 2301 Introduction to Design for the Theatre Cr. 3
Methods and materials laboratory course. Practical exercises. Prerequisite to stage, costume or lighting design; techniques of costume, lighting design; rendering, drafting, perspective, color, and design. Offered Fall.
Prerequisites: THR 1010 with a minimum grade of C- or THR 1111 with a minimum grade of C-
Fees: $30

THR 2580 Fundamentals of Production Practice Cr. 3
Demonstration and application of principles and skills fundamental to theatre and dance production, specifically focusing on duties required of stagehands and backstage crew. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Dance, Dance Honors, Theatre or Theatre Honors.
Fees: $80

THR 2581 Theatre Studio - Performance Cr. 1
Supervised studio in theatre performance requiring participation in department productions. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $80
Repeatable for 3 Credits

THR 2582 Intermediate Production Practice Cr. 3
Students receive practice in a production setting by working on Theatre and Dance Department productions as a member of a shop crew or in a supporting role as a member of the design or management team for an active production. Offered Fall, Winter.
Prerequisites: THR 2580 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $80
Repeatable for 9 Credits

THR 2585 Theatre Studio - Theatre Management Cr. 1
Supervised studio in theatre management as applied to department productions. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $80
Repeatable for 3 Credits

THR 2611 Stage Management Cr. 3
Study of activities except acting that take place on stage or backstage during a technical performance and during rehearsal period. Offered Every Term.
Prerequisites: THR 1111 with a minimum grade of C- or THR 1010 with a minimum grade of C-
Fees: $20

THR 2651 Introduction to Life Skills for the Creative Entrepreneur Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
An introduction to the quantitative and analytical skills utilized by successful entrepreneurs. Topics include: fund management, financial management, contracts, development, and marketing. This course is intended for all students preparing for a career as an independent entrepreneur, business person, artist, creator, musician, writer, and any others seeking self-determined professional opportunities. Offered Every Term.

THR 3211 Acting III Cr. 3
Study and exercise in the fundamentals of the actor's craft. Emphasis on the development of the actor's inner resources as applied to dramatic action, and consideration of basic stage techniques. Offered Fall.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25

THR 3215 Acting IV Cr. 3
Development of the techniques and basic principles of character building. Emphasis on the development of a role through script, exercises and scene work. Offered Winter.
Prerequisites: THR 2030 with a minimum grade of C- or THR 3211 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25

THR 3221 Stage Movement II Cr. 2
Continuation of THR 2010 or THR 2221. Emphasis on character movement. Offered Winter.
Prerequisites: THR 2010 with a minimum grade of C- or THR 2221 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $50

THR 3225 Stage Movement III Cr. 2
Styles of stage movement: Commedia, Moliere, Restoration. Emphasis on period deportment, manners, and dance forms. Offered Fall.
Prerequisites: THR 2020 with a minimum grade of C- or THR 3221 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25

THR 3231 Voice Lab II Cr. 2
Continuation of vocal production work and an introduction to consonant sounds. Offered Yearly.
Prerequisites: THR 2110 with a minimum grade of C- or THR 2231 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25

THR 3235 Voice Lab III Cr. 2
Continuation of vocal and articulation work and an introduction to rhythm and tempo in the speaking voice. Offered Winter.
Prerequisites: THR 2170 with a minimum grade of C- or THR 3231 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25

THR 3241 Dance Styles of Musical Theatre Cr. 3
Tap, jazz and dance of the American musical theatre tradition. Emphasis on skills for performing and auditioning for Broadway and movie musicals. Offered Yearly.
Fees: $25
Repeatable for 6 Credits

THR 3251 Musical Theatre Studio: Advanced Cr. 2
This advanced musical theatre course explores extended scene-into-song repertoire, collaborative staging for small groups and ensembles, and storytelling through musical theatre dance. Offered Fall.
Prerequisite: THR 2251 and THR 2255
Restriction(s): Enrollment is limited to students with a major in Dance, Dance Honors, Theatre or Theatre Honors.

THR 3255 Musical Theatre Studio: Specialties Cr. 2
This advanced musical theatre course is an in-depth exploration of several performance specialties: Auditions for musical theatre, song-styling and storytelling for Cabaret, and extended Sondheim repertoire. Offered Winter.
Prerequisite: THR 2251 and THR 2255
Repeatable for 6 Credits

THR 3301 Design Skills - Drafting I Cr. 3
Specific instruction in theatrical drafting techniques, including hand drafting and the use of 2D AutoCAD in the drafting of theatrical scenery and lighting. Offered Fall.
Fees: $95

THR 3303 Design Skills - Drafting II Cr. 3
Specific instruction in theatrical drafting techniques using the 3 dimensional capabilities of AutoCAD Offered Every Other Winter.

THR 3315 Entertainment Design - Scenery I Cr. 2
Through instructor lead group discussions, as well as group and individual projects, this class will focus on the exploration of the theatrical text, and the design process as it relates to scenery. Studio skills, including research, sketching, drafting and model making, will be incorporated into a working process aimed at designing scenery for the theatre. Offered Winter.
Prerequisite: THR 3301 with a minimum grade of C-

THR 3322 Introduction to Costuming Cr. 2
Introduction to techniques used in costume construction and manipulation. Offered Fall.
Fees: $85

THR 3325 Entertainment Design - Costume I Cr. 2
An exploration of the role of costume designer in the contemporary theatre and live entertainment industry. Through hands on, project-based coursework, students will explore the art and history of costume design. Offered Fall.

THR 3331 Entertainment Design - Lighting I Cr. 2
An exploration of the role of lighting designer in the contemporary theatre and live entertainment industry. Through hands on, project-based coursework, students will explore the art of lighting design and its various industry applications, including theatre, dance, opera, architecture, themed entertainment, and concert performances. Offered Yearly.

THR 3341 Design Skills - Digital I Cr. 2
Students will gain a working knowledge of the fundamental concepts and features needed to master a set of software programs widely used by theatre design practitioners. Focus includes programs within the Adobe Suite - Adobe Photoshop, Illustrator and After Effects - that can become integral tools in the working processes of set, costume, lighting and projection designers. Offered Fall.

THR 3351 Visual Communication - Scenery and Lighting Cr. 2
With a focus on visual communication as a primary tool for collaboration, this course covers various techniques, workflows and professional practices used to develop a stage design from initial concept to final design. Offered Winter.
Prerequisite: THR 3301 with a minimum grade of C-
Fees: $100

THR 3352 Visual Communication - Costumes Cr. 2
Helps the student develop those skills needed to design costumes for theatrical productions. We will explore various media and rendering techniques as well as script and character analysis. Elements and principles of design will be taught and applied through numerous rendering assignments. Offered Winter.

THR 3561 WSU Touring Theatre Cr. 1
Offered Every Term.
Repeatable for 6 Credits

THR 3581 Advanced Theatre Studio - Performance Cr. 1
Supervised studio in theatre performance requiring participation in department productions. Written permission of Instructor or academic advisor required. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $80
Repeatable for 6 Credits

THR 3582 Advanced Production Practice: Pre-Production Cr. 2
Advanced design and management students are assigned roles on collaborative production teams to create original designs and technical solutions for various public performances, including dance concerts, plays, and musicals produced by the Maggie Allesee Department of Theatre and Dance. This course focuses specifically on pre-production portions of the process. Offered Fall.
Prerequisites: THR 2582 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $80
Repeatable for 4 Credits

THR 3583 Advanced Production Practice: Production Cr. 2
Advanced design and management students are assigned roles on collaborative production teams to create original designs and technical solutions for various public performances, including dance concerts, plays, and musicals produced by the Maggie Allesee Department of Theatre and Dance. This course focuses specifically on production portions of the process. Offered Winter.
Prerequisites: THR 2582 with a minimum grade of C-
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $80
Repeatable for 4 Credits

THR 3585 Advanced Theatre Studio - Theatre Management Cr. 1
Supervised studio in theatre management applied to department productions. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $80
Repeatable for 6 Credits

THR 3586 Advanced Theatre Studio - Running Crew Cr. 1
Supervised laboratory as back stage crew and/or wardrobe crew for department productions. Offered Fall, Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $70
Repeatable for 6 Credits

THR 3601 Stage Management Studio - Principles Cr. 2
The principles of stage management from time management to performance management. Offered Fall.

THR 3603 Stage Management Studio - AEA Contracts Cr. 2
The study of Actors Equity Association contracts from SPT to Broadway and the history and labor laws impact on these contracts. Offered Intermittently.

THR 3605 Stage Management Studio - Health and Safety Cr. 2
An examination of all vital information about health and safety issues affecting the performing arts. Offered Intermittently.

THR 3651 Principles of Theatre Management Cr. 3
Introduction to the principles and practices of theatre management. Season selection, advertising, budgeting, marketing and fundraising are among the areas to be covered. Offered Yearly.
Fees: $20

THR 3671 Theatre Management: Marketing and Public Relations Cr. 3
Methods and approaches used by Theatre Management professionals to communicate their mission, events, and productions. Offered Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $10

THR 3675 Theatre Management: Marketing Design and Layout Cr. 3
Techniques and practices for design and layout specifically addressing the needs in Theatre and Arts Marketing; programs, posters, billboards, brochures, and web pages Offered Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $10

THR 3681 Theatre Management: Patron Services and Development Cr. 3
Methods and approaches used by Theatre Management professionals to create and maintain meaningful relationships with patrons and audience. This class will emphasize oral communication skills supported by simple use of practices found in the theatre industry Offered Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $10

THR 3731 Applied Theatre Studies: Community Possibilities Cr. 3
Fundamental theory and practical technique of applied theatre work, especially process drama and playbuilding. Focus on community situations including intergenerational dynamics, community health and social work effectiveness, and areas of outreach involvement. Offered Yearly.
Fees: $10

THR 3738 Applied Theatre Practicum Cr. 1-4
Supervised students work in schools, with youth programs, and in community service settings, implementing applied theatre projects. Offered Yearly.
Repeatable for 8 Credits

THR 3811 Africana Theatre and Dance: Concepts and Practices Cr. 3
Exploration of the interdisciplinary and global reach of black performance in theatre and dance; examination of key concepts through the analysis of performance and popular culture with scholarly and creative texts by scholars, activists, and artists from the Black Diaspora. Offered Winter.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $10

THR 3841 History of Theatre and Drama I Cr. 3
Comprehensive examination of theatrical and dramatic elements encompassing the historical evolution of theatre from earliest times through the late nineteen-century, including the art of playwriting, dramaturgical methodologies, theoretical frameworks and critical analyses, the craft of acting, principles of directing, intricacies of design and technology, economic dimensions, and cultural influences. Offered Fall.

