

# 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. Enroll Info: None

**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 2020

## 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. Enroll Info: None

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

**Repeatable for Credit:** No

**Last Taught:** Spring 2021

## 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. Enroll Info: None

**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 2020

## 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. Enroll Info: None

**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 2020

## 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. Enroll Info: None

**Requisites:** PHMCOL-M/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 2021

## PHMCOL-M/BIOCHEM/ZOOLOGY 630 – CELLULAR SIGNAL TRANSDUCTION MECHANISMS

3 credits.

Comprehensive coverage of human hormones, growth factors and other mediators; emphasis on hormone action and biosynthesis, cell biology of hormone-producing cells. Enroll Info: None

**Requisites:** (BIOCHEM 501 or 507) and (BIOCORE 383, ZOOLOGY/BIOLOGY 101, or ZOOLOGY 570) 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 2020

## PHMCOL-M 699 – INDEPENDENT STUDY

1-3 credits.

Directed study projects for juniors and seniors. Enroll Info: None

**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 2020

## 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. Enroll Info: None

**Requisites:** Graduate/professional standing

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

**Repeatable for Credit:** No

**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. Enroll Info: None

**Requisites:** Graduate/professional standing

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

**Repeatable for Credit:** No

**Last Taught:** Fall 2020

**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. Enroll Info: None

**Requisites:** Graduate/professional standing

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

**Repeatable for Credit:** No

**Last Taught:** Spring 2021

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

1-3 credits.

Special topics in pharmacology. Topics may vary. Enroll Info: None

**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 2021

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

1-2 credits.

Students and staff present research reports of current interest. Enroll Info: None

**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 2021

**PHMCOL-M 990 – RESEARCH**

1-12 credits.

Research facilities of the department available to qualified students.

Enroll Info: None

**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 2021