



The Florida State University
College of Medicine

Pharmacology 201

BMS 6401

FALL 2015

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Instructors

Course Director

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Faculty and Course Evaluation

Students will have the opportunity to evaluate each faculty member who teaches a major portion of the course, using a standard evaluation questionnaire. Students will also have the opportunity to evaluate the course at its conclusion. Suggestions and comments concerning the course, its material and conduct, are welcomed and may be made to the Course Director at any time.

Course Overview

Course Goals

This introductory course deals with the concepts of pharmacodynamics (e.g., drug-receptor interactions, signaling mechanisms, and dose-effect relationships) and pharmacokinetics (e.g., drug absorption, distribution, metabolism, and elimination). The course emphasizes the biochemical and physiological bases for understanding drug action, and it introduces many major classes of drugs. Groups of drugs which are specifically considered include those acting on the autonomic nervous system, those most prominently affecting the immune system, those used in treating disorders of the cardiovascular and respiratory systems, and those used in treating neoplastic and infectious diseases.

Learning Objectives

The student should exhibit the following knowledge, skills, and behaviors:

Knowledge

1. Demonstrate knowledge concerning each major drug class discussed in the course, including:
 - a. prototype drug(s),
 - b. mechanism(s) of action,
 - c. important therapeutic actions and applications, and
 - d. important (prevalent or life-threatening) adverse effects;
2. Demonstrate knowledge of the variations in drug response between individual patients, based upon disease, genetic traits, or other innate characteristics;
3. Demonstrate knowledge of the effect of age on pharmacodynamics, pharmacokinetics, and responses to therapy, with an emphasis on geriatric patients;
4. Develop an adequate basis of knowledge in pharmacology on which to build as the student advances through the clinical clerkship rotations;
5. Develop knowledge of drug classes and mechanisms into which additional drugs can be incorporated, compared, and contrasted as new drugs are developed and as the practice of medicine dictates.

Skills

1. Demonstrate an understanding of the general types and clinical usage of drugs for treating diseases of each organ system;
2. Demonstrate the ability to recognize and understand the physicochemical and physiological factors that affect the absorption, distribution, metabolism, and elimination of drugs, and how these relate to pharmacokinetics;
3. Demonstrate the ability to interpret dose-response relationships for both desired and undesired drug effects;
4. Demonstrate an understanding of drug-receptor interactions and allied molecular phenomena at a basic level;
5. Demonstrate ability to interpret and analyze literature related to drugs.

Attitudes and behaviors:

Demonstrate professional behavior during activities in the course by being in attendance when required, on time, attentive, and a considerate and active participant in discussions.

Course Format

The course consists of lecture hours, clinical discussion-tutorial sessions, and small group discussion sessions.

Competencies

Competency Domains	Competencies Covered in the Course	Methods of Assessment
Medical Knowledge for Practice	<p>Demonstrate knowledge of the variations in drug response between individual patients, based upon disease, genetic traits, age, or other innate characteristics.</p> <p>Demonstrate knowledge of each major drug class discussed in the course, including prototype drug(s), mechanism(s) of action, important adverse effects, and therapeutic actions and applications for treating diseases of each organ system.</p> <p>Recognize and describe the factors that affect the absorption, distribution, metabolism, and elimination of drugs.</p> <p>Demonstrate the ability to interpret dose-response relationships.</p> <p>Describe drug-receptor interactions and allied molecular phenomena at a basic level.</p>	Lecture, small groups, quizzes, examinations, written critique
Practice-based Learning and Improvement	Demonstrate an adequate knowledge base in pharmacology to advance to the clerkship rotations.	Quizzes and examinations
Communication and Interpersonal Skills	Demonstrate communication and teamwork skills	Drug Ad critique, communication skills in small group exercises and large group discussions
Professionalism	Demonstrate professional behavior during activities in the course by being in attendance when required, on time, attentive, and a considerate and active participant in discussions	Small group student evaluations
System-based Practice	Demonstrate the ability to interpret and analyze literature related to drugs	Drug Ad critiques to become aware of bias and misleading information related to patient safety & quality improvement

Policies

Americans with Disabilities Act

Candidates for the M.D. degree must be able to fully and promptly perform the essential functions in each of the following categories: Observation, Communication, Motor, Intellectual, and Behavioral/Social. However, it is recognized that degrees of ability vary widely between individuals. Individuals are encouraged to discuss their disabilities with the College of Medicine's [Director of Student Counseling Services](#) and the FSU Student Disability Resource Center to determine whether they might be eligible to receive accommodations needed in order to train and function effectively as a physician. The Florida State University College of Medicine is committed to enabling its students by any reasonable means or accommodations to complete the course of study leading to the medical degree.