THR 3842 History of Theatre and Drama II Cr. 3
Continuation of THR 3841. Theatre from English and continental nineteenth century to contemporary European and American theatres. Offered Winter.
Prerequisites: THR 3841 with a minimum grade of C- or THR 5841 with a minimum grade of C-

THR 3990 Directed Study Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment is limited to students with a major in Theatre or Theatre Honors.
Repeatable for 9 Credits

THR 4211 Acting V Cr. 3
Theories and methods of acting verse drama. Offered Fall.
Prerequisites: THR 2040 with a minimum grade of C- or THR 3215 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25
Repeatable for 6 Credits

THR 4221 Stage Movement IV Cr. 2
Styles of stage movement: Shakespeare. Emphasis on Renaissance deportment, manners, and dance forms. Offered Winter.
Prerequisites: THR 3225 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25

THR 4231 Voice Lab IV Cr. 2
Continuation of vocal articulation and vocal music techniques; harmonizing them in performance. Offered Yearly.
Prerequisites: THR 3080 with a minimum grade of C- or THR 3235 with a minimum grade of C-
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre or Theatre Honors; enrollment limited to students in a Bachelor of Fine Arts degree.
Fees: $25

THR 4271 Acting for the Camera Cr. 3
Acting technique and practice with an emphasis on developing the technical and emotional adjustments required for success in Film, TV and industry acting. Units include adjusting theatre acting technique for Film and TV; learning to ""hit marks"" and to understand frame sizes; and developing video auditions. Offered Fall.
Restriction(s): Enrollment is limited to Undergraduate level students.
Fees: $25

THR 4311 Entertainment Design - Scenery II Cr. 3
A continuation of Entertainment Design – Scenery 1, this course seeks to strengthen and expand the student's design process and presentation skills as they relate to scenery. Through the development and critique of projects that span various genres and styles, students will cultivate a greater facility in conceptualizing an approach to the myriad design challenges in the entertainment industry. Offered Fall.
Prerequisite: THR 3315 with a minimum grade of C-
Fees: $80

THR 4315 Entertainment Design - Scenery III Cr. 3
A continuation of Entertainment Design – Scenery 2, this course seeks to refine and reinforce the student's design process and presentation skills as they relate to scenery. Through the design and critique of projects of their own choosing, students will develop their own unique point of view and aesthetic while solidifying their facility in conceptualization. At this level, students are encouraged to seek internship opportunities outside of the academic setting to bring greater perspective to their training. Offered Winter.
Prerequisite: THR 4311 with a minimum grade of C-
Fees: $80

THR 4321 Entertainment Design - Costume II Cr. 3
A continuation of Entertainment Design - Costume 1 with particular attention to conceptual design and costume design communication. Offered Fall.
Prerequisite: THR 3325 with a minimum grade of C-

THR 4331 Entertainment Design - Lighting II Cr. 3
An intermediate practice in the design and execution of lighting for the contemporary theatre and live entertainment industry. Through hands on, project-based coursework, students will explore the art of lighting design and its various industry applications, including plays, musical theatre, opera, and dance. Offered Winter.
Prerequisites: THR 5331 with a minimum grade of C-

THR 4335 Entertainment Design - Lighting III Cr. 3
An advanced study of the practice of lighting design in the contemporary theatre and live entertainment industry. Through hands on, project-based coursework, students will exercise their craft in the art of lighting design specifically focused on the application of advanced lighting technology to commercial entertainment including large scale musicals, operas, dance, themed entertainment, and architectural lighting applications. Offered Winter.
Prerequisites: THR 5331 with a minimum grade of C-

THR 4342 Design Skills - Digital II Cr. 1
An advanced study of software that is necessary for the growth of entertainment designers and managers. Students will gain an understanding of industry standard software, while also exploring cutting edge software that might be incorporated into their design and management work in the future. Offered Winter.

THR 4371 Entertainment Design - Projection Design Cr. 2
Specialized study in the use of projection and media as an integrated storytelling device in theatre. The course will explore and practice the design skills (conceptualization, research, and storyboarding); building techniques (creating, acquiring, and manipulating visual imagery); and production practices (manipulating cues and playback software) required to develop a comprehensive working process for designing projections for the theatre. Offered Every Other Fall.
Prerequisite: THR 3341 with a minimum grade of C-

THR 4500 Qualitative Research in Dance and Theatre Arts Cr. 3
A survey of qualitative research design and methodology in dance and theatre arts with particular emphasis on empirical and exploratory research drawn from descriptive, ethnographic, case study, participatory action research, interpretive and critical approaches, among others. Offered Every Other Fall.
Prerequisites: AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C
Restriction(s): Enrollment limited to students with a class of Junior or Senior; enrollment is limited to students in the Department of Theatre and Dance.
Equivalent: DNC 4500

THR 4601 Stage Management Studio: Event Management Cr. 2
An examination of the central role of events management in the cultural, tourism and arts industries. Offered Intermittently.

THR 4603 Stage Management Studio - Commerce of Theatre Cr. 2
Prepares students with the requisite skills and understanding required to seek employment in the commercial and not-for-profit entertainment industry. Offered Winter.

THR 4605 Stage Management Studio - Performance Management Cr. 2
The exploration and development of skills and techniques necessary to manage a wide range of performances. Offered Winter.

THR 4995 Theatre Capstone: Performance Cr. 3
Capstone experience for B.F.A. acting students. The course focuses on transitioning into the profession, including: auditioning approaches and techniques; showcase preparation and presentation; and developing a personal professional resume and electronic portfolios. Offered Winter.
Prerequisite: THR 4211 with a minimum grade of C-
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Theatre.

THR 4996 Theatre Capstone: Design and Technology Cr. 3
Capstone experience for B.F.A. design tech students. The course focuses on transitioning into the profession, including: auditioning approaches and techniques; showcase preparation and presentation; and developing a personal professional resume and electronic portfolios. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Theatre.

THR 4997 Theatre Capstone Experience Cr. 3
Development of a personal electronic portfolio demonstrating computer proficiency. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Theatre or Theatre Honors; enrollment limited to students in the BA in Fine Arts program; enrollment limited to students in a Bachelor of Arts degree.

THR 4998 Capstone Honors Thesis Cr. 3
Culminating project for theatre honors students: research for scholarly/creative activity. Offered Spring/Summer.
Prerequisites: THR 3410 with a minimum grade of C- (may be taken concurrently), THR 3460 with a minimum grade of C- (may be taken concurrently), THR 3030 with a minimum grade of C- (may be taken concurrently), THR 3731 with a minimum grade of C- (may be taken concurrently), or THR 3735 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students with a class of Senior; enrollment is limited to students with a major in Theatre Honors; enrollment limited to students in the BA in Fine Arts or Bachelor of Fine Arts programs; enrollment limited to students in a Bachelor of Arts or Bachelor of Fine Arts degrees.

THR 5301 Design Skills - Drafting I Cr. 3
Specific instruction in theatrical drafting techniques, including hand drafting and the use of 2D AutoCAD in the drafting of theatrical scenery and lighting. Offered Fall.
Fees: $95

THR 5311 Stage Design Cr. 3
The scenic designer's multiple analysis of a play. Practice in evolving a technique of scenic design by study of selected plays with execution of sketches and working drawings. Offered Intermittently.
Prerequisite: THR 1411 with a minimum grade of C-
Fees: $30
Repeatable for 6 Credits

THR 5315 Entertainment Design - Scenery I Cr. 3
This class will focus on the exploration of the theatrical text, and the design process as it relates to scenery. Studio skills, including research, sketching, drafting and model making, will be incorporated into a working process aimed at designing scenery for the theatre. Offered Winter.
Prerequisite: THR 5301 with a minimum grade of C-
Fees: $50

THR 5322 Introduction to Costuming Cr. 2
Introduction to techniques used in costume construction and manipulation. Offered Fall.

THR 5325 Entertainment Design - Costume I Cr. 3
Advanced costume design projects concentrating on the expression of character through design principles. Further development of drawing and rendering skills. Offered Every Other Winter.
Fees: $30

THR 5331 Entertainment Design - Lighting I Cr. 3
An introduction and exploration of the art and craft of lighting design for live entertainment. Through hands on, project-based coursework, students will explore the art of lighting design and its various industry applications, including theatre, dance, opera, architecture, themed entertainment, and concert performances. There will be a strong focus in the course on composition and lighting techniques used to affect an audience and improve your ability to master storytelling through light. The majority of our time will be spent in the lighting lab, learning by directly applying concepts surrounding lighting design for live performance. Students will engage in a series of hands on projects and receive direct feedback about their work. Offered Fall.
Fees: $45

THR 5335 Advanced Stage Lighting Design Cr. 3
Examination of situations and responsibilities encountered in professional lighting design. Project work based on large-scale, complex requirements. Offered Intermittently.
Prerequisites: THR 5070 with a minimum grade of C- or THR 5331 with a minimum grade of C-
Fees: $45

THR 5422 Introduction to Scene Painting Cr. 3
Studio and demonstration course as an introduction to painting for the stage, with an emphasis on the materials, texturing techniques, three-dimensional effects and the beginning work from painter's elevations. Offered Intermittently.
Fees: $80

THR 5426 Advanced Scene Painting Cr. 3
Studio and demonstration course for the design or technical theatre student. Materials, techniques, styles of scene painting. Offered Intermittently.
Prerequisite: THR 5422 with a minimum grade of C- or THR 5140 with a minimum grade of C-
Fees: $80

THR 5601 Stage Management - AEA Contracts Cr. 2
Continuation of THR 7060 or THR 7605; further practical studies in various theatre crafts. Offered Every Other Fall.
Prerequisite: THR 7060 with a minimum grade of C or THR 7605 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree.

THR 5640 Introduction to Accounting for Nonprofit Organizations Cr. 2
Introduction to accounting for nonprofit organizations. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

THR 5642 Research Methods and Technology in the Theatre Management Cr. 3
Explores the research methodologies and technologies used by leaders in the theatre and other arts disciplines, including website development, social media management, email marketing, data collection, ticketing systems/CRMs. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

THR 5711 Play Direction Cr. 3
Principles and theories of stage movement, blocking, casting, rehearsing. Students required to direct scenes and one-act plays for class presentation. Offered Fall.
Prerequisites: THR 1121 with a minimum grade of C-, THR 1211 with a minimum grade of C-, and (THR 1215 with a minimum grade of C- or THR 2211 with a minimum grade of C-)
Fees: $25

THR 5721 Playwriting Cr. 3
Introduction to the craft of writing for the stage. Students required to write a full-length dramatic script. Offered Every Other Year.
Restriction(s): Enrollment is limited to students in the Department of Theatre and Dance.
Fees: $10

THR 5751 Study Abroad: Moscow Art Theatre School Cr. 1-3
Satisfies General Education Requirement: Global Learning Inquiry
Intensive training in acting or another branch of theatre. Study is conducted on-site at the Moscow Art Theatre School, Moscow, Russia. Offered Spring/Summer.
Repeatable for 3 Credits

THR 5755 Study Abroad: Directed Study in Russian Theatre Cr. 1-3
Focused studies on Russian theatre, performance, design and production; directed studies in contemporary Russian. Offered Spring/Summer.
Prerequisites: THR 5600 with a minimum grade of C- (may be taken concurrently) or THR 5751 with a minimum grade of C- (may be taken concurrently)

THR 5811 Development of the Drama I: Greek to Eighteenth Century Cr. 3
Plays from the Greek through the eighteenth century, including Shakespeare; relation of drama to an era and its theatre. Offered Fall.
Fees: $10

THR 5812 Development of the Drama II: Nineteenth Century to Modern Cr. 3
Plays and theories of the theatre from the nineteenth century to modern times; relation of drama to an era and its theatre. Offered Winter.
Fees: $10

THR 5821 Black Dramatic Literature and Performance Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Critical study of significant Black dramatists of the American stage: Willis Richardson, Marita Bonner, Randolph Edmonds, Langston Hughes, Alice Childress, Lorraine Hansberry, Ed Bullins, Amiri Baraka, Ntozake Shange, and August Wilson. Offered Yearly.
Fees: $45
Equivalent: AFS 5220

THR 5831 Pioneers of the Modern Theatre Cr. 3
Readings and discussions about key figures in modern theatre, dance, and performance theory. Offered Every Other Year.
Fees: $10

THR 5993 Writing Intensive Course in Theatre Cr. 0
Disciplinary writing assignments under the direction of a faculty member. Must be selected in conjunction with a designated corequisite; see section listing in Schedule of Classes for corequisites available each term. Satisfies the University General Education Writing Intensive Course in the Major requirement. Required for all majors. Offered Every Term.
Prerequisites: (AFS 2390 with a minimum grade of C, ENG 2390 with a minimum grade of C, ENG 3010 with a minimum grade of C, ENG 3020 with a minimum grade of C, or ENG 3050 with a minimum grade of C) and (THR 5811 (may be taken concurrently) or THR 5812 (may be taken concurrently))
Restriction(s): Enrollment is limited to students with a major in Theatre or Theatre Honors; enrollment is limited to Undergraduate level students; enrollment limited to students in a Bachelor of Arts or Bachelor of Fine Arts degrees.

