PHARMACOLOGY (PHMCOL-M)

PHMCOL-M/PHM SCI 521 — PHARMACOLOGY I
3 credits.
Pharmacological actions of important drugs, including drugs that affect the peripheral nervous system, the central nervous system, and the gastrointestinal tract.
Requisites: Junior standing and Pharmacology and Toxicology undergraduate program or declared in the Doctor of Pharmacy program with second year standing
Repeatable for Credit: No
Last Taught: Fall 2017

PHMCOL-M/PHM SCI 522 — PHARMACOLOGY II
3-4 credits.
Pharmacological actions of important drugs, including hematopoietic, thrombolytic, antihyperlipidemic, immunopharmacologic, anticancer, anti-inflammatory, diuretic, antihypertensive, antianginal, and anti-arrhythmic agents, and agents used to treat congestive heart failure.
Requisites: PHMCOL-M/PHM SCI/PHMCOL-M 521
Repeatable for Credit: No
Last Taught: Spring 2017

PHMCOL-M/NTP/PHYSIOL 610 — CELLULAR AND MOLECULAR NEUROSCIENCE
4 credits.
Study of original papers leading to an understanding of the molecular basis of electrical activity in neurons. Topics include voltage-sensitive currents, molecular biology of neuronal receptors, synaptic transmission and sensory transduction. Lectures supplemented with experimental demonstrations and discussion sessions.
Requisites: Zoo 523 or equiv
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

PHMCOL-M/ANATOMY/NTP/PHYSIOL/PSYCH 611 — SYSTEMS NEUROSCIENCE
4 credits.
Introduction to the anatomy and physiology of the mammalian nervous system. Lectures will cover the neuroanatomy of the major subdivisions of the human brain, the major sensory and motor systems, and higher order functions. Lab/discussion sections will emphasize readings from the primary literature and hands-on dissections.
Requisites: PHYSIOL/NTP/PHMCOL-M 610
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

PHMCOL-M/B M E/MED PHYS/PHYSICS/RADIOL 619 — MICROSCOPY OF LIFE
3 credits.
Survey of state of the art microscopic, cellular and molecular imaging techniques, beginning with subcellular microscopy and finishing with whole animal imaging.
Requisites: PHYSICS 104, 202, 208, or 248 or MED PHYS/PHYSICS/MED PHYS 265
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

PHMCOL-M/M&ENVTOX/MEDICINE/ONCOLOGY/PATH/PHM SCI/POP HLTH 625 — TOXICOLOGY I
3 credits.
Basic principles of toxicology and biochemical mechanisms of toxicity in mammalian species and man. Correlation between morphological and functional changes caused by toxicants in different organs of the body.
Requisites: BIOCHEM 501, PHYSIOL 335, PATH 404 and PHM SCI 401
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

PHMCOL-M/M&ENVTOX/MEDICINE/PATH/PHM SCI/POP HLTH 626 — TOXICOLOGY II
3 credits.
Survey of the basic methods and fundamental biochemical mechanisms of toxicity. Toxicity in mammalian organ systems, techniques for evaluating toxicity, as well as mechanisms of species specificity, and environmental interactions (with toxicant examples) are presented.
Requisites: MENVTOX/MEDICINE/ONCOLOGY/PATH/PHMCOL-M/PHM SCI/POP HLTH/M&ENVTOX/MEDICINE/ONCOLOGY/PATH/PHM SCI/PHMCOL-M 625
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017
PHMCOL-M/BIOCHEM/ZOOLOGY 630 — CELLULAR SIGNAL TRANSDUCTION MECHANISMS
3 credits.
Lecture-discussion. Comprehensive coverage of human hormones, growth factors and other mediators; emphasis on hormone action and biosynthesis, cell biology of hormone-producing cells.
**Requisites:** Intro biochem (BIOCHEM 501 or 507 508) cell biology (Biocore 303 or Zool 570 or Path750) or cons inst
**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** No
**Last Taught:** Fall 2017

PHMCOL-M 699 — INDEPENDENT STUDY
1-3 credits.
**Requisites:** Consent of instructor
**Course Designation:** Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
**Repeatable for Credit:** Yes, unlimited number of completions
**Last Taught:** Fall 2017

PHMCOL-M 710 — CYTOSOLIC AND NUCLEAR SIGNALING MECHANISMS
2 credits.
Biochemical basis of drug action.
**Requisites:** PHMCOL-M/BIOCHEM/ZOOLOGY 630 (formerly Zool 630/PHMCOL-M 875), BIOCHEM 601 or equiv, cons inst
**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** No
**Last Taught:** Spring 2012

PHMCOL-M 711 — BIOCHEMICAL PHARMACOLOGY: NEUROTRANSMITTER RECEPTORS/ION CHANNELS
2 credits.
A consideration of neurotransmitter receptors and ion channels from a molecular perspective. Emphasis will be on current concepts in the field. Course is directed to graduate students and outstanding senior undergraduates.
**Requisites:** BIOCHEM 501 or cons inst
**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** No
**Last Taught:** Spring 2013

PHMCOL-M 717 — PHARMACOLOGY I
4 credits.
Lectures and discussions. For students in medicine.
**Requisites:** Graduate or professional standing
**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** No
**Last Taught:** Fall 2010

PHMCOL-M 781 — MOLECULAR AND CELLULAR PRINCIPLES IN PHARMACOLOGY
4 credits.
Provides an in-depth introduction to the molecular and cellular principles of pharmacology. Emphasis is on the mechanisms of drug and small molecule action in cells, with a particular focus on downstream signaling pathways, second messenger systems, protein kinase cascades, and the regulation of gene transcription.
**Requisites:** Graduate or professional standing
**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** No

PHMCOL-M 875 — SPECIAL TOPICS IN PHARMACOLOGY
1-3 credits.
Special topics in pharmacology. Topics may vary.
**Requisites:** Intro crse in biochem, mol biol, and genetics and cons inst
**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** Yes, unlimited number of completions
**Last Taught:** Spring 2017

PHMCOL-M 901 — SEMINAR AND JOURNAL CLUB
1-2 credits.
Students and staff present research reports of current interest.
**Requisites:** Graduate or professional standing
**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** Yes, unlimited number of completions
**Last Taught:** Fall 2017

PHMCOL-M/MEDICINE 914 — THERAPEUTICS I - EMPHASIS ON CHRONIC DISEASES
2 credits.
Students will have a greater knowledge of the use of drugs to treat common illnesses. They will better understand the appropriate selection of drugs and the management of side effects in treating chronic illnesses.
**Requisites:** 4th yr Med st or cons inst
**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** Yes, unlimited number of completions
**Last Taught:** Spring 2013

PHMCOL-M 920 — TREATMENT OF CANCER PAIN-CSC
2-12 credits.
Clinical elective for fourth year medical students.
**Requisites:** 4th yr Med st
**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement
**Repeatable for Credit:** Yes, unlimited number of completions
**Last Taught:** Spring 2015
PHMCOL-M 990 — RESEARCH
1-12 credits.

Research facilities of the department available to qualified students.

Requisites: Consent of instructor

Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: Yes, unlimited number of completions

Last Taught: Fall 2017