

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 5280 Principles of Pharmacotherapy VIII Cr. 2-3

Pharmacotherapeutic principles of special populations, men's and women's health, patient problem solving. Offered Winter.

Corequisite: PHA 5275

Restriction(s): Enrollment is limited to Professional level students; enrollment limited to students in the Pharmacy and Health Sciences.

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

PHA 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 5125