

PHARMACEUTICAL SCIENCES (PLS)

PLS 200 Fundamentals of Pharmaceutical Sciences (3 credits)

This course introduces the fundamental concepts in pharmaceutical sciences, including drug discovery, development, and delivery. It covers the principles of medicinal chemistry, pharmacology, pharmacokinetics, and pharmaceuticals.

Course Rotation: PLV: Spring.

Prerequisites: (CHE 112 and BIO 102 with minimum grades of D) and (CHE 326 or BIO 327 with a minimum grade of D).

PLS 300 Pharmaceutics (3 credits)

Pharmaceutics is the science and technology of designing, formulating, and manufacturing pharmaceutical dosage forms. It encompasses the study of the physical, chemical, and biological properties of drugs and their interactions with various excipients to create effective and safe medications. The course covers a wide range of topics, including drug delivery systems, drug formulation, stability testing, and quality control, with the ultimate goal of optimizing the therapeutic efficacy and safety of medications for patient use.

Course Rotation: PLV: Fall.

Prerequisites: PLS 200 with a minimum grade of D.

PLS 310 Pharmaceutical Manufacturing and Regulations (3 credits)

This course provides an in-depth understanding of the processes involved in pharmaceutical manufacturing and the regulatory frameworks governing the pharmaceutical industry. Topics include Good Manufacturing Practices (GMP), quality control, quality assurance, regulatory agencies, and compliance requirements.

Course Rotation: PLV: Spring.

Prerequisites: PLS 200 with a minimum grade of D.

PLS 392 Pharmaceutical Sciences Seminar I (1 credit)

Being able to articulate an idea, a problem, or solution means being able to understand and apply them in the real world once a student leaves the university. This seminar course is designed to engage students in the discussion of current topics and research in pharmaceutical sciences. Students will attend and participate in seminars presented by faculty, guest speakers, and peers. The course emphasizes the development of communication skills, critical thinking, and the ability to engage in scholarly discussions. Department Chair approval required.

Course Rotation: PLV: Fall & Spring.

PLS 480 Research in Pharmaceutical Sciences (3 credits)

This course provides an introduction to research methodologies and techniques in pharmaceutical sciences. It covers the principles of designing, conducting, and analyzing research projects. Students will engage in hands-on research, develop a research proposal, and present their findings.

Course Rotation: PLV: Fall & Spring.

Prerequisites: This course does not have a prerequisite.

PLS 492 Pharmaceutical Sciences Seminar II (1 credit)

Being able to articulate an idea, a problem, or solution means being able to understand and apply them in the real world once a student leaves the university. This seminar course is designed to engage students in the discussion of current topics and research in pharmaceutical sciences. Students will attend and participate in seminars presented by faculty, guest speakers, and peers. The course emphasizes the development of communication skills, critical thinking, and the ability to engage in scholarly discussions. For the PLS492 course, students are strongly encouraged to take this course in parallel with PLS480 – Research in Pharmaceutical Sciences, though it is not mandatory. Students of the PLS492 course are recommended to participate in the external undergraduate conferences or symposia giving a talk on their research topic Requires Department Chair Approval.

Course Rotation: PLV: Fall & Spring.