

(PS) PHARMACEUTICAL SCIENCE

Courses

PS 501. Graduate Seminar I. 1 Hour.

This course provides students with an introductory experience to graduate-level presentations of scientific information. Students attend a series of presentations by external speakers selected for their research activities along with presentations by departmental faculty and graduate students. From these presentations, students identify different elements that are essential for an effective presentation of data. Students apply these observed techniques in a journal club setting.

PS 502. Graduate Seminar II. 4 Hours.

This course provides students with an intermediate experience to graduate-level presentations of scientific information. Students attend a series of presentations by external speakers selected for their research activities along with presentations by departmental faculty and other graduate students. Each student will develop an abbreviated presentation on a topic related to their thesis project for presentation to departmental faculty and students. Prerequisite(s): PS 501.

PS 511. Scientific Writing & Responsible Conduct of Research (RCR). 1 Hour.

This course provides students with an understanding of key concepts that make for effective written communication by scientists with a focus on journal articles. Literature searching and elements of scientific publications and their formatting expectations are covered. Topics on authorship allocation, plagiarism and financial conflict of interest are discussed within the broader context of the responsible conduct of research. This course fulfills the requirements of the National Science Foundation and National Institutes of Health with regard to RCR training for graduate students.

PS 512. Pharmacologic Research Methods. 3 Hours.

The goal of this course is to provide students an opportunity to learn about research methods that are commonly used in Pharmacology. The course will survey a variety of methods, with a focus on understanding how each technique is performed, as well as the underlying scientific principles. While many of these methods are not unique to pharmacology, pharmacologic principles will be emphasized as they are discussed. The laboratory component of the course will provide students with practical experience in conducting pharmacologic research. Students will also receive an orientation to the research laboratories at Husson University and will be exposed to a variety of research topics.

PS 520. Applied Biostatistics & Research Design. 3 Hours.

This course will provide a graduate level discussion of appropriate statistical methods for analyzing different types of data generated by in vitro and in vivo pharmacology studies. The course will survey studies with different hypotheses and study designs. Mock data sets will be made available to the students for hands-on analysis. Analysis will be via simple statistical packages (e.g., Excel) and advanced statistical packages (e.g., SPSS). The course will involve approximately 2 hours per week of information presentation/discussion, and 2 to 3 hours per week of hands-on data analysis and interpretation. Prerequisite(s): RX 411.

PS 521. Graduate Pharmacodynamics I. 4 Hours.

This course will provide an in-depth survey of pharmacology & toxicology at the graduate level with particular coverage of drugs affecting the peripheral and central nervous systems, treatment of inflammatory states, agents that influence water and ion conservation, antibiotics & anti-viral agents, and agents used to treat cardiovascular disease. Selected topics of importance for understanding the SAR of agents in each class will also be discussed. Prerequisite(s): RX 302.

PS 522. Graduate Pharmacodynamics II. 4 Hours.

This course is a continuation of PS 521 with coverage of drugs in the areas of behavioral & neurological diseases, chemotherapeutic agents used against neoplasm, dermatologic preparations, endocrinology, bone and gastrointestinal agents, ophthalmic drugs, and respiratory drugs. Prerequisite(s): PS 521.

PS 599. Topic/. 1-6 Hour.

This course of variable content will provide students with the opportunity to explore selected topics in Pharmaceutical Science.

PS 620. Molecular and Cellular Toxicology. 3 Hours.

This course provides students with an in-depth coverage of toxicological mechanisms including toxicogenomics and molecular toxicology. It focuses on various ways to identify toxicity, specific testing paradigms, and federal regulations governing the field. Specific classes of xenobiotics that affect major organ systems are also covered. Student must have completed a general biochemistry course at the 300 level or higher and an introductory course in pharmacology at the 300 level or higher.