

INTRODUCTION

The goal of the Core Medical Pharmacology course is to assure that our students obtain a thorough comprehension of the basic pharmacological principles necessary for developing effective and safe therapeutic regimens for their patients.

OBJECTIVES

At the end of this course, each student should be able to:

1. Demonstrate an understanding of the terminology used to describe basic pharmacologic principles and drug classification.
2. Describe the basic pharmacokinetic principles governing uptake, distribution, metabolism and elimination of drugs and apply these principles in the therapeutic management of patients.
3. Describe and explain pharmacodynamic concepts of drug-receptor interaction to accurately predict drug responses at all levels of biological organization.
4. Interpret pharmacological data such as dose-response curves in the context of optimizing drug therapy.
5. Differentiate between terms such as efficacy, potency and therapeutic index as they relate to drug therapy.
6. Demonstrate an understanding of the basic mechanisms of drug-induced toxicity and drug interactions and develop appropriate approaches to their management.
7. Demonstrate an understanding of the basic mechanisms involved in modification of drug responses by disease, genetics, and age.
8. Apply the above concepts to all major drug groups in the development of the most effective and safe therapeutic regimen for their patients presenting with a variety of diseases.
9. Describe the effects exerted by drugs on cells, tissues, organ systems, and patients and be able to explain the mechanisms underlying these effects at various levels of biological organization.
10. Utilize appropriate resource materials (i.e. textbooks, literature & colleagues) to supplement their basic fund of knowledge in developing a rational and safe therapeutic approach for their patients.

PHARMACOLOGY COURSE-ORGANIZATION

A. SCHEDULE

The course schedule is found at the beginning of the syllabus and details the lecture schedule, exam schedule and room assignments for all course-related functions.

B. THE TEXT

Goodman and Gilman. The Pharmacological Basis of Therapeutics, 11th edition. New York: McGraw Hill, 2006.

C. THE SYLLABUS

Each of you should purchase a copy of the syllabus. Basically, the syllabus serves as a lecture outline as well as a study guide.

For each major topic (which may be one lecture or several), the syllabus materials include:

1. Instructor: the faculty member responsible for instruction on the topic.
2. Prototype Drug(s), if applicable: the drugs which will be used to illustrate concepts applicable to the major class of drugs under discussion. It will be necessary to know the key properties of all prototype drugs. **However, the prototypes are not the only drugs that you will be required to learn.** Along with the prototypes indicated, it will also be necessary to know the key properties of any other drugs that are specifically emphasized during the lecture sessions.
3. Outline: illustrated outline of major concepts you should know about the topic; to be supplemented by your own lecture notes and reading.
4. References: references to the text pages, which cover the topic, plus recommended supplementary reading in other books and/or journals.
5. Faculty Consultants: list of Pharmacology faculty members, in addition to the principal instructor, who are particularly knowledgeable on the topic and who may be consulted if you have any questions.
6. Review Questions: series of best answer multiple choice questions on the topic, for your own self-testing and review.

D. THE COURSE SCHEDULE

1. Lectures: Approximately 75 hours of lecture are scheduled. All lectures are to be given in the Basic Science Auditorium unless otherwise noted on the schedule.
2. Topic Conferences: This year we have scheduled four (4) two-hour conferences that will focus on groups of interrelated topics. To facilitate participation and discussion, the class will be divided in half and each conference will be conducted twice. The purposes of these conferences are to provide time:

- a. for faculty-student discussion of the major points and concepts of the given topics, the goal being to help you improve your understanding and working knowledge of the material.
 - b. to clarify any specific questions that may have arisen during your studying of the topics.
3. Interactive Group Problem: The interactive group problem will utilize the Patient-Oriented Problem Solving (POPS) System in Pharmacology and will focus on the Treatment of Cardiac Arrhythmias. For this exercise, students will work together in units of 4.
 4. Earned Extra Credit: At the beginning of each topic conference, a short (10 minute) problem solving exercise or a series of questions dealing with the major concepts to be discussed in the conference will be distributed. These papers will be taken up and graded. Each conference exercise and conference participation will be worth a maximum of 5 credits. In addition, at the end of the POPS exercise, there will also be a quiz worth 5 credits. When combined, the 4 topic conferences and POPS exercise will provide the possibility of earning a maximum of 25 credits. Each 10 credits earned will provide an additional 1 point to be added to the final grade. Fractional credits will be awarded (i.e., 15 credits = 1.5 points). To be eligible for the earned credits, students must have a passing final average grade (70%). **Extra credit cannot be used to raise a failing average to passing.** (See Grading Policy (F) below.)
 5. Clinical Pharmacology Conferences: Four (4) clinical correlation conferences will be presented by the faculty during the second half of the course. Their purpose is to reinforce concepts covered in lecture and to demonstrate application of these pharmacologic concepts to therapeutics in clinical vignettes and case settings. In order to facilitate class participation in discussion, the class will be divided in half and instructors will rotate between rooms as indicated in the schedule.

E. TESTING POLICY

The Pharmacology course includes 3 exams (2 topic and 1 comprehensive final). The 3 exams are integrated into the Spring Semester block exams.

1. The first topic exam includes all lectures and conferences up to and including the lecture on the Anticoagulant, Antithrombotic and Thrombolytic Drugs.
2. The second topic exam includes lectures, conferences and POPS from Antihypertensives through and including the Drugs of Abuse.
3. The final exam includes all material with a slightly greater number of questions dealing with those topics not covered on exams 1 and 2 (e.g., Prostaglandins through Antidotal Therapies).
4. Because the tests are given as integrated block tests over a total of six hours, students are advised not to miss tests for frivolous reasons. The policy approved by the Curriculum Committee concerning retaking of tests will be strictly adhered to. That policy states the following:

All students are to take examinations on the scheduled dates. Missing an examination will result in a grade of “0” (zero), unless exceptional circumstances justify that the student may take the examination on a different date. The decision to allow a student to take an examination at a time other than that designated for the entire class will be made by the Associate Dean for Students, Dr. Wong. Any requests for permission to take an exam at a time other than on the regularly scheduled date based on health reasons, a death in the family, or other significant problems must be made in writing with appropriate supporting documentation.

F. GRADING POLICY

The tests will be graded using % correct answers (raw score) as the score with 70% being the minimum passing grade.

1. Each topic exam and the final will count 33.33% of the total final grade.
2. Students with a final grade of 70% or greater will be eligible for earned extra credit: These points will be added to the final grade (refer to page 3, section 4).
3. As stipulated by the Curriculum Committee of the College of Medicine, completion of course and faculty evaluations are a required course component. Responses to individual items on the evaluations are anonymous; however, the software used in course and faculty evaluation administration permits us to know which students have completed the evaluations. Students who do not complete the course and faculty evaluations will receive an incomplete “IN” in the course until the evaluations are completed.

G. ATTENDANCE

Attendance is mandatory at all lectures, conferences, and the POPS exercise.

NOTE:

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