

PHM350 Introduction to Human Pharmacology (Online)

Course Description

Pharmacology as a discipline “stands on the shoulders” of the disciplines of physiology and biochemistry. This course is designed to introduce the student to aspects of human pharmacology - it is not intended to cover every topic within pharmacology.

The course includes material on “General Principles of Pharmacology” - Pharmacokinetics and Pharmacodynamics. The course also includes materials on pharmacology of central and peripheral nervous systems, on drugs affecting cardiovascular and renal systems to treat cardiac dysfunction and hypertension, on drugs used in cancer chemotherapy, on anti-bacterial drugs, and on drugs targeting endocrine systems.

The approach to the course content, although focused on the basic science underlying drug effects in humans, includes consideration of the clinical uses of drugs and the side effects of these drugs.

Prerequisite Courses

MSU students must have completed PSL 250, or PSL310, or PSL431 and PSL432.

For non MSU students, there are not any prerequisite courses required by MSU for enrollment in this course although a strong biology background is certainly useful. Previous performance in a physiology course is the most likely predictor of performance in this course. (Non MSU students taking this pharmacology course as an elective course within their curriculum may be required by their home institution to have taken specific courses before enrolling in this course.)

Course Schedule

The course is divided into five sections.

Section	Title
1	Principles of Pharmacology Pharmacokinetics Pharmacodynamics
2	Drugs Targeting the Nervous System: Part A Drugs Targeting the Autonomic Nervous System and Skeletal Neuromuscular Junction
3	Drugs Targeting the Nervous System: Part B Drugs Targeting GABA Receptors Drugs Targeting Norepinephrine and Serotonin Re-uptake Transporters: Antidepressants Drugs Targeting Dopamine Receptors: Treatment of Psychosis and Parkinson’s Disease Drugs Targeting Opiate Receptors: Pain Management
4	Drugs in Inflammation, Infection and Cancer Drugs Modulating Inflammation and Immunological Responses Drugs Targeting Bacteria Drugs Targeting Cancer Cells
5	Drugs Affecting the Cardiovascular System & the Kidneys, and Drugs Affecting Endocrine Systems Drugs Targeting the Heart Drugs Targeting the Kidney Pharmacology of Blood Pressure Control Drugs for Control of Hypercholesterolemia Hormones, Hormone Mimetics, and Hormone Antagonists

Course Structure

All course content is presented online using MSU's ANGEL system. Most of the material is presented in the form of written (online) text with numerous (text captioned) figures. Many figures are also accompanied by an audio description. There are also a significant number of animations to illustrate physiological processes and manipulation of these processes by drugs. In addition, there are a number of short (usually ten to twenty minute) recorded "lectures": these are audiovisual presentations prepared specifically for this course.

Within most text pages, students are asked content relevant questions for which answers are available at the click of the mouse. In addition, there are Discussion Forums in which the instructor can post a question and students can post their answers; students may also read and comment on the posted answers of their classmates.

The course is divided into five sections (as shown in the Course Schedule, above). Sections are made available to students in two to three week intervals. Within each section, students are free to access posted course content material at any time. At the end of each section, there is a multiple choice question type, closed book test. Students taking the course while enrolled in a degree program at an institution other than MSU may be required by that institution to take the exams under proctored conditions. Each test is composed of 30-45 questions and has a time limit - allowing students sufficient time to answer all questions but not enough time to consult sources for the correct answers! Each test is available to the students for a two day period. Each test can only be accessed once during that two day period by each student: once a student has started a test, it must be completed before the student logs off the ANGEL system.

Grades will be dependent solely on test performance. Grades will be based on the following scale: 92-100% 4.0, 83-91% 3.5, 76-82% 3.0, 64-75% 2.5, 53-63% 2.0, 48-62% 1.5, 42-47% 1.0, and < 42% 0.0.

Communication

The ANGEL platform used for MSU's online courses has an integral e-mail system. Students may contact fellow students to discuss course content and may contact the instructor to ask questions regarding the course content.

Students may also communicate with one another other and with the instructor through Discussion Forums (see Course Structure, above).

Finally, students may discuss content and ask the instructor questions on content during weekly two hour Chatroom sessions - any number of students may enter the Chatroom simultaneously. Chatroom transcripts are saved for consultation by students at any time.

Text Books

The students are not required to have a Pharmacology textbook for the course. However, students are encouraged to have access to a good textbook. Brenner and Stevens' "Pharmacology" is recommended for most students taking the course; Lehne's "Pharmacology for Nursing Care" is recommended for students in nursing programs.

Students with Disabilities

Students with a disability and requiring different accommodations to complete assignments (including tests) in the course must contact the course instructor as soon as possible after the start of the semester.

Academic Integrity

For MSU's policy on internet security, good citizenship, and privacy policy, visit <http://www.msu.edu/au>. Students should note that MSU and the instructor of this course adhere to strict policies on plagiarism.

Enrollment by MSU Students

Students enrolled in MSU undergraduate or graduate programs/majors should enroll in Section 730.

Enrollment by Non MSU Students

Non MSU students - students who are not currently enrolled at MSU in a degree program - may enroll in PHM350 Section 731 or 732 (Section 731 is for Michigan residents, Section 732 is for residents of other states and other countries) through MSU's Life Long Education (LLE) system. Prospective LLE students should visit MSU Admissions http://admissions.msu.edu/admission/guest_lifelong.asp to be admitted to the LLE system. After being admitted to the LLE system, students may register for PHM350 section 731 or 732 at <http://www.schedule.msu.edu>.

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