THR 5995 Special Topics in Theatre Cr. 1-3
Specialized studies in theatre performance, history, criticism, management, design, and technology. Topics to be announced in Schedule of Classes. Offered Every Term.
Restriction(s): Enrollment is limited to students in the Department of Theatre and Dance.
Repeatable for 6 Credits

THR 6211 Acting Studio I: Fundamentals of the Stanislavski System Cr. 3
Open only to students admitted to the M.F.A. Acting Program. Offered for graduate credit only. A study of the Method of Active Analysis through Physical Action, a post-1991 understanding and practice of the teachings of Konstantin Stanislavski. Subject matter to be chosen from modern texts - Anton Chekhov through Eugene O'Neill. Offered Fall.
Restriction(s): Enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 6215 Acting Studio II: Introduction to the Michael Chekhov Cr. 2
Understanding and application of the principles and tools of the Technique: Psycho-physical approach; Imagination and Incorporation of Images; Improvisation and Ensemble work; Atmosphere; and Psychological Gesture. Subject matter to be chosen from the plays of William Shakespeare. Clues from First Folio renditions of the plays will be identified on all analysis assignments. Offered Winter.
Prerequisite: THR 6211 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

THR 6219 Performance Techniques for Contemporary Actors Cr. 2
This class is designed to introduce students to a breadth of performance techniques through a combination of lecture, exercises, and public performance opportunities. The class will provide students with the overview of the theory and practice of technique and will emphasize practical application through performance to provide a solid foundation in the styles of performance utilized in the industry. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Theatre; enrollment limited to students in a Master of Fine Arts degree.
Repeatable for 16 Credits

THR 6221 Theatrical Movement I - Introduction to Physical Awareness Cr. 2
Pilates Method of body conditioning; learning and perfecting movements of the body at beginning and intermediate levels. Offered Every Other Winter.
Restriction(s): Enrollment is limited to students with a major, minor, or concentration in Theatre; enrollment limited to students in a Master of Fine Arts degree.
Fees: $10

THR 6225 Theatrical Movement II - Introduction to Movement Analysis Cr. 2
Yoga; Laban Movement Analysis for analyzing and further strengthening the body. Offered Every Other Fall.
Prerequisite: THR 6070 with a minimum grade of C or THR 6221 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Theatre; enrollment limited to students in a Master of Fine Arts degree.
Fees: $50

THR 6231 Voice and Speech I - Foundations of Voice for the Actor Cr. 2
Studies in vocal physiology and production using Fitzmaurice, Linklater, and Lessac techniques. Offered for graduate credit only. Offered Every Other Winter.
Restriction(s): Enrollment is limited to students with a major in Theatre; enrollment limited to students in a Master of Fine Arts degree.
Fees: $15

THR 6235 Voice and Speech II: Speech Foundations Cr. 2
Studies in speech and phonetics through physiology, articulatory improvement, and phonetics with application to text. Offered for graduate credit only. Offered Every Other Fall.
Prerequisite: THR 6050 with a minimum grade of C or THR 6231 with a minimum grade of C
Restriction(s): Enrollment is limited to students with a major in Theatre; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree.
Fees: $25

THR 6301 Foundations of Collaboration and Design Cr. 2
Introduction to the design process and expectations for graduate-level study in theatrical design. Review of responsibilities of each portion of design team, examination of traditional and electronic methods of research. Offered Fall.
Restriction(s): Enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 6303 Design Skills - Drafting II Cr. 3
Continuation of THR 5301 Design Skills – Drafting 1 for graduate students. Specific instruction in theatrical drafting techniques using the 3 dimensional capabilities of AutoCAD. Offered Winter.
Prerequisite: THR 5301 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

THR 6306 Design Skills - Drawing Cr. 1
Provides each design student with the opportunity to strengthen the connection between their eye and hand, enabling the student to draw spontaneously, energetically and accurately. Designing for theatre is the act of transforming words into visual imagery and drawing is an essential tool in that transformative process. A student who hopes to progress as a designer must simultaneously develop and practice their drawing skills. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

THR 6321 Entertainment Design - Costume II Cr. 3
Advanced exploration of the principles of costume design as it relates to Western theatrical literature. Offered for graduate credit only. Offered Winter.
Prerequisite: THR 6000 with a minimum grade of C or THR 6301 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $30

THR 6325 Professional Costume Design II Cr. 3
Advanced exploration of elements, genres, and styles of costume design as it relates to Western theatrical literature and conventions. Significant project work and research. Offered Every Other Fall.
Prerequisite: THR 6060 with a minimum grade of C or THR 6321 with a minimum grade of C
Restriction(s): Enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $30

THR 6331 Professional Lighting Design I Cr. 3
Examination of the responsibilities and skills needed to function as a professional lighting designer. Varied styles of theatrical production, the lighting designer's communication with other professionals, use of computers in lighting design process, graphic presentation of lighting design concepts. Offered Yearly.
Prerequisite: THR 5300 with a minimum grade of C or THR 5335 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $45

THR 6351 Visual Communication Scenery and Lighting Cr. 2
With a focus on visual communication as a primary tool for collaboration, this course covers various techniques, workflows and professional practices used to develop a stage design from initial concept to final design. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $100

THR 6352 Visual Communication Costumes Cr. 2
This course is designed to help the student develop those skills needed to design costumes for theatrical productions. We will explore various media and rendering techniques as well as script and character analysis. Elements and principles of design will be taught and applied through numerous rendering assignments. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

THR 6361 Design Studio I Cr. 2
Studio study and application of graphics which support development and representation of the design idea. Rendering techniques, presentational styles, computer graphics. Offered Winter.
Prerequisite: THR 6000 with a minimum grade of C or THR 6301 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 6365 Design Studio II Cr. 2
Continuation of THR 6210 or THR 6361. Offered Fall.
Prerequisite: THR 6210 with a minimum grade of C or THR 6361 with a minimum grade of C

THR 6381 Styles of Design Cr. 3
Survey and analysis of theatrical styles of production in European and American theatre, related to historical theory and practice. Research and comparative analysis; some laboratory project work. Offered Winter.
Prerequisite: THR 6000 with a minimum grade of C or THR 6301 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 6601 Stage Management Studio - Principles Cr. 2
The principles of stage management from time management to performance management. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 6603 Stage Management Studio - AEA Contracts Cr. 2
The study of Actors Equity Association contracts from SPT to Broadway and the history and labor laws impact on these contracts. Offered Intermittently.

THR 6605 Stage Management - Health and Safety Cr. 2
Continuation of THR 6010 or THR 6601. Offered Winter.
Prerequisite: THR 6010 with a minimum grade of C or THR 6601 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 6661 Marketing the Theatre Cr. 3
Marketing strategies for arts organizations. Topics include: subscription and membership sales, individual ticket sales. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $10

THR 6672 Legal and Ethical Issues in the Arts Cr. 3
An examination of legal requirements of nonprofit arts organizations, specifically addressing tax exemption, reporting of contributions, development considerations, and contemporary legal issues affecting artists. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

THR 6675 Board Governance in the Theatre Cr. 2
How boards of directors govern theatres; how dynamics operate between management and boards. Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 7211 Acting Studio III: Advanced Michael Chekhov Technique Cr. 2
Exploration of characterization through study of archetypes, centers, imaginary body, creative individuality, composition of space and connection to the audience. Subject matter will be supported by mask work and the techniques of Jacques LeCoq; and the study of High Comedy. Offered Fall.
Prerequisite: THR 6215 with a minimum grade of C or THR 6020 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

THR 7215 Acting Studio IV: Advanced Study of Active Analysis and Physical Approach to Acting Cr. 2
Advanced Stanislavski practices and exploration of other approaches to the study of physical theatre. Subject matter will explore contemporary, post-modern and devised texts. Offered Winter.
Prerequisite: THR 7211 with a minimum grade of C or THR 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $15

THR 7221 Theatrical Movement III: Dance Techniques Cr. 2
Broadway and social dance techniques. Offered Every Other Winter.
Prerequisite: THR 6110 with a minimum grade of C or THR 6225 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

THR 7225 Theatrical Movement IV - Ensemble Physicality Cr. 2
Viewpoints; ensemble-generated expressive movement. Offered Every Other Fall.
Prerequisite: THR 7020 with a minimum grade of C or THR 7221 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

THR 7231 Voice and Speech III - Vocalizing Heightened Language and Shakespeare Cr. 2
Application of voice and speech techniques to Shakespeare and heightened language, with additional studies in verse analysis. Offered Every Other Winter.
Prerequisite: THR 6235 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

THR 7235 Voice and Speech IV: Accents and Dialects for Stage and Media Cr. 2
Studies in analyzing, learning, and performing accents and dialects for stage and film. Offered Every Other Winter.
Prerequisite: THR 7231 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

THR 7271 Acting for the Camera Cr. 3
Acting technique and practice with an emphasis on developing the technical and emotional adjustments required for success in Film, TV and industry acting. Units include adjusting theatre acting technique for Film and TV; learning to ""hit marks"" and to understand frame sizes; and developing video auditions. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $25

THR 7281 Theatre Aesthetics Cr. 3
Contemporary and classical theories of performance in drama, musical theatre, and dance. Interactions of acting, design, music, dance, script, and audience. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $10

THR 7311 Entertainment Design - Scenery II Cr. 3
A continuation of 5315 Entertainment Design – Scenery I, this course seeks to strengthen and expand the student's design process and presentation skills as they relate to scenery. Through the development and critique of projects that span various genres and styles, students will cultivate a greater facility in conceptualizing an approach to the myriad design challenges in the entertainment industry. Offered Fall.
Prerequisite: THR 5315 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $80

THR 7315 Entertainment Design - Scenery III Cr. 3
A continuation of 7311 Entertainment Design – Scenery II, this course seeks to refine and reinforce the student's design process and presentation skills as they relate to scenery. Through the design and critique of projects of their own choosing, students will develop their own unique point of view and aesthetic while solidifying their facility in conceptualization. At this level, students are encouraged to seek internship opportunities outside of the academic setting to bring greater perspective to their training. Offered Every Other Fall.
Prerequisite: THR 7311 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $80

THR 7321 Costume History I Cr. 2
Historical trends in fashion from ancient Egypt to Elizabethan England, as it pertains to theatre arts and its literature. Study of various periods and genres; design of costumes for plays of these periods based on a historical approach. Offered Every Other Winter.
Prerequisite: THR 6301 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

THR 7325 Costume History II Cr. 2
Continuation of THR 7321. Historical trends in fashion from Jacobean England through the 21st Century. Offered Every Other Fall.
Prerequisite: THR 7321 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

THR 7331 Entertainment Design - Lighting II Cr. 3
An intermediate practice in the design and execution of lighting for the contemporary theatre and live entertainment industry. Through hands on, project-based coursework, students will explore the art of lighting design and its various industry applications, including plays, musical theatre, opera, and dance. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

THR 7335 Entertainment Design - Lighting III Cr. 3
An advanced study of the practice of lighting design in the contemporary theatre and live entertainment industry. Through hands on, project-based coursework, students will exercise their craft in the art of lighting design specifically focused on the application of advanced lighting technology to commercial entertainment including large scale musicals, operas, dance, themed entertainment, and architectural lighting applications. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

THR 7341 Design Skills - Digital I Cr. 2
Students will gain a working knowledge of the fundamental concepts and features needed to master programs in the Adobe Creative Suite widely used by set, lighting, costume and projection designers. This course will cover Photoshop, Illustrator and After Effects. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

THR 7342 Design Skills - Digital II Cr. 1
Provides an advanced study of software that is necessary for the growth of entertainment designers and managers. Students will attain an advanced understanding of industry standard software, while also exploring cutting edge software that might be incorporated into their design and management work in the future. We will explore the foundations of Vectoworks (VWX), FileMaker Pro, and PureData (Pd) as a group, then continue individualized study of the application of these softwares to each individual's specific discipline (Scenic Design, Lighting Design, and Stage Management). Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

THR 7371 Entertainment Design - Projection Cr. 2
Specialized study in the use of projection and media as an integrated storytelling device in theatre. Through instructor lead group discussions and critique sessions of group and individual projects, this class will focus on the exploration of the theatrical text, and the design process as it relates to projections. We will survey the brief history and fast evolution of theatrical projection design as we engage with the exploration of possibilities of this discipline. Students will cultivate a sharp awareness of the effects of added visual imagery coupled with a sensitivity to how that imagery affects the substance of what is being communicated to the audience. Designers who possess a keen awareness of how projected imagery can add to (or distract from) the telling of a story will be equipped to make strong design choices that are both compelling and supportive of the text. Offered Every Other Fall.
Restriction(s): Enrollment is limited to Graduate level students.

THR 7381 Architecture and Decor Cr. 3
Historical study of the form and elements of architecture and decoration; emphasis on theatrical design. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $20

THR 7389 Design Internship Cr. 3
Students are involved with the creative process and execution of a design element for a production at a commercial theatre in the Detroit Metro area. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree.