[The Office of Student Counseling Services](#)

Medical Science Research Building, G146

Phone: (850) 645-8256 Fax: (850) 645-9452

This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center

874 Traditions Way

Florida State University

Tallahassee, FL 32306-4167

Voice: (850) 644-9566

TDD: (850) 644-8504

sdrc@admin.fsu.edu

<http://www.fsu.edu/~staffair/dean/StudentDisability>

Academic Honor Code

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. (Florida State University [Academic Honor Policy](#))

Attendance Policy

The College of Medicine has detailed attendance policies as they relate to each cohort and events that conflict with course schedules. See pages 28-29 of [FSUCOM Student Handbook](#) for details of attendance policy, notice of absences and remediation.

For BMS 6401: Unexcused absence from a scheduled examination or quiz may result in a score of zero (0 %) being assigned for that assessment. Unexcused absence from any activity for which attendance is required may be considered as an issue of Professionalism. Any unexcused absence may require completion of the Performance Improvement Program (see Grading System, below).

Required Materials

Required Textbook

Basic and Clinical Pharmacology, 12th Ed. (2012), B.G.Katzung, ed. (Available online at COM Medical Library [Pharmacology course page](#) and [Preclerkship Resources](#).)

Required Website

The Medical Letter on Drugs and Therapeutics (**required**, subject to examination) (*on Medical Library webpage under [Clinical Tools: Drug Information](#)*)

Recommended Materials

Textbooks

Goodman and Gilman's The Pharmacological Basis of Therapeutics, 12th ed. L.L. Brunton et al., eds., 2011. (Available online at COM Medical Library [Pharmacology course page](#) and [Preclerkship Resources](#))

Review books

Katzung & Trevor's Pharmacology Examination and Board Review, 10th ed., A.J. Trevor et al. eds., 2012. (An extensive review)

USMLE Road Map: Pharmacology, 2nd ed. (2006), B.G. Katzung and A.J. Trevor, eds. (A more abbreviated review)

Websites

Therapeutic Guidelines from The Medical Letter (*on Medical Library webpage: [Clinical Tools: Drug Information](#)/Medical Letter*)

Facts and Comparisons (*on Medical Library webpage: [Clinical Tools: Drug Information](#)*)

e-Pocrates (available *on Medical Library webpage: [Clinical Tools: Drug Information](#)* and *on handheld devices*)

MD Consult Drug Tab (*on Medical Library webpage: [Clinical Tools: Drug Information](#)*)

Prescriber's Letter (*on Medical Library webpage: [Clinical Tools: Drug Information](#)*)

[Practice questions from Tulane University](#)

Grading

Assignments

Questions pertaining to Medical Pharmacology 201 will be included in the four integrated examinations in the fall semester (total of approximately 135 questions) and in the integrated quizzes. The integrated quizzes are formative and do not contribute to the final exam average. In addition, there will be 4 announced quizzes (5 questions each) given during Pharmacology Small Group sessions. Small group quizzes contribute to your final exam average. The types of questions may include computer-graded formats (multiple choice, matching) and open-ended, short answer questions. Each student will also be required to write a critique (1-2 pages, double-spaced, 12-pt font) of a print, television, online, or radio advertisement for a drug product.

Grading System

FSU COM has adopted a pass/fail grading system which is used in the curriculum for the first and second years (See [Student Handbook](#)). To achieve a grade of Pass in BMS 6401 a student must meet all of the following requirements:

- 1) A performance of $\geq 70\%$ of all examination and for-credit quiz questions answered correctly. A performance below 70% correct will receive a grade of fail which will require remediation or repetition of the course, as determined by decision of the Student Evaluation and Promotion Committee.
- 2) A student whose performance is $<70\%$ (below passing) on any individual exam during the semester is required to
 - a. Attend the exam review
 - b. Contact the course director within 24 hours of that exam review, and
 - c. Meet with the course director. Students may be asked to complete a Performance Improvement Program, the purpose of which is to assist the student in developing the skills and habits necessary to succeed in the curriculum, as well as to address specific performance deficits.
- 3) Attendance and satisfactory participation in all required sessions, as determined by the Course Director. Unexcused absence from an activity for which attendance is required (for example, Small Group session) may be considered as an issue of Professionalism and may result in completion of a [Report of Concern for Unprofessional Behavior](#), a failing grade for the course, and/or referral of the student to the Student Evaluation and Promotions Committee.
- 4) Satisfactory completion and on-time submission of the assigned drug advertisement critique, as determined by the Course Director.
- 5) Demonstration of the attitudes and behaviors of Medical Professionalism in all aspects of the course.