

# 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 2022

## 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:** PHM SCI/PHMCOL-M 521

**Repeatable for Credit:** No

**Last Taught:** Spring 2023

## 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 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 2022

## PHMCOL-M/M&ENVTOX/ONCOLOGY/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 or 508) and (ANAT&PHY 335, 435, or (BIOCORE 485 486)) and PATH 404; or graduate/professional standing

**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 2022

## PHMCOL-M/M&ENVTOX/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:** POP HLTH/M&ENVTOX/ONCOLOGY/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 2023

## PHMCOL-M 699 – INDEPENDENT STUDY

1-3 credits.

Directed study projects for juniors and seniors.

**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:** Spring 2023

## PHMCOL-M 715 – GRANT WRITING

1 credit.

Develop a predoctoral fellowship application based on the student's proposed thesis project. Receive input on ideas and writing, both from the instructor and peers.

**Requisites:** Graduate/professional standing

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

**Repeatable for Credit:** No

**Last Taught:** Spring 2023

## PHMCOL-M 739 – RIGOR, REPRODUCIBILITY AND BECOMING AN EFFECTIVE RESEARCHER

1 credit.

Focuses on two of the cornerstones of science advancement, which are rigor in designing and performing scientific research and the ability to reproduce biomedical research findings. Emphasizes the application of rigor that ensures robust and unbiased experimental design, methodology, analysis, interpretation, and reporting of results. Highlights topics of particular importance to first year graduate students, including the development of effective presentation skills, communication in a professional setting, and a strong mentor-mentee relationship.

**Requisites:** Graduate/professional standing

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

**Repeatable for Credit:** No

**Last Taught:** Fall 2022

**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/professional standing

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

**Repeatable for Credit:** No

**Last Taught:** Spring 2023

**PHMCOL-M 875 – SPECIAL TOPICS IN PHARMACOLOGY**

1-3 credits.

Special topics in pharmacology. Topics may vary.

**Requisites:** Graduate/professional standing

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

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2022

**PHMCOL-M 901 – SEMINAR AND JOURNAL CLUB**

1-2 credits.

Students and staff present research reports of current interest.

**Requisites:** Graduate/professional standing

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

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2023

**PHMCOL-M 990 – RESEARCH**

1-12 credits.

Research facilities of the department available to qualified students.

**Requisites:** Graduate/professional standing

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

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Summer 2023