

Department of Pharmacology and Toxicology

Chairperson:	Sabra, Ramzi
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The field of pharmacology embraces knowledge of the history, sources, physical and chemical properties, compounding, biochemical and physiological effects, mechanisms of action, absorption, distribution, biotransformation, excretion, and therapeutic and other uses of drugs. The Department of Pharmacology and Toxicology offers mainly graduate courses for students in the medical, biomedical and nursing fields. Only one undergraduate course is available, specifically designed for students pursuing a BS in Nursing.

Graduate courses include those offered to medical students, graduate students in the biomedical sciences pursuing either a MS or PhD, degree, and graduate students in the MS in Nursing program. With the complete integration of the preclinical years in the medical program, pharmacology teaching occurs throughout the first two years of medical training within integrated, mostly organ-system based, courses. In addition, sessions in clinical pharmacology are offered during the third year of medical school embedded within the Internal Medicine, Surgery and Anesthesiology clerkships.

The MS graduate program in the department (in the discipline of Pharmacology and Therapeutics) consists of a minimum of two years of didactic and research training leading to the degree of Master of Science. Students who wish to enroll must have a BS and must have taken undergraduate courses in biology, chemistry (including organic chemistry) and physics. Required courses within the program include courses within the disciplines of biochemistry, physiology and cell biology, and the PHRM 300 course (see below) for a total of 21 credits, followed by a thesis (PHRM 399).

The PhD in Pharmacology and Toxicology is offered within the PhD program in biomedical sciences (refer to Faculty of Medicine and Medical Center - PhD Program in this catalogue).

PHRM 240 Pharmacology and Therapeutics 48.0; 3 cr.

A presentation of the chemistry, pharmacological effects, and therapeutic usefulness and toxicity of drugs. Designed to meet the requirements of the BS in nursing.

PHRM 300 Pharmacology and Toxicology

A general course dealing with the chemistry, general properties, pharmacological effects on the various systems, therapeutic usefulness and toxicity of drugs. A separate section deals with toxicology. *Offered to graduate students.*

PHRM 303/304 Pharmacological Methods 0.96; 3 cr. (each)

Methods of animal surgery, bioassay and biochemistry. *Prerequisite: PHRM 300.*

PHRM 305/306	Enzymological Bioassays	0.96; 3 cr. (each)
<i>Prerequisite: BIOC 211.</i>		
PHRM 307/308	Tutorial in Pharmacology	0.96; 3 cr. (each)
An introduction to research.		
PHRM 309/310	Pharmacology Seminar	0.32; 1 cr. (each)
PHRM 314	Advanced Pharmacology and Therapeutics	48.0; 3 cr.
The course covers the basic pharmacology of various drug classes and emphasizes clinical practice perspectives. Designed to meet the requirements of the MS degree in nursing. <i>Prerequisites: PHRM 240 (or its equivalent) and NURS 504.</i>		
PHRM 260	Elective in Pharmacology	0.180-360.
An introduction to biochemical and physiological methods in use in pharmacology. <i>One to two months.</i>		
PHRM 315	Principles of Pharmacology	19.21; 2 cr.
A course that covers the basic principles of drug action including pharmacokinetics, pharmacodynamics, pharmacogenetics, drug resistance, tolerance and toxicity, and pharmacovigilance; and explores mechanisms of drug action through readings of the scientific literature.		
PHRM 395 A/B	Comprehensive Exam	0 cr.
<i>Prerequisite: Consent of advisor.</i>		
PHRM 399 A/B/C/D/E	MS Thesis	9 cr.