THR 7581 Repertory Theatre: Acting Cr. 1-4
Supervised experience in the Classic Theatre repertory program. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Repeatable for 18 Credits

THR 7582 Advanced Production Practice : Pre-Production Cr. 2
Supervised experience in practical application of design, technology and management specific to the design and implementation required to produce classical and contemporary live productions across disciplines, genres and styles. Within this course, advanced students are assigned roles on collaborative production teams to create original designs and technical solutions for various public performances, including dance concerts, plays, and musicals produced by the Maggie Allesee Department of Theatre and Dance. Offered Fall, Winter.
Restriction(s): Enrollment is limited to students with a major in Theatre; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree.
Repeatable for 12 Credits

THR 7583 Advanced Production Practice: Production Cr. 2
Supervised experience in practical application of design, technology and management specific to the design and implementation required to produce classical and contemporary live productions across disciplines, genres and styles. Within this course, advanced students are assigned roles on collaborative production teams to create original designs and technical solutions for various public performances, including dance concerts, plays, and musicals produced by the Maggie Allesee Department of Theatre and Dance. Offered Winter.
Restriction(s): Enrollment is limited to students with a major in Theatre; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree.
Repeatable for 12 Credits

THR 7584 Graduate Practicum in Theatre Management Cr. 1-3
Supervised experience in various management assignments for WSU and for marketing and audience engagement activities for the Theatre Department. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Repeatable for 18 Credits

THR 7601 Stage Management - Event Management Cr. 2
Continuation of THR 6020 or THR 6605. Offered Fall.
Prerequisite: THR 6020 with a minimum grade of C or THR 6605 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

THR 7603 Stage Management Studio - Commerce of Theatre Cr. 2
Prepares students with the requisite skills and understanding required to seek employment in the commercial and not-for-profit entertainment industry. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students.

THR 7605 Stage Management - Performance Management Cr. 2
Continuation of THR 7050 or THR 7601. Offered Every Other Winter.
Prerequisite: THR 7050 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 7652 Arts Policy and Advocacy Cr. 3
All artists and arts organizations exist within a particular policy environment. It is essential that arts administrators understand arts and cultural policy in order to ensure the well-being of their organizations, play a role in improving the quality of life in their communities, to be active participants in civil society, and to be effective advocates for the place of the arts in society. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

THR 7662 Production Management for the Theatre Cr. 2
Explores the process for managing productions including budgeting, communication, and technologies to support the creation, production, dissemination, and stewardship of creative expression. Budgets, systems, controls, resources, and leadership will be explored. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.

THR 7671 Development II: Advanced Topics Cr. 3
Explores corporate sponsorship, board recruitment techniques, major gift cultivation strategies, crowdfunding, transitional fundraising, and solicitation techniques with a heavy emphasis on grant research, writing, and reporting. Students focus on an arts organization to model their assignments. The emphasis in the course is on the importance of creativity and innovation in the field of development. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $10

THR 7675 Producing for the Commercial Theatre Cr. 3
Focuses on the role of the independent commercial producer, and explores the entrepreneurial skills and qualities that are necessary to be successful without the support of an organizational infrastructure. Among the topics to be covered: why produce commercially; who produces; Broadway and Off-Broadway; the challenges of creating interesting work in a commercial setting; and the unique challenges of plays and musicals. Practical matters covered include optioning and developing work, raising money, creating budgets, hiring a freelance team, and utilizing marketing/press/advertising to attract an audience. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 9 Credits

THR 7741 Dramaturgy Cr. 3
Study and preparation of dramatic texts for production; historical, socio-political and theoretical perspectives for production dramaturgy and literary management. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $10

THR 7990 Directed Study Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment is limited to students in the Department of Theatre and Dance.
Repeatable for 4 Credits

THR 7999 Master's Essay Direction Cr. 1-4
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Repeatable for 4 Credits

THR 8211 Acting Studio V: Preparation for the Profession Cr. 3
Preparation and development of the professional head shot and resume; creation of personal website, and scene selection for the industry showcase. Subject matter will explore camera acting techniques, utilizing television scripts and screenplays. Offered Fall.
Prerequisite: THR 7215 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $15

THR 8215 Acting Studio VI: Audition and Composition Cr. 2
Development and execution of the industry showcase; performance and interviews with industry specialists. Subject matter will focus on character types for the individual actor and development of an original solo piece or group devised work. Offered Winter.
Prerequisite: THR 8211 with a minimum grade of C or THR 7110 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $52

THR 8221 Theatrical Movement V - Acrobatics Cr. 1
Partner Russian Movement (acrobatics) and etude work. Offered Fall.
Prerequisite: THR 7100 with a minimum grade of C or THR 7225 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $25

THR 8225 Theatrical Movement VI - Composition and Physical Devising Cr. 1
Physical composition class building on previous techniques, working toward original devised performance pieces. Offered Winter.
Prerequisite: THR 7140 with a minimum grade of C or THR 8221 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $25

THR 8231 Voice and Speech V: Accents & Dialects for Stage and Media Cr. 1
Studies in analyzing, learning, and performing accents & dialects for stage and film. Offered Fall.
Prerequisite: THR 7090 with a minimum grade of C or THR 7235 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $25

THR 8235 Voice and Speech VI - Media Techniques Cr. 1
Studies in the techniques needed for performance in voice-overs and camera. Offered Winter.
Prerequisite: THR 7180 with a minimum grade of C or THR 8231 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Fees: $25

THR 8605 Stage Management - Commerce of Theatre Cr. 2
Continuation of THR 7110 or THR 8601; further practical studies in various theatre crafts. Offered Every Other Winter.
Prerequisite: THR 7110 with a minimum grade of C or THR 8601 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 8689 Internships in Theatre Management Cr. 3
Planning and execution of projects in theatre management; evaluation of project effectiveness. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 8941 Teaching Internship I Cr. 3
Assisting faculty members in teaching first-semester undergraduate-level courses. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 8945 Teaching Internship II Cr. 3
Assisting faculty members in teaching second-semester undergraduate-level courses. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 8991 MFA Management Exit Project Cr. 1-3
Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 8992 MFA Design Exit Project Cr. 2
Demonstration in the specific design area in the skills developed by the student designer. Portfolio presentation developed in consultation between the student and the design area advisor. Offered Winter.
Prerequisite: THR 6000 with a minimum grade of C or THR 6301 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 8995 MFA Acting Exit Project Cr. 3
Course designed to bridge from academia to the professional world. Selection, research and execution of seven monologues from a variety of period texts; development of a professional website; research and documentation of the artist's job market in a chosen geographic area. The course culminates in a final Oral Examination by each student's M.F.A. Exit Committee. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 8998 MFA Theatre Management Exit Project Cr. 3
Course designed to bridge from academia to the professional world. Development of a professional website and portfolio; research and documentation of the manager's job market in a chosen geographic area. The course culminates in a final Oral Examination by each student's M.F.A. Exit Committee. Offered Winter.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in a Master of Fine Arts degree; enrollment is limited to students in the Department of Theatre and Dance.

THR 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students; enrollment limited to students in a Master of Arts degree; enrollment is limited to students in the Department of Theatre and Dance.
Repeatable for 8 Credits

TIS - Technology, Information Systems and Analytics

TIS 1500 Business Tools and Applications Cr. 3
Integrated business computer concepts and business applications and tools to solve business problems. No credit after former BA 1500. Offered Every Term.
Corequisite: TIS 2300
Restriction(s): Enrollment limited to students in the School of Business.

TIS 2300 Quantitative Methods I: Probability and Statistical Inference Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp
Measures of central tendency and dispersion. Introduction to probability; normal, binomial, uniform, and Poisson distributions. Statistical inference and sampling methods. Computer techniques. No credit after former BA 2300. Offered Every Term.
Corequisite: TIS 1500
Restriction(s): Enrollment limited to students in the School of Business.

TIS 3400 Quantitative Methods II: Statistical Methods Cr. 3
Uses of statistical techniques in business. Topics include: sampling, hypothesis testing, confidence interval estimation, regression, analysis of variance and chi-square tests. Application to accounting, market research, finance, production and forecasting. Computer techniques. No credit after former BA 3400. Offered Every Term.
Prerequisites: TIS 2300 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 3630 Business Information Systems Cr. 3
Introductory Technology, Information Systems and Analytics course, which establishes a foundation for understanding the value of information systems in organizations. Provides a management-oriented study of computer-based information systems in organizations and an overview of the manner in which information systems and technology supports business processes, managerial decision-making, and organizational strategy. No credit after former ISM 3630. Offered Every Term.
Restriction(s): Enrollment limited to students in the School of Business.

TIS 4500 Business Co-op Assignment Cr. 0
Provides students with practical application of theory to on-the-job experience. Students must be admitted to the University's Cooperative Education Program during the work semester that the course is to be taken. Students will normally be assigned to a cooperating business organization for internship periods of one semester. No credit after former ISM 4500. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 4550 Advanced Excel with VBA: Beyond the Basics Cr. 3
This course is designed assuming students have basic familiarity with Excel but may not have programming experience. Its aim is to provide a comprehensive understanding of VBA programming in Excel, covering both foundational and advanced topics. The course is designed to equip students with advanced skills in Microsoft Excel, focusing on complex data analysis, automation, and customization using Visual Basic for Applications (VBA). Students will learn advanced Excel functions, pivot tables, data visualization techniques, and programming fundamentals in VBA to automate repetitive tasks and enhance productivity in business and analytical contexts. Offered Every Term.
Prerequisites: TIS 1500 with a minimum grade of C-

TIS 4575 IT Security Cr. 3
Provides an investigation of contemporary issues in computer security. Students are exposed to the spectrum of security activities, procedures, and methodologies. Topics include: inspection and protection of information assets; detection of and reaction to threats to information assets; examination of pre- and post-incident procedures, and technical and managerial responses; and an overview of information security planning and staffing functions. No credit after former ISM 4575. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 4990 Directed Study in Information Systems Management Cr. 1-3
Provides the student with the opportunity to focus on advanced readings, projects (e.g., tutorials, certifications), and research in a particular area of information systems management that is of interest to the student and faculty member. Offered Every Term.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5200 ERP Systems: Concepts and Practice Cr. 3
Discusses the role and function of ERP systems within organizations; analyzes the major business processes in their organization and their implementation using ERP software; provides hands-on use of ERP tools for transaction processing and decision support; and describes the use of ERP systems for customer relationship management (CRM), supply chain management (SCM), and electronic commerce. Offered for undergraduate credit only. No credit after former ISM 5200. Offered Winter.
Prerequisites: ACC 3010 with a minimum grade of C, ACC 3020 with a minimum grade of C, and (ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C)
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $117
Equivalent: ACC 5200

TIS 5210 Blockchain Fundamentals for Accounting and Business Cr. 3
Introduces blockchain, which is a public, transparent, secure, immutable and distributed ledger. Blockchains can be used to record and transfer any digital asset, not just currency. Progressing from a detailed study of how blockchain works in Bitcoin; this course also discusses alternative blockchain platforms; potential uses of blockchain in accounting, other areas of business, and society; and this technology's potential impact on accounting systems, business transactions, financial services, government, and banking management. This course is taught completely online. No credit after former ISM 5210. Offered Spring/Summer.
Prerequisite: ACC 3010 with a minimum grade of C and ACC 3020 with a minimum grade of C
Equivalent: ACC 5210

TIS 5530 Ethics in Information Technology Cr. 3
An awareness of the wider social, legal and ethical issues of information technology. Relationship between technological change, society and the law. Student is introduced to legal issues such as intellectual property and liability for defective software. Offered for undergraduate credit only. No credit after former ISM 5530. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C (may be taken concurrently) or TIS 3630 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5560 Survey of e-Commerce Cr. 3
Provides an introduction to electronic commerce. Topics include: e-commerce scope, business-to-business (B2B) and business-to-consumer (B2C) activities; supporting software, hardware, networking, security technologies; readings and online discussions. Offered for undergraduate credit only. No credit after former ISM 5560. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5570 Introduction to Business Analytics Cr. 3
Focuses on developing techniques to analyze large datasets and using techniques, algorithms, and software to automate the analysis and exploration of those datasets. Covers the methodology, major software tools, and applications in the data mining and analytics field. Offered for undergraduate credit only. No credit after form ISM 5570. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5580 Introduction to Data Visualization for Business Cr. 3
The purpose of this course is to teach students how to convert raw data into insightful visualizations that aid business decision making. Students will learn how to work with large complex data sets using the R environment and its various graphics packages. Basic programming experience is recommended but not required. No credit after former ISM 5580. Offered Intermittently.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5670 Special Topics in Information Systems Cr. 3
Topics range from JAVA to digital video creation and analytics. Offered for undergraduate credit only. No credit after former ISM 5670. Offered Intermittently.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

