



PHARM 726. FUNDAMENTAL PHARMACOLOGY

Course Description: A basic pharmacology course in which principles underlying the actions of drugs are presented, including pharmacokinetics, drug-receptor interactions, and drug metabolism. In addition, mechanisms of action, therapeutic effects, adverse effects and therapeutic indications are noted for major classes of drugs and for commonly used drugs within each class.

Credit Hours: 6

Course Prerequisites: Graduate students in the pharmacology program will have already completed basic courses in biochemistry and physiology. Graduate students in other basic science programs should have background in one of these disciplines. Also, prior approval by the course director and either the Graduate Director of the program in which the student is enrolled or the student's faculty advisor are required.

Course Dates: Spring Semester, see schedule appended at the end of this syllabus

Course Times: Monday, Wednesday, Friday; 10:00 – 11:50 a.m.

Course Location: D114

Director:

Stanley V. Smith, Ph.D.
Assistant Professor
Pharmacology/Toxicology
Room R401
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Professor
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Required Text and Other Learning Resources:

Course Overview:

Pharmacology 626 is an introduction to principles of pharmacology and therapeutic uses of drugs. The material is presented primarily in lectures. Blackboard will be used extensively, to post Power Point slides, additional study materials, and announcements.

Time Requirements:

Seventy hours are scheduled for presentations and examinations. Additional time outside of class will be required for reading, reviewing presented material, and other study efforts. It is difficult to estimate the number of hours required outside the classroom for each individual student to master the material, because of the wide range of studying habits and learning styles. However, mastery of pharmacology requires that one know mechanisms of action of drugs and drug names and classes, which will probably, at least initially, necessitate some degree of memorization; this means that a part of students' effort in studying involves learning the names of drugs and drug classes.

We encourage any of you to contact us to discuss any questions that may arise as you read or study the course materials. You are welcome to come to our offices and laboratories, or, of course, to e-mail or telephone us. The office and phone number of each faculty member are listed on the last page, and each of us has an e-mail account.

Examinations:

Exams. This course will have five examinations; students are permitted one hour and fifty minutes to complete each exam. Each of these exams will cover between 9 and 14 hours of lecture material, and will consist of 40-60 questions.

There will NOT be a comprehensive final exam.

The exams will be weighted to reflect the number of hours of material covered, as follows: exam 1 (14 hours), 23%; exam 2 (12 hours), 20%; exam 3 (13 hours), 22%; exam 4 (9 hours), 15%; exam 5 (12 hours), 20%.

Attendance:

Students are expected to attend all scheduled classes. Attendance at 80 percent of the scheduled classes is a minimum requirement; students who are absent from 20 percent or more of the scheduled classes will not receive credit for the course. For this course, students may be absent from NO MORE THAN TWELVE classes. Students who miss thirteen or more of the scheduled classes will not receive credit for the course. A student may, at the discretion of the course coordinator, be allowed to make up any course work that was missed due to absence. It is the responsibility of the student to communicate with the course coordinator if absence from a class is unavoidable.

Course Objectives:

Upon completion of this course, students will be able to:

1. Use pharmacokinetic parameters of drugs to determine appropriate doses and dose schedules.
2. Use dose-response curves to determine relative efficacies and potencies of drugs.
3. For each drug or drug class, explain the mechanism through which it exerts a therapeutic effect.
4. For each drug or drug class, identify the major side effect(s).
5. Identify the preferred agent for treating a particular medical disorder or disease;
6. Identify drugs or drug classes that have harmful interactions with a given drug.
7. Identify situations (such as specific diseases) in which a given drug is contraindicated.
8. Identify the unknown drug from a given list of drugs on the basis of information provided with a graph or diagram illustrating the physiological effects of the drug to be identified.
9. Identify the toxic compound or drug which is responsible for a single or multiple toxic sign(s) or effect(s).

Faculty

	<u>OFFICE</u>	<u>TELEPHONE</u>	
Basic Science			
Dr. Rodney Baker	R-413	601-984-1620	rbaker@umc.edu
Dr. George Booz	R-429	601-984-4401	gbooz@umc.edu
Dr. D. Bruce Couch	N-433	601-984-1611	dcouch@umc.edu
Dr. Jerry Farley	R-400	601-984-1630	jfarley@umc.edu
Dr. Robert Kramer	N-437	601-984-1604	rkramer@umc.edu
Dr. Tangeng Ma	R-425	601-984-1698	tma@umc.edu
Dr. Richard Roman	R-418	601-984-1602	rroman@umc.edu
Clinical			
Dr. Harry Precheur	D-299-216-07	601-984-6090	hprecheur@umc.edu

*D, Dental Building; G, Guyton Building; L, Clinical Sciences Building; R, Research Wing; N, North Wing

Course Communication: Announcements and other information related to the operations of this course will be relayed in class or through e-mail.

University Policies:

Students with disabilities (ADA) statement, Refer to UMC policy

Academic honesty statement, Refer to UMC policy

PHARMACOLOGY 626
Spring Semester 2011

All classes will be in D-114.

