

# PHARMACOLOGY (PHAR)

## Explanation of Course Numbers

- Courses in the 1000s are primarily introductory undergraduate courses
- Those in the 2000s to 4000s are upper-level undergraduate courses that also may be taken for graduate credit with permission and additional work assigned
- Those in the 6000s and 8000s are for master's, doctoral, and professional-level students
- The 6000s are open to advanced undergraduate students with approval of the instructor and the dean or advising office

### **PHAR 5099. Variable Topics. 1-99 Credits.**

#### **PHAR 6116. Pharmacogenomics and Personalized Medicine. 3 Credits.**

Relationships between human genetic variability and drug responsiveness, susceptibility to disease, and disease severity. Scientific, clinical, legal, and ethical challenges in applying pharmacogenomics to drug discovery and clinical development. Application of pharmacogenomics to personalized medicine. Students who have not completed PHAR 6205 or its equivalent prior to enrollment must complete a pharmacology preparatory primer. Restricted to graduate students enrolled in the biomedical sciences program or in Year 2 of the anatomical and translational sciences program. Prerequisites: permission of the instructor.

#### **PHAR 6205. Pharmacology. 5 Credits.**

Basic principles of pharmacology, including receptor mechanisms, drug distribution and metabolism, and pharmacokinetics. The interactions of drugs and biological systems as a basis for rational disease therapy. Prerequisites: BMSC 8210 and BMSC 8212; or permission of the instructor. Recommended background: Enrollment in an MA or PhD program in medical-related sciences.

#### **PHAR 6206. Advanced Pharmacology. 5 Credits.**

The interactions of drugs and specific organ systems. Current research in pharmacology and toxicology. Prerequisite: PHAR 6205. Recommended background: Enrollment in an MA or PhD program in medical-related science program.

#### **PHAR 6207. Basic Principles of Pharmacology. 2 Credits.**

Drug disposition. Autonomic nervous system, cardiovascular and gastrointestinal drugs. Psychopharmacology. Analgesics, sedatives, anticonvulsants. Chemotherapy, toxicology, endocrinology.

#### **PHAR 6208. Pharmacology in Disease Pathophysiology For Health Sciences Students. 2 Credits.**

Rational background on which to base understanding of therapeutics in the context of clinical pathophysiology. Representative drugs from various classes are presented. Builds on concepts introduced in PHAR 6207. Restricted to Health Sciences Students. Prerequisite: PHAR 6207.

#### **PHAR 6322. Advanced Professional and Communication Skills. 3 Credits.**

Best practices and strategies for attaining success in MS and PhD graduate programs and in future professional career paths, both in and outside academia. Restricted to graduate students. Recommended background: graduate students in STEM fields.

#### **PHAR 6501. Readings in Pharmacology. 1-12 Credits.**

Readings, discussions, and/or preparation of report. Student can choose to work with one or more faculty members in the department on a topic of mutual interest.

#### **PHAR 6502. Clinical Use of Drugs. 3 Credits.**

Discussion of the rational use of drugs in the treatment of disease. Independent reading and study.

#### **PHAR 8211. Physiology. 3 Credits.**

Basic medical science examining the normal function of the body and the control systems that maintain its homeostasis, integrating biochemistry and anatomy at the organ and organismal level. Prerequisites: BMSC 8210 and BMSC 8212.

#### **PHAR 8214. Physiology and Pharmacology Seminar. 1 Credit.**

Current and emerging topics with presentations and discussions facilitated by leading experts from GW and outside institution; student-led journal club and oral presentation opportunities. May be repeated for credit. Prerequisites: BMSC 8210 and BMSC 8212.

#### **PHAR 8281. Molecular Pharmacology and Neurobiology of Excitable Tissues. 3 Credits.**

Basic principles of molecular pharmacology and neurobiology of excitable tissues, the methods used in these disciplines, and current and emerging research in the field Prerequisites: BMSC 8210 and BMSC 8212.

#### **PHAR 8998. Advanced Reading and Research. 1-12 Credits.**

Restricted to doctoral candidates preparing for the qualifying examination. May be repeated for credit.

#### **PHAR 8999. Dissertation research. 3-12 Credits.**

Restricted to doctoral candidates. May be repeated for credit.