TIS 5705 Inbound Information Technology Cr. 3
Provides insights and practical guidelines to help students learn how to create an appealing and engaging digital presence for businesses. The discussion focuses on topics relevant to planning, managing, and implementing on-line and social media interactivity such as: search engine organization (SEO), inbound links, page ranking, tagging content, pillaring content, publishing content, analytic reports, blogging, tweeting and other social media. Offered for undergraduate credit only. No credit after former ISM 5705. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $50

TIS 5820 Systems Analysis and Design Cr. 3
Presents a structured and formal approach to information systems development. Analysis, logical requirements specification, general and detailed design, control, and implementation of information systems are discussed. Offered for undergraduate credit only. No credit after former ISM 5820. Offered Every Term.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5860 Data Communications and Networks Cr. 3
Data communication concepts and terminology, communication system design approaches, data communications standards, data communications software and hardware, network architecture, distributed management information systems. Offered for undergraduate credit only. No credit after former ISM 5860. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $13

TIS 5890 Internship in Information Systems Cr. 3
Student performs assigned tasks and responsibilities in a professional manner under supervision of host-employer for a minimum of 160 hours during the semester, abiding by the rules and regulations established by the employer and expected by all employees; student must satisfactorily complete all course requirements outlined in the internship program for the Mike Ilitch School of Business. Offered for undergraduate credit only. No credit after former ISM 5890. Offered Every Term.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5900 Project Management Cr. 3
Understanding and appreciation of the different knowledge areas of project management. Insight into developing the inputs, tools, techniques, and outputs to successfully manage products. Offered for undergraduate credit only. No credit after former ISM 5900. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Equivalent: MGT 5900

TIS 5992 Database Systems Cr. 3
Details the importance of data in today's enterprise and describes the theories, models, and techniques for designing, developing, creating, and manipulating a database. Students will practice data modeling, physical database design, database implementation, and complete introductory SQL exercises. Offered for undergraduate credit only. No credit after former ISM 5992. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5994 Software Tools for Business Applications Cr. 3
Introduces the student to the use of the Internet to create a digital presence. Students design and develop websites, create responsive web pages to provide an optimal viewing experience, and integrate database functionality allowing all web pages to "know" who is looking at the information using HTML, Javascript, Hubl, HubDB, Wistia, and cascading style sheets (CSS). Smart design includes content complete with video, progressive forms, and focused calls-to-action. Offered for undergraduate credit only. No credit after former ISM 5994. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $13

TIS 6997 Information Systems Policy and Management Cr. 3
Within the overall structure of the systems approach, this capstone course integrates the managerial, technical, and strategic planning and control concepts developed throughout the undergraduate courses. It also focuses on the concepts and methodologies necessary for management of information systems projects. Offered for undergraduate credit only. No credit after former ISM 6997. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 7030 Business Analytics Cr. 3
This course provides students with the skills and perspective to apply analytics in a variety of business scenarios through the development of both applied and technical business analytics skills. No credit after former BA 7030. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

TIS 7060 Understanding Emerging Technologies Cr. 3
Provides an understanding of how emerging business technologies alter business processes, affect operational efficiency, create competitive advantage, impact the organization's culture, and enhance customer relationships. No credit after former BA 7060. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.
Fees: $65

TIS 7290 Blockchain, Artificial Intelligence and CyberSecurity Cr. 3
This course examines the convergence of blockchain, artificial intelligence and cybersecurity, beginning with an accessible overview of the cryptographic foundations that enable secure digital business. Students learn how these fundamentals support both blockchain's decentralized ledgers and today's essential cybersecurity infrastructure. Using virtual worlds and digital economies (e.g. the Metaverse) as an ongoing case study, students explore the business implications and opportunities created when these technologies converge - from AI-enhanced virtual experiences to digital asset markets. Through focused case studies, individual and small group work assignments, students develop the practical knowledge needed to ground strategic decisions about these transformative technologies. No credit after former ISM 7290. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.

TIS 7505 Information Analytics: Inbound Information Technology Cr. 3
The evolving cyberspace organization. Insights and practical guidelines to create an appealing and engaging digital presence. Discussion focuses on topics relevant to planning, managing, and implementing online and social media interactivity such as search engine organization (SEO), inbound links, blogging, page ranking, tagging content, tweeting, publishing content, analytic reports, and social media. No credit after ISM 5705. Offered Fall.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $113

TIS 7507 Application Development with Swift Cr. 3
Establishes a foundation for understanding the value of mobile applications in the enterprise and how to design, create, and publish mobile applications for the Apple iOS using Swift and Xcode. These tools allow you to quickly develop a mobile application so you can focus your energy on your design. No credit after former ISM 7507. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $115

TIS 7510 Database Management Cr. 3
Overall examination of database management and knowledge management systems. Theories, models, and techniques for designing, developing, understanding, utilizing and creating competitive advantage through database systems. Topics include data modeling, logical and physical database design, strategic value of data, introductory SQL, knowledge management, and emerging database technologies. No credit after TIS 5992 or former ISM 5992 or ISM 7510. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

TIS 7520 Information Systems Design Cr. 3
Non-technical course in how to use information systems to add value to an organization. Use of system analysis techniques to study and identify information needs of organizations and integration of IT specialists and manager-users. Topics include: IT and organizational design, inter-networking infrastructure, organization and leading the IT function. How information systems professionals link MIS to specific business operations and objectives to increase value; how managers may use information systems to support activities and increase individual productivity. No credit after former ISM 7520. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

TIS 7530 Societal and Ethical Issues in the Information Age Cr. 3
Issues such as computer crime, privacy, copyrighting of software; other ethical issues related to use of business systems and information systems. No credit after former ISM 7530. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

TIS 7560 Survey of E-Commerce Cr. 3
Introduction to electronic commerce: scope, business-to-business and business-to-consumer activities; supporting software, hardware, networking, security technologies; readings and online discussions. No credit after former ISM 7560. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

TIS 7570 Advanced Business Analytics Cr. 3
This course focuses on learning skills necessary for generating insights from data to aid business decision making. Students will learn how to ingest, prep, transform, visualize and analyze data using the popular open source data science tool - R. Specifically, the course will cover descriptive analytics (e.g., data visualization, query, data slicing), and, predictive analytics (e.g., regression, clustering, classification). Basic programming experience is recommended but not required. No credit after TIS 5570 or former ISM 5570 or ISM 7570. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

TIS 7575 Corporate Computer Networks and IT Security Cr. 3
Broad selection of contemporary issues in computer security. Security activities, methods, methodologies, and procedures including inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses, and an overview of the Information Security Planning and Staffing functions. Includes many topics for Security+ exam by CompTIA. No credit after TIS 4575 or after former ISM 4575 or ISM 7575. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

TIS 7680 Information Visualization for Business Cr. 3
The purpose of this course is to teach students how to use information visualization tools and techniques to inform and persuade decision makers in organizations, government, and the public. Specifically, students will learn how to visualize large and complex data using the R environment and its various graphic packages. Basic programming experience is recommended but not required. No credit after former ISM 7680. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

TIS 7890 Internship in Information Systems and Management Cr. 1-3
Students work a minimum of 160 hours for fifteen weeks in an entry-level management position in information systems. No credit after former ISM 7890. Offered Yearly.
Prerequisites: ISM 7500 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

TIS 7900 Project Management Cr. 3
Management of resources (budget, personnel, materials, etc.) within the scope of a given project; understanding and appreciation for the different knowledge areas of project management; insight into identification of inputs, tools, and techniques of project management. No credit after TIS/MGT 5900 or after former ISM 5900 or ISM 7900. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: MGT 7900

TIS 7994 Digital Content Development Cr. 3
Development of responsive, smart, and personalized web sites using leading web development tools and technologies. No credit after former ISM 7994. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

TIS 7995 Directed Study in Information Systems and Management Cr. 1-3
Advanced independent readings and research under supervision of a graduate faculty member in areas of special interest to student and faculty member. No credit after former ISM 7995. Offered Yearly.
Prerequisites: ISM 7500 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students; enrollment limited to students in the School of Business.

TIS 7996 Principles for Customer Relationship Management Cr. 3
Investigation of the antecedents and consequences of implementing a customer-relationship management strategy. The course will provide students with insight on: What CRM and its conceptual foundations are; How CRM forces the interaction between corporate strategy, organizational structure, supply chain, and customer facing front end; The role of measuring and managing customer satisfaction, customer loyalty and customer profitability; Hands-on application with salesforce.com. No credit after former ISM 7996. Offered Intermittently.
Restriction(s): Enrollment is limited to Graduate level students.
Fees: $75

TIS 8000 Seminar in Information Systems and Management Cr. 3
Current developments and emerging trends. No credit after former ISM 8000. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

UGR - Undergraduate Research

UGR 1050 Research Methods - BUILD Scholars Cr. 1
Satisfies General Education Requirement: Wayne Experience
A one-semester course that is part of the BUILD program and is designed to help students prepare for the Research-based laboratory courses BUILD Scholars will take in the Winter Term. Offered Fall.

UP - Urban Planning

UP 3530 Urban and Regional Planning Cr. 3
Introduction to urban and regional planning concepts, including zoning, growth management, planning history, theory, and ethics. Emphasis on metropolitan Detroit. Offered Yearly.
Equivalent: US 3530

UP 3730 Introduction to Land Use and Transportation Cr. 3
This course will introduce students to the important themes in land use and transportation planning. Land use and transportation planning are fundamentally linked. Decisions about how to use land affect where we live, work, shop, and play, and how far we need to travel to these different places. How we arrange our transportation systems affect how easy it is to access the places we want to go, how expensive it is to travel, and which transportation modes are available for us to get there. In this course, students will learn about how land use and transportation planning decisions are made, the consequences of past and current land use and transportation planning choices, and how planners can help make decisions that will create more accessible and high quality neighborhoods and communities. Offered Yearly.

UP 3830 Community and Economic Development Cr. 3
Cities and metropolitan regions are complex and variegated centers of community and economic activity. Urban spaces offer possibilities for establishing meaningful communities within and across neighborhood boundaries. They are also conducive to the development of efficient and innovative economic possibilities, which create opportunities for residents to improve their material circumstances. Yet even as cities offer the potential for meaningful and productive livelihoods, they also present challenges of inequality, segregation, concentrated poverty, and power struggles. This course emphasizes socio-economic perspectives on urbanism and urban planning through an introduction to the fields of community development and economic development. Offered Every Other Winter.

UP 4420 Methods for Urban Studies Cr. 3
An elementary research methods course that covers the process, analytical methods, and data sources necessary for urban studies and planning. Includes introduction to relevant data sources, such as the U.S. Census, American Community Survey, and County Business Patterns; presentation of quantitative data; collecting and interpreting qualitative data, and introduction to basic statistics for use in urban studies. Offered Yearly.
Prerequisite: US 2000 with a minimum grade of C- or SOC 2500 with a minimum grade of C- or GPH 2000 with a minimum grade of C- or HIS 2000 with a minimum grade of C- or PS 2000 with a minimum grade of C-

UP 4460 Sustainable Cities Cr. 3
Through the lens of the planner's triangle of Environmental preservation, Equity, and Economic growth—the 3-Es of sustainability—this course explores the ways in which the natural world affects and is affected by both growing and shrinking cities, and how cities may manage growth, shrinkage, or redevelopment to create a more green, just, and prosperous urban future. Offered Fall, Winter.

