

Pharmacy, PhD

Drug Discovery and Experimental Therapeutics

The Doctor of Philosophy in pharmacy with a subprogram in drug discovery and experimental therapeutics requires 72 s.h. of credit. The degree requires 25 s.h. of didactic coursework, including 15 s.h. of required courses and a minimum of 10 s.h. of interdisciplinary electives. The remaining hours may be fulfilled by research, seminars, additional electives, and the doctoral dissertation. The typical time to complete the degree is five years. Students must maintain a cumulative grade-point average of at least 3.00.

The curriculum provides a strong foundational base of knowledge along with options for a tailored experience for students. The program prepares scientists capable of bridging the complex landscape of medicinal chemistry, biotherapeutics, pharmacogenetics/genomics, and basic pharmacology/toxicology.

The Doctor of Philosophy in pharmacy with a subprogram in drug discovery and experimental therapeutics requires the following work.

Required Courses

Course #	Title	Hours
All of these to total 15 s.h.:		
PHAR:5510	Pharmaceutical Sciences and Experimental Therapeutics Seminar	1-2
PHAR:5545	Current Medicinal Chemistry	3
PHAR:6515	Perspectives in Drug Discovery	2
PHAR:6820	Drug Discovery and Experimental Therapeutics Research	arr.
BIOS:4120	Introduction to Biostatistics	3
PCOL:4130	Drug Mechanisms and Actions (OR)	3
or PHAR:7101	Principles of Experimental Therapeutics	

Interdisciplinary Electives

Students select a minimum of 10 s.h. of electives chosen from the following courses. Additional electives can be selected from biochemistry, chemistry, genetics, neuroscience, and pharmacology at the discretion of the advisor.

Course #	Title	Hours
PHAR:5512	Drug Discovery and Mechanisms	3
PHAR:5537	Enzymatic Basis of Drug Metabolism	3
PHAR:5541	Total Synthesis of Biologically Active Natural Products	3
PHAR:5549	Analytical Biochemistry	3
PHAR:6501	Principles and Mechanisms of Chemical Toxicology	3
PHAR:6504	Mastering Reproducible Science	1

PHAR:6700	Advanced Pharmacokinetics and Pharmacodynamics	3
PHAR:7101	Principles of Experimental Therapeutics	3
PHAR:7102	Applied Clinical and Translational Science	3
BIOL:5512	Readings in Genetics	2
BIOS:5120/ IGPI:5120/ STAT:5610	Regression Modeling and ANOVA in the Health Sciences	3
CHEM:5321	Spectroscopic Methods in Organic Chemistry	3-4
CHEM:5328	Mechanisms of Organic Reactions	3

Comprehensive Examination

Students take the comprehensive examination between the beginning and end of their third year of graduate study.

Dissertation

The dissertation is defended in a final oral examination.