

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. 3

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: \$15

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 subspecialties 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. 3

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. 3

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. 3

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 Nurse 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