UP 4550 State, Regional and Urban Economic Development: Policy and Administration Cr. 3
This course examines fundamental theories and concepts of economic development, traces how policy thinking about the development process has changed over time, and highlights issues of emerging relevance in the field. In the last four decades, shifting global economic trends (as well as new empirical findings from extensive research across the globe) have posed new challenges to our understanding of how and why regions grow, develop, and change – and what to do about it. In the course, we will use directed readings, policy debates, and case materials to examine how our current thinking about key development problems—such as economic growth, employment, competitiveness, industrial upgrading, skill formation, the organization of work, and institutional arrangements that sustain innovative development processes—has changed in light of the new global challenges. Offered Yearly.

UP 5010 Resources and Communication in Planning Cr. 3
Introduction to the use of basic tools and techniques of professional planning practice, including data resources, computer applications, map and plan preparation, presentation techniques. Offered Yearly.

UP 5110 Urban Planning Process Cr. 3
Scope and historical development of planning. Topics relevant to the practice of planning: theory, planning practice, social and physical development policy. Offered Yearly.

UP 5650 Metropolitan Detroit Cr. 3
Comprehensive analysis of metropolitan Detroit: city, suburbs and surrounding region. Historical development, physical foundations, economic and political expansion, ethnic and cultural areas, geopolitical infrastructure, social change, present-day problems and current events shaping the area's spatial structure. Offered Yearly.

UP 5670 Modern American Cities Cr. 3
History of U.S. cities since World War II. Topics include suburbanization, deindustrialization, gentrification, and globalization. Offered Intermittently.
Equivalent: HIS 5670

UP 5820 Urban and Regional Economics Cr. 4
Introduction to the economic foundations of urban problems; land use, housing, poverty, transportation, local public finance; regional industry mix, income, growth and development; the national system of cities and location of firms. Offered Yearly.
Equivalent: ECO 5800

UP 5999 Special Topics Cr. 1-4
Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

UP 6120 Planning Studies and Methods Cr. 4
Economic base, population, and land use studies. Discussion of approaches used to solve selected community development problems. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6260 Land Use Policy and Planning Cr. 3
Role of economics, history, and technology in shaping land use patterns within limits established by public policies and the legal system. Development of conceptual and practical skills for effective ethical intervention in local land markets. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6310 Real Estate Development Cr. 3
Process of urban real estate development; emphasis on market analysis, the construction process, and finance. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6320 Quantitative Techniques I Cr. 4
Statistical inference with emphasis on applications including central tendency, dispersion, hypothesis testing, correlation and regression. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.
Equivalent: GPH 6420

UP 6340 Community Development Cr. 3
Overview of contemporary community development practice in U.S. cities with emphasis on community-based approaches and the role of non-profit organizations. Housing and economic development aspects of neighborhood revitalization; social and political development. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6350 Housing Policy and Programs Cr. 3
Governmental housing policies and programs at the Federal, state and local levels. Role of community-based organizations in housing activities. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6470 Environmental Planning Cr. 3
Overview of local and regional environmental planning and policy. Rationale and ethics of environmental interventions; major elements of environmental plans and impact statements; current approaches to environmental problems. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6510 Urban and Regional Systems Cr. 3
Theory course dealing with concepts, processes and organization of urban and metropolitan regions, primarily focusing on the western world experience. Primary focus on system structure and change in response to market forces, technology, and public policy. Offered Yearly.

UP 6520 Transportation Policy and Planning Cr. 3
Introduction to the role of transportation in the planning process involving both regional and urban considerations. Offered Yearly.

UP 6550 Regional, State, and Urban Economic Development: Policy and Administration Cr. 3
Examination of regional, state, and local economic development theory, analysis, policy and administration. Offered for graduate credit only. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6570 Local Economic Development: Implementation and Finance Cr. 3
Detailed examination of economic development programs available to local governments for commercial revitalization (neighborhood and downtown), and industrial development and redevelopment. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6650 Planning and Development Law Cr. 3
Techniques available to guide land development. Concepts in zoning, subdivision regulations, timing and sequence of land development. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6680 Neighborhood Decline and Revitalization Cr. 3
Examination of reasons for neighborhood change and how plans and policies can be specified and implemented for neighborhood improvement. Offered for graduate credit only. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

UP 6700 Geographic Information Systems Cr. 4
Principles and applications of GIS, including spatial statistics, computer graphics, computer cartography. Offered for graduate credit only. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 7010 Planning and Decision Theory Cr. 3
Review of political, ethical, professional dimensions of planning; models of planning; communicative and group processes; negotiation and conflict resolution; decision-making in contexts characterized by uncertainty and complexity. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 7130 Advanced GIS Applications Cr. 4
Use of GIS for spatial analysis and computer cartography. No credit after GPH 4600. Offered Fall.
Prerequisite: UP 6700 with a minimum grade of C
Restriction(s): Enrollment is limited to Graduate level students.

UP 7500 Master's Professional Report Cr. 3
Applies the skills and competencies learned in the program on a project of the student's choosing. Under the close guidance of a MUP faculty member, the student will study a planning topic, issue, or community project and write a professional report based on this study with implications for local practice/policy. The goal is that the student demonstrate an understanding of urban planning theory and practice, public policy and planning processes, analytical techniques, and appropriate professional writing and analysis skills. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.

UP 7700 Projects in Urban Planning Cr. 4
Development and application of research design to specified urban problems. Offered Every Other Year.
Restriction(s): Enrollment is limited to Graduate level students.

UP 7800 Internship in Planning Cr. 1-3
Practicum for MUP Program. Field placement with public or nonprofit agency assigned by Urban Planning Intern Coordinator. Offered Yearly.
Restriction(s): Enrollment is limited to Graduate level students.

UP 7990 Directed Study Cr. 1-4
Independent reading and research. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 8 Credits

UP 7996 Research Topics Cr. 1-4
Individual problems in urban planning. Offered Every Term.
Restriction(s): Enrollment is limited to Graduate level students.
Repeatable for 6 Credits

UP 7999 Master's Essay Direction Cr. 3
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.

UP 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.
Restriction(s): Enrollment limited to students with a class of Candidate Masters; enrollment is limited to Graduate level students.
Repeatable for 8 Credits

US - Urban Studies

US 2000 Introduction to Urban Studies Cr. 4
Satisfies General Education Requirement: Diversity Equity Incl Inquiry, Social Inquiry
In this introductory urban studies course, students learn about the historic and contemporary forces driving urbanization with an emphasis on US cities and urban areas; the effects of these forces on diverse population groups; and challenges facing cities and strategies to resolve them. Although the course will draw from international contexts, wherever possible, experiences of and from the Detroit metro—city and suburbs—will be used to illustrate particular themes. Student learning centers on an examination of issues related to diversity, equity, and inclusion, and broader social phenomena. Offered Every Term.
Equivalent: GPH 2000, HIS 2000, PS 2000, SOC 2500

US 2200 Global Urbanism Cr. 3
Satisfies General Education Requirement: Global Learning Inquiry
The Global Urbanism course draws on directed readings, film and cases studies to illustrate the complexity of urbanity and urbanization in the developing and developed worlds – first through a comparative historical exploration of global urbanization and development, and then through a practical lens that seeks out solutions to broadly experienced problems. The class will use aspects of social science, history and urban planning as a framework for developing both inter-cultural perspectives on global urban development and also nuanced lessons for addressing similar challenges in different places. Offered Yearly.

US 2350 Black Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
Explores the historical, cultural and structural aspects of the Black urban experience in Detroit from the late 19th Century to the present, including the role that racism, urbanization and suburbanization have played in shaping racial, spatial and economic inequality in the Detroit Metropolitan area. Utilizes an interdisciplinary approach: to interrogate the social and cultural history of Black Detroit, to examine the various forms of Black social movement activism used by Black Detroiters in the 20th Century, and to analyze ways the shifting economic and political currents shaped, and reshaped racism, class, space, and resistance in the Detroit metropolitan area. Offered Fall, Winter.
Equivalent: AFS 2350, HIS 2350

US 3530 Urban and Regional Planning Cr. 3
Introduction to urban and regional planning concepts, including zoning, growth management, planning history, theory, and ethics. Emphasis on metropolitan Detroit. Offered Yearly.
Equivalent: UP 3530

US 3550 Public Health and the City Cr. 3
Introduces the field of medical geography, or the study of geographic aspects of health and disease. Students will also be introduced to the impact that city life has on health and healthcare in the US and internationally. They will gain an understanding of how geography as a discipline contributes to an understanding of health and health care in urban environments, and how social and economic contexts impact urban health. Mapping techniques will be utilized to examine the spatial patterns of disease and risk factors that may contribute to disease. Offered Yearly.
Equivalent: PH 3550

US 3650 History of Detroit Cr. 3
Satisfies General Education Requirement: Diversity Equity Incl Inquiry
History of Detroit from European contact to the present, with emphasis on the late-19th and 20th centuries. Offered Fall, Winter.
Equivalent: HIS 3650

US 3900 Topics in Urban Studies and Geography Cr. 1-4
Special topics focused on Urban Studies and Geography. Offered Every Term.
Equivalent: GPH 3900
Repeatable for 8 Credits

US 4000 Internship Cr. 1-4
Placement in government agencies or the non-governmental sector that provide working experience related to urban issues. Offered Every Term.
Restriction(s): Enrollment is limited to Undergraduate level students.
Repeatable for 4 Credits

US 4510 Cities and Regions Cr. 3
Processes of urbanization and metropolitanization in both the western and non-western worlds. Offered Fall.
Prerequisites: US 2000 with a minimum grade of D-, GPH 2000 with a minimum grade of D-, HIS 2000 with a minimum grade of D-, PS 2000 with a minimum grade of D-, or SOC 2000 with a minimum grade of D-

US 4620 Urban Studies Senior Capstone Research Cr. 3
Development and application of research design to specified urban problems. Offered Yearly.
Prerequisites: US 4420 with a minimum grade of D-, GPH 6420 with a minimum grade of D-, CRJ 4860 with a minimum grade of D-, SOC 4200 with a minimum grade of D-, or PS 3600 with a minimum grade of D-
Restriction(s): Enrollment is limited to Undergraduate level students.

WMT - Welding and Metallurgical Engineering Technology

WMT 3000 Welding Quality and Safety Cr. 3
Provides the basic knowledge of welding engineering as related to the inspection of welds. Includes an in-depth review of how various national, international structural and automotive welding standards relate to the quality of automatic, semi-automatic and manual welding processes. Understanding weld quality to determine if weldment(s) are fit for purpose is critical in developing a quality program that optimizes design and production requirements for automotive, military and aerospace weldments. Emphasis will be on process selection that minimizes rework, scrap or premature fracturing of production weldments. Examines the interrelationship between weld process, quality standards, material properties, and their effect on the performance of the weldment. Offered Yearly.

WMT 3150 Engineering Alloys Cr. 3
A firm and thorough knowledge of engineering alloys is critical in developing an optimal design for a given application while minimizing the risk of material failure. This course examines the interrelationships between processing, structure, properties, and performance of various engineering metals such as ferrous and non-ferrous metals with an emphasis on welding. The intent is to develop the ability both to select appropriate materials to meet engineering design criteria and to understand the effects of thermal treatments, hot and cold work, imperfections, forming, welding and chemical environments upon material properties and performance. Offered Yearly.
Prerequisite: ET 2200 with a minimum grade of C-

WMT 3200 Thermodynamics of Welding and Metallurgy Cr. 3
The principles and application of the fundamental laws of thermodynamics to metallurgical systems and welding engineering processes. The fundamentals will be used to obtain a thorough understanding of the basic relationships of thermodynamic driving force for phase transformations in metal and alloy systems. These fundamentals will be applied to understand the solid-solid, solid-liquid, and liquid-solid phase transformations occurring during heat-treatment and during welding processes. Offered Yearly.
Prerequisites: (ET 2200 with a minimum grade of C- or BE 1300 with a minimum grade of C-), (ET 3430 with a minimum grade of C- or MAT 2010 with a minimum grade of C-), and CHM 1020 with a minimum grade of C-

WMT 3451 Mechanical Metallurgy Cr. 3
The course will examine the strength, deformation, and failure of engineering materials from a first-principles materials science principles point of view. Established relationships between the mechanical behavior of materials and their microstructure as well as the control of mechanical behavior through materials processing and microstructural change will be studied. Emphasis will be placed on the behavior of structural defects associated with the welding of metallic alloys and how these defects affect the mechanisms of yielding, plastic deformation, strengthening, fatigue, fracture, and creep. Offered Yearly.
Prerequisites: WMT 3100 with a minimum grade of C- (may be taken concurrently)

WMT 3452 Physical Metallurgy Cr. 3
This course provides foundational knowledge of microstructural evolution during solidification, thermodynamics and phase transformation kinetics, alloy design, heat treatment, and the relationship between processing-microstructure-properties of metals and alloys. This course aims to teach students the crystallography principles of metallic systems, experimental tools, and techniques, solidification of metals and alloys, crystal defects in metals, diffusion kinetics, binary and ternary phase diagrams, cold working, and heat treatment. Students will also gain hands-on experience in heat treatment, metallography, and microscopy through the laboratory component. Offered Yearly.
Prerequisites: WMT 3100 with a minimum grade of C-

WMT 4500 Failure Fracture Analysis Cr. 3
The scope of this course is to understand various types of failure modes in metals and alloys, contributing factors to failures and analytical and detection methods employed to identify and resolve failure issues. The discussion of the failures of structural members will include design considerations, material selection and mechanical and chemical loading. Offered Yearly.
Prerequisites: WMT 3451 with a minimum grade of C- and WMT 3452 with a minimum grade of C- (may be taken concurrently)
Restriction(s): Enrollment limited to students in a BS in Weld & Metal Engg Tech degree.