HR	DAY	DATE	TIME	TITLE	CH.	LECTURER
1	Mon	21 Feb	10:00	Pharmacokinetics	1	Wellman
2			11:00	Pharmacokinetics	1	Wellman
3	Wed	23 Feb	10:00	Pharmacokinetics	1	Wellman
4			11:00	Problems	1	Wellman
5	Fri	25 Feb	10:00	Drug Biotransformation	1	Smith
6			11:00	Drug Biotransformation	1	Smith
7	Mon	28 Feb	10:00	Pharmacodynamics	2	Wellman
8			11:00	Pharmacodynamics	2	Wellman
9	Wed	2 Mar	10:00	Gastrointestinal and Antiemetic Drugs	28	Smith
10			11:00	Drugs to treat Migraine	42	Smith
11	Fri	4 Mar	10:00	Antihistamines	42	Wellman
12			11:00	Antineoplastics I	39	Wellman
13	Mon	7 Mar	10:00	Antineoplastics II	39	Wellman
14			11:00	Antineoplastics III	39	Wellman
15	Wed	9 Mar	10:00	Immunosuppressants	40	Baker
16			11:00	The Autonomic Nervous System	3	Farley
17	Fri	11 Mar	10:00	TEST 1 (Hours 1-14)		
18						
14-18 Mar			SPRING BREAK			
19	Mon	21 Mar	10:00	Cholinergic Agonists	4	Farley
20			11:00	Cholinergic Antagonists	5	Farley
21	Wed	23 Mar	10:00	Cholinergic Antagonists	5	Farley
22			11:00	Adrenergic Agonists	6	Farley
23	Fri	25 Mar	10:00	Adrenergic Agonists	6	Farley
24			11:00	Adrenergic Antagonists	7	Farley
25	Mon	28 Mar	10:00	Adrenergic Antagonists	7	Farley

26			11:00	Treatment of Asthma	27	Farley
27	Wed	30 Mar	10:00	Hemostasis	20	Baker
28			11:00	Dyslipidemias	21	Wellman
29	Fri	1 Apr	10:00	Overview of Cardiac Physiology	16	Booz
30			11:00	Heart Failure	16	Booz
NOTE TIME CHANGE						
31	Mon	4 Apr	8:00	TEST 2 (Hours 15 – 28; 12 lecture hours)		
32						
33	Wed	6 Apr	8:00	Antiarrhythmics	17	Booz
34			9:00	Antianginal Drugs	18	Booz
35	Fri	8 Apr	8:00	Eicosanoids	42	Baker
36			9:00	Anti-inflammatory Drugs	26, 41	Baker
37	Mon	11 Apr	8:00	Anti-inflammatory Drugs	26, 41	Baker
38			9:00	Insulin and Oral Hypoglycemic Drugs	24	Smith
39	Wed	13 Apr	8:00	Insulin and Oral Hypoglycemic Drugs	24	Smith
40			9:00	Diuretics	22	Roman
	Fri	15 Apr		no class		
41	Mon	18 Apr	8:00	Diuretics	22	Roman
42			9:00	Antihypertensives	19	Roman
43	Wed	20 Apr	8:00	Antihypertensives	19	Roman
44			9:00	Pituitary and Thyroid	23	Kramer
45	Fri	22 Apr	8:00	Pituitary and Thyroid	23	Kramer
46			9:00	Estrogens and Androgens	25	Kramer
47	Mon	25 Apr	8:00	TEST 3 (Hours 29 – 43; 13 lecture hours)		
48						
49	Wed	27 Apr	8:00	Estrogens and Androgens	25	Kramer

50			9:00	Adrenal Hormones	26	Kramer
51	Fri	29 Apr	8:00	Antimicrobials	30 - 38	Couch
52			9:00	Antimicrobials	30 – 38	Couch
53	Mon	2 May	8:00	Antimicrobials	30 – 38	Couch
54			9:00	Antimicrobials	30 - 38	Couch
55	Wed	4 May	8:00	Introduction to the CNS		Ma
56			9:00	CNS Stimulants	10	Ma
57	Fri	6 May	8:00	TEST 4 (Hours 44-54; 9 lecture hours)		
58						
59	Mon	9 May	8:00	Opioids	14	Ma
60			9:00	Neuroleptics	13	Wellman
61	Wed	11 May	8:00	Epilepsy	15	Wellman
62			9:00	Anxiolytic and Hypnotic Drugs	9	Baker
63	Fri	13 May	8:00	Anesthetics	11	Baker
64			9:00	Anesthetics	11	Baker
65	Mon	16 May	8:00	Clinical Correlation (Anesthesia)		Precheuer
66			9:00	Antidepressants	12	Baker
67	Wed	18 May	8:00	Neurodegenerative Diseases	8	Baker
68			9:00	Toxicology	43	Baker
69	Fri	20 May	8:00	Drug Interactions		Smith
70	Mon	23 May	8:00	TEST 5 (Hours 55-68; 12 lecture hours)		
71						