WMT 4600 Metallurgy of Welding Processes Cr. 3
This course teaches the principles and applications of welding processes in addition to the standard fusion processes of shielded metal arc, gas metal arc, gas tungsten arc and flux-cored arc welding. The welding and metallurgical principles of resistance welding, gas welding, solid state welding, plasma arc, submerged arc, laser beam and electron beam welding will be addressed. There will be strong focus on the relationships between weld parameters and metallurgical fundamentals. Offered Yearly.
Prerequisites: WMT 3452 with a minimum grade of C-

WMT 4700 Welding Design Cr. 3
Offers a practical understanding and application of the design process for projects in welding engineering. The engineering aspects of the production of welded structures from the perspective of program development, concept, design and metallurgy will be taught. Students will gain further understanding of welding theory as it applies to design. Offered Yearly.
Prerequisite: WMT 3451 with a minimum grade of C-

WMT 4800 Advanced Welding Metallurgy Cr. 3
This course provides students with the knowledge and skills they need to become a welding professional. Both theoretical foundation on advanced welding metallurgy and hands-on practical training will be the focus of the course. Offered Yearly.
Prerequisite: WMT 4600 with a minimum grade of C-

WMT 5350 Resistance Welding Processes Cr. 3
This course teaches the principles and applications of resistance welding processes including Resistance Spot, Seam, Projection Welding as well as Resistance Mash, Flash-Butt, High Frequency and Stud Welding processes. The course will include the basic electrical and physical changes that occur during welding. The principles of both basic fusion and solid-state welding mechanisms will be discussed and related to metallurgical principles and process specific equipment requirements. Overall, there will be strong focus on the relationships between weld parameters, metallurgical implications, and how these affect the equipment requirements. Weld quality control, corporate and industry specifications, and spot weld analysis techniques will be taught through laboratory and homework assignments. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Weld & Metal Engg Tech; enrollment limited to students in the BS in Weld and Metal Engg Tech program.

WMT 5800 Welding Automation and Robotics Cr. 3
The scope of this course is to understand the concepts and technology associated with the operation of automatic and robotic welding systems. This course will incorporate automation and robotic technology with welding metallurgy. Students will learn to develop and edit programs to complete simple and complex welds and learn the effects of welding variables and options on weldment structural integrity as they are applied to automated and robotic weld systems. Offered Yearly.
Restriction(s): Enrollment is limited to students with a major in Weld & Metal Engg Tech.

UNIVERSITY FACULTY

A list of university librarians and archivists (p. 884) follows the list of faculty.

The list of faculty is updated during the normal bulletin revision process. Requests to update the faculty database must be made using the faculty list amendment forms (http://bulletins.wayne.edu/faculty/update/).

A

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INDEX

A

Academic Calendar 2026-2027 10
Academic Regulations 40
Academic Regulations 230
Academic Regulations 354
Academic Regulations 385
Academic Regulations: College of Education 99
Academic Regulations: College of Pharmacy and Health Sciences 365
Academic Regulations: Engineering Division 142
Academic Regulations: Fine, Performing and Communication Arts 183
Academic Regulations: Liberal Arts and Sciences 241
Academic Regulations: Mike Ilitch School of Business 79
Academic Services: College of Education 101
ACC - Accounting 400
Accounting 87
Accounting (B.A.) 88
Accounting (B.S.) 88
Accounting (Post-Bachelor Certificate) 88
Accreditation 16
ACO - Art: Core 403
ACR - Art: Ceramics 403
ACS - Art: Special Seminars 404
Actuarial Mathematics (B.A.) 304
ADA - Art: Digital Art 405
Adapted Physical Education (Undergraduate Certificate) 103
Additional Academic Programs 395
Administration of the University 12
Administrative and Organizational Studies 102
Admission: Graduate School 36
Admission: Undergraduate 34
ADN - Art: Design 405
ADR - Art: Drawing 406
Advanced Courses for Non-Majors 303
Advanced Energy Storage Systems (Undergraduate Certificate) 173
ADX - Art and Design Exposure 407
AED - Art Education 407
AET - Alternative Energy Technology 408
AFA - Art: Design and Merchandising 409
AFI - Art: Fibers 410
African American Studies 246
African American Studies (B.A.) 246
African American Studies Minor 247
Africana Theatre and Dance Minor 226
AFS - African American Studies 411
AGD - Art: Graphic Design 413
AH - Art History 415
AHS - Applied Health Sciences 417
AIA - Art: Interior Design 418
AID - Art: Industrial Design 419
AME - Art: Metalsmithing 420
AN - Anesthesia 420
ANA - Anatomy and Cell Biology 424
Animation and Interactivity Minor 195
ANT - Anthropology 424
Anthropology 247
Anthropology (B.A.) 247
Anthropology Minor 248
APA - Art: Painting 430
APH - Art: Photography 431
Applied Health Sciences 369
Applied Health Sciences (B.S.) 369
APR - Art: Printmaking 432
Arabic for the Health Care Professions (Undergraduate Certificate) 272
Arabic Minor 269
ARB - Arabic 433
Archaeology Minor 248
ARM - Armenian 434
ART - Art Courses 435
Art, Art History, and Design 188
Art (B.A.) 189
Art (B.F.A.) 190
Art History (B.A.) 192
Art History Minor 196
Art Minor 196
ASE - American Sign Language 435
Asian Studies Minor 270
ASL - Art: Sculpture 436
ASN - Asian Studies 437
AST - Astronomy 437
Astronomy (B.A.) 326
Astronomy (B.S.) 326
Astronomy Minor 330
AT - Art Therapy 438
ATR - Athletic Training 439
AUD - Audiology 440

B

BA - Business Administration 442
Bachelor Degree Requirements 208
Bachelor of Arts Program Requirements 201
Bachelor of Science: Engineering Division 144
Bachelor's Degree Requirements 23
Bachelor's Degree Requirements: Fine, Performing and Communication Arts 185
Bachelor's Degree Requirements: Liberal Arts and Sciences 242
BBE - Bilingual/Bicultural Education 444
BE - Basic Engineering 444
BIO - Biological Sciences 445
Biochemistry and Chemical Biology (B.S.) 255
Biochemistry and Chemical Biology Minor 260
Bioinformatics and Data Analysis (Undergraduate Certificate) 250
Biological Sciences 250
Biological Sciences (B.A.) 251
Biological Sciences (B.S.) 252
Biological Sciences Minor 254
Biomedical Engineering 150
Biomedical Engineering (B.S.) 150
Biomedical Physics (B.S.) 327
Biomedical Physics Minor 331
Blacksmithing Minor 196
BLW - Business Law 456
BMB - Biochemistry and Molecular Biology 456
BME - Biomedical Engineering 457
BMS - Basic Medical Science 461
Business Administration (B.A. and B.S.) 83
Business Administration Minor 85

C

Campus Life 62
Cannabis Chemistry (Undergraduate Certificate) 261
CB - Cancer Biology 461
CE - Civil Engineering 463
CED - Counselor Education 471
Centers and Institutes (Undergraduate Programs) 75
Ceramics Minor 196
CHE - Chemical Engineering 473
Chemical Engineering and Materials Science 152
Chemical Engineering (B.S.) 153
Chemistry 254
Chemistry (B.A.) 256
Chemistry (B.S.) 257
Chemistry Minor 260
CHI - Chinese 476
CHM - Chemistry 477
Civil and Environmental Engineering 155
Civil Engineering (B.S.) 155
CLA - Classics 484
Classical and Modern Languages, Literatures, and Cultures 261
Classical Civilization Minor 270
CMLLC Program Requirements 262
CMT - Construction Management 485
College of Education 98
College of Fine, Performing and Communication Arts 182
College of Liberal Arts and Sciences 239
College of Nursing 353
COM - Communication 487
Communication 201
Communication and Media Studies (B.A.) 202
Communication Sciences and Disorders 275
Communication Sciences and Disorders (B.A.) 275
Communication Sciences and Disorders Minor 276
Communication Studies Minor 206
Community Health (B.S.) 104
Competency Requirements 25
Complete Course List 397
Computer Science 158
Computer Science (B.A.) 243
Computer Science (B.S.) 158
Computer Science Minor 161
Computer Technology (B.S.) 174
Computing and Information Technology Division (C&IT) 72
Construction Management (B.S.) 175
Conversational and Professional French (Undergraduate Certificate) 273
Creative Writing Minor 286
Criminal Justice (B.S.) 276
Criminal Justice Minor 277
Criminology and Criminal Justice 276
CRJ - Criminal Justice 495
CSC - Computer Science 498
CTE - Career and Technical Education 505

D

Dance (B.F.A.) 219
Dance (B.S.) 220
Dance Minor 226
Deaf Studies Minor 136

Design and Merchandising (B.A.) ... 194
Design and Merchandising (B.S.) ... 195
Design (B.F.A.) ... 192
Design Minor ... 197
Digital Art and Photography Minor ... 197
Digital Humanities Minor ... 244
DNC - Dance ... 505
Doctor of Medicine (M.D. Program) ... 351
DR - Dispute Resolution ... 509
DSA - Data Science and Analytics ... 509
DSB - Data Science for Business ... 510
DSE - Data Science for Engineering ... 510

E

Early Childhood Education (B.S.Ed.) ... 117
ECE - Electrical and Computer Engineering ... 511
ECO - Economics ... 517
Economics ... 278
Economics (B.A.) ... 278
Economics Minor ... 280
ED - Education ... 522
EDA - Educational Administration ... 523
EDP - Educational Psychology ... 525
Educational Leadership AGRADE ... 102
Educational Outreach ... 69
Educational Studies (B.S.Ed.) ... 118
EED - English Education ... 528
EER - Educational Evaluation and Research ... 529
EET - Electrical/Electronic Engineering Technology ... 531
EGR - Engineering: Special Topics ... 531
EHP - Educational History and Philosophy ... 532
EI - Entrepreneurship and Innovation ... 532
ELE - Elementary Education ... 533
Electrical and Computer Engineering ... 163
Electrical and Computer Engineering (B.S.) ... 163
Electrical and Computer Engineering Minor ... 165
Electrical/Electronic Engineering Technology (B.S.) ... 176
Electromechanical Engineering Technology (B.S.) ... 178
Elementary Education (B.S.Ed.) ... 118
ELI - English Language Institute ... 537
ELR - Employment and Labor Relations ... 538
Employment and Labor Relations ... 281
Employment and Labor Relations (B.A.) ... 281
ENG - English ... 541
Engineering Technology Division ... 170
English ... 282
English (B.A.) ... 282
English Minor ... 286
Entrepreneurship and Innovation (B.A.) ... 91
Entrepreneurship and Innovation (B.S.) ... 91
Entrepreneurship and Innovation (Undergraduate Certificate) ... 87
Environmental Science and Geology ... 288
Environmental Science (B.S.) ... 288
Environmental Science Minor ... 291
EPS - Educational Leadership and Policy Studies ... 550
ESG - Environmental Science and Geology ... 551
ET - Engineering Technology ... 555
Eugene Applebaum College of Pharmacy and Health Sciences ... 362
EVE - Electric-drive Vehicle Engineering ... 557
Exercise and Sport Science (B.S.) ... 107
Exploratory and Pre-Professional Curricula ... 243

F

Fashion Design Minor ... 197
Film and Media Studies Minor ... 286
Film (B.A.) ... 203
Film Minor ... 206
Film Studies (B.A.) ... 285
FIN - Finance ... 558
Finance ... 89
Finance (B.A.) ... 89
Finance (B.S.) ... 90
Financial Aid ... 52
Folklore and Fairy-Tale Studies Minor ... 270
Forensics and Investigation Minor ... 249
Forensics and Investigation Minor ... 278
FPC - Fine Arts: Interdisciplinary ... 562
FPH - Family Public Health ... 562
FRE - French ... 564
French Minor ... 270
FYS - First Year Seminar ... 567

G

Gender, Sexuality and Women's Studies ... 292
Gender, Sexuality and Women's Studies (B.A.) ... 292
Gender, Sexuality and Women's Studies Minor ... 293
General Education Program ... 24
General Engineering (B.S.) ... 150
General Information ... 14
General Studies (B.G.S.) ... 244
General Theatre Minor ... 226

Geochemistry Minor ... 291
Geology (B.A.) ... 289
Geology (B.S.) ... 290
Geology Minor ... 291
Geophysics Minor ... 291
GER - German ... 567
German Minor ... 270
GKA - Greek: Ancient ... 569
GKM - Greek: Modern ... 570
Global Health and Social Medicine Minor ... 249
Global Studies (B.A.) ... 262
Global Studies Minor ... 271
Global Supply Chain Management ... 91
Global Supply Chain Management (B.A.) ... 92
Global Supply Chain Management (B.S.) ... 92
GLS - Global Studies ... 570
GPH - Geography ... 572
Graphic Design Minor ... 198
GS - Graduate School ... 573
GSC - Global Supply Chain Management ... 573
GSW - Gender, Sexuality and Women's Studies ... 576

H

HA - Health Administration ... 578
HE- Health Education ... 579
Health and Physical Education Teaching (B.S.) ... 111
Health Care Ethics Minor ... 321
Health Care Sciences ... 377
Health Communication Minor ... 207
Health Economics Minor ... 281
Health Psychology Minor ... 340
HEB - Hebrew ... 581
HIS - History ... 581
History ... 295
History (B.A.) ... 295
History Minor ... 296
History of Science, Technology, Environment, and Medicine Minor ... 297
HMB - Healthcare MBA ... 591
HON - Honors ... 591
Honors College Programs ... 232
Honors Curricula ... 33
HPE - Health and Physical Education ... 592
Humanities Minor ... 321

I

IBS - Interdisciplinary Biomedical Sciences ... 593
IE - Industrial Engineering ... 594
Illustration Minor ... 198
IM - Immunology and Microbiology ... 601
Industrial and Systems Engineering ... 165
Industrial Design Minor ... 198
Industrial Engineering (B.S.) ... 165
Industrial Engineering Minor ... 167
INF - Information Sciences ... 602
Information Technology (B.S.) ... 161
Inquiry Course Requirements ... 26
Interior Design Minor ... 198
Irvin D. Reid Honors College ... 229
Israeli Studies Minor ... 271
ITA - Italian ... 606
Italian Minor ... 271

J

James and Patricia Anderson College of Engineering ... 139
Jazz Studies Minor for Instrumental Music Education Majors ... 218
Jewelry Minor ... 199
Jewish Studies Minor ... 245
Journalism and Media (B.A.) ... 204
Journalism Minor ... 207
JPN - Japanese Studies ... 608

K

KHS - Kinesiology, Health and Sport Studies ... 609
KIN - Kinesiology ... 610
Kinesiology, Health and Sport Studies ... 103

L

Laboratory Science Concentration (B.H.S.) ... 373
LAS - Latino/Latina and Latin American Studies ... 611
LAT - Latin ... 613
Latin Minor ... 272
Latino/a and Latin American Studies ... 298
Latino/a and Latin American Studies (Co-Major) ... 298
Latino/a and Latin American Studies Minor ... 298
Law (B.A.) ... 237
Law (B.A.) ... 322
Law Minor ... 86
Law Minor ... 188
Law Minor ... 238
Law Minor ... 323
Law Minor ... 394
Law School ... 236
LawStart Program ... 239

LDT - Learning Design and Technology ... 613
LED - Language Education ... 616
LEX - Law ... 616
LFA - Life Fitness Activities ... 637
LGL - Language Learning ... 638
LIN - Linguistics ... 638
Linguistics ... 299
Linguistics (B.A.) ... 299
Linguistics Minor ... 301

M

MAE - Mathematics Education ... 640
Management ... 93
Management (B.A.) ... 93
Management (B.S.) ... 94
Marketing ... 95
Marketing (B.A.) ... 95
Marketing (B.S.) ... 95
MAT - Mathematics ... 641
Mathematical Economics (B.A.) ... 279
Mathematical Economics (B.A.) ... 305
Mathematics ... 301
Mathematics (B.A.) ... 306
Mathematics (B.S.) ... 308
Mathematics Minor ... 311
Mathematics Placement Information ... 302
MCT - Mechanical Engineering Technology ... 647
MD1 - Medical School: Year 1 ... 648
MD2 - Medical School: Year 2 ... 651
MD3 - Medical School: Year 3 ... 655
MD4 - Medical School: Year 4 ... 656
MDR - Medical Research ... 665
ME - Mechanical Engineering ... 665
Mechanical Engineering ... 168
Mechanical Engineering (B.S.) ... 168
Mechanical Engineering Minor ... 170
Mechanical Engineering Technology (B.S.) ... 179
MED - Music Education ... 671
Media Arts and Studies (B.A.) ... 204
Media Arts and Studies Minor ... 207
Media Content Creation Minor ... 208
Medical Humanities Minor ... 324
Medical Laboratory Science ... 371
Medical Laboratory Science (B.S.) ... 371
MGG - Molecular Genetics and Genomics ... 671
MGT - Management ... 673
Middle Childhood Education (B.S.Ed.) ... 120
Mike Ilitch School of Business ... 78
MIT - Manufacturing and Industrial Engineering Technology ... 677
MKT - Marketing ... 677
MLC - Med-Direct Community Learning ... 680
MLS - Medical Laboratory Science ... 680
Modern Greek Studies Minor ... 271
Mortuary Science (B.S.) ... 374
MS - Mortuary Science ... 682
MSE - Materials Science and Engineering ... 686
MSL: Master of Studies in Law ... 683
MUA - Music Ensembles and General Courses ... 687
MUH - Music History ... 691
Multi-Age Education (B.S.Ed.) ... 121
MUP - Music Private Instruction ... 694
Music ... 208
Music (B.A.) ... 211
Music (B.Mus.) ... 211
Music Industry Studies Minor ... 218
Music Minor ... 217
Music Technology Minor ... 218
Musical Theatre Minor ... 227
MUT - Music Theory ... 700

N

NE - Near Eastern Studies ... 702
Near Eastern Studies Minor ... 272
NEU - Neuroscience ... 704
Neuroscience ... 313
Neuroscience (B.S.) ... 313
Neuroscience Minor ... 314
NFS - Nutrition and Food Science ... 705
NUR - Nursing ... 709
Nursing (B.S.N.) ... 357
Nutrition and Food Science ... 316
Nutrition and Food Science (B.A.) ... 316
Nutrition and Food Science (B.S.) ... 317
Nutrition and Food Science Minor ... 318

O

Office of International Programs ... 66
OT - Occupational Therapy ... 727

P

PAA - Pathologists' Assistant ... 731
Painting and Drawing Minor ... 199

PAS - Physician Assistant Studies 734
PCS - Peace and Conflict Studies 736
Peace and Conflict Studies 318
Peace and Conflict Studies (Co-Major) 318
Peace and Conflict Studies Minor 332
PH - Public Health 737
PHA - Pharmacy 739
Pharmaceutical Sciences 380
Pharmaceutical Sciences Concentration (B.H.S.) 380
Pharmacy (Pharm.D.) 381
Pharmacy Practice 383
PHC - Pharmacology 740
PHI - Philosophy 743
Philosophy 319
Philosophy (B.A.) 319
Philosophy Minor 324
PHY - Physics 747
Physical Therapy Concentration (B.H.S.) 377
Physics and Astronomy 326
Physics (B.A.) 328
Physics (B.S.) 329
Physics Minor 331
POL - Polish 753
Polish Minor 272
Political Science 332
Political Science (B.A.) 333
Political Science Minor 337
PPR - Pharmacy Practice 754
Practical French (Undergraduate Certificate) 273
Practical German (Undergraduate Certificate) 274
Practical Italian (Undergraduate Certificate) 274
Pre-Law Minor 325
Printmaking Minor 199
Professional Arabic (Undergraduate Certificate) 273
Professional Biomedical Sciences (B.S.) 244
Professional Writing Minor 287
PS - Political Science 757
PSC - Pharmaceutical Sciences 764
PSL - Physiology 767
PSY - Psychology 770
Psychology 338
Psychology (B.A.) 338
Psychology (B.S.) 339
Psychology Minor 340
PT - Physical Therapy 778
PTH - Pathology 781
Public Affairs (B.P.A.) 336
Public Health 341
Public Health (B.S.) 341
Public Health Minor 342
Public History Minor 297
Public Relations and Strategic Communication (B.A.) 205
Public Relations Minor 208
PYC - Psychiatry 782

Q

Queer Studies Minor 294

R

Radiation Therapy Technology (B.S.) 378
RDT - Radiologic Technology 783
Records and Registration 55
Religious Studies Minor 325
RLL - Reading, Language and Literature Education 785
ROC - Radiation Oncology 786
RSE - Research, Service and Engagement 788
RT - Radiation Therapy Technology 788
RUS - Russian 790
Russian Minor 272

S

SAM - Sport Administration and Management 791
SCE - Science Education 792
School of Information Sciences 234
School of Medicine 348
School of Social Work 384
Sculpture Minor 200
Secondary Education (B.S.) 122
SED - Special Education 793
SEM - Sport and Entertainment Management 794
SLA - Slavic 795
SLP - Speech and Language Pathology 795
SOC - Sociology 797
Social Work and Social Justice Minor 393
Social Work (B.S.W. Program) 386
Society and the Environment Minor 297
Sociology 343
Sociology (B.A.) 343
Sociology Minor 344
SPA - Spanish 802
Spanish Minor 272
Special Education (B.S.) 125

Sport Management (B.S.) 112
SSE - Social Studies Education 805
STA - Statistics 806
Statistics (B.S.) 310
Statistics Minor 312
STE - Sustainable Engineering 807
STS - Study Skills 807
Student Academic Success Services 57
Studio and Community Dance Minor 227
SW - Social Work 807
SWA - Swahili 816
SYE - Systems Engineering 816

T

Teacher Education 116
Technology, Information Systems and Analytics 97
Technology, Information Systems and Analytics (B.A.) 97
Technology, Information Systems and Analytics (B.S.) 97
TED - Teacher Education 817
Textile Design Minor 200
THD - Theatre and Dance 824
Theatre and Dance 219
Theatre (B.A.) 225
Theatre (B.F.A.) 222
Theatre Design and Technology Minor 227
Theatre Management Minor 228
Theoretical and Behavioral Foundations 138
THR - Theatre 825
TIS - Technology, Information Systems and Analytics 836
Tuition and Fees 46

U

UGR - Undergraduate Research 840
Undergraduate Bulletin: 2026-2027 9
University Faculty 844
University Libraries and Archives 73
University Policies 20
UP - Urban Planning 840
Urban Education and Equity Studies Minor 136
Urban Studies and Planning 344
Urban Studies and Planning (B.A.) 344
Urban Studies Minor 346
Urban Sustainability Minor 346
US - Urban Studies 842

V

Visual Arts Education (Teacher Certification) 137

W

Wayne Experience 31
Welding and Metallurgical Engineering Technology (B.S.) 181
WMT - Welding and Metallurgical Engineering Technology 842
World Languages, Literatures, and Cultures (B.A.) 265

Y

Yoga and Mindfulness Minor 115