

The University of Jordan

Faculty: Pharmacy

Program: Pharmacy / Pharm D

Department: Department of Biopharmaceutics & Clinical Pharmacy

Academic Year/ Semester: First semester 2014/2015

Pharmacology I (1203363)

Credit hours	3 hours	Level	3 rd year	Pre-requisite	Physiology II (0551215)
Coordinator: Lecturers:	Dr. Amal Akour Dr. Sameh Al-Zubaidi Dr. Oriana Awwad Dr. Eman Abu Rish	Office number	- 324 - 236 - 325 - 326	Office phone	- 23344 - 23368 - 23362 - 23372
Course website	http://www2.ju.edu.jo/sites/Academic/a.akour/default.aspx				
E-mail	- a.akour@ju.edu.jo - s.alzubaidi@ju.edu.jo - o.awwad@ju.edu.jo - e.aburish@ju.edu.jo	Place	- 3 rd floor - 2 nd floor - 3 rd floor - 3 rd floor		

Office Hours					
Day/Time	Sunday	Monday	Tuesday	Wednesday	Thursday
Dr. Amal		11-12 pm		11-12 pm	
Dr. Sameh	9-10 am		9-10 am		12-1 pm
Dr. Oriana	11-12 pm		11-12 pm		11-12 pm
Dr. Eman	10-11 am		10-11 am		10-11 am

Course Description

Pharmacology is the study of drugs. The course will cover the important concepts students need to know about the basis of drug action and the pharmacology of therapeutic. The first part of the course will deal with general principles of pharmacology, including pharmacodynamics, and pharmacokinetics.

The second part will focus on systemic pharmacology and will involve discussions of major drug classes as they relate to organ systems or major pathophysiological diseases. Topics include: autonomic drugs, cardiovascular-renal drugs, drugs acting on the blood and drugs used to treat disease of inflammation.

Learning Objectives

The central goal of the Pharmacology I course is two-fold. First, to provide students with a solid grounding in the basic concepts and scientific underpinnings of Pharmacology. Second, to provide students with a comprehensive introduction to the fundamental Pharmacology and uses of the major classes of clinically important drugs currently used in medical practice.

When you're finished with Pharmacology I, you'll come away with an appreciation of how drugs affect the body in intended and unintended ways, and you will be ready to move on to Pharmacology II.

Intended Learning Outcomes (ILOs):

Successful completion of the course should lead to the following outcomes:

A. Knowledge and Understanding: Student is expected to:

- A.1- Explain the basic principles of pharmacology and drug therapy.
- A.2- Understand the principles of pharmacokinetics.
- A.3- Understand the principles of pharmacodynamics.
- A.4- Know core cellular and molecular processes associated with drug actions and drug interactions.
- A.5- Know the major drug classes as they relate to organ systems or major pathophysiological diseases and discuss representative medications within specific classifications.

B. Intellectual Analytical and Cognitive Skills: Student is expected to:

- B.1- Demonstrate knowledge of the terminology and special concepts useful in the study of pharmacology.
- B.2- A5- Understand the rationale behind designing different dosing regimens of particular drugs in specific patient populations.
- B.3- Recognize that drugs have action at all systems and should be able to classify them, and appreciate that this classification is not absolute.

C. Subject-Specific Skills: Student is expected to:

- C.1- Be able to distinguish one or two prototype drug(s) of each pharmacological group especially those of clinical importance.
- C.2- Acquire a comprehensive description of the major group of drugs as applied to medical practice and be sufficiently prepared to gather information on new drugs.
- C.3- Identify the common serious side effects and contraindications of each prototype drug, different mechanisms of drug toxicity, interactions and factors modifying drug action.

D. Transferable Key Skills: Students is expected to:

- D.1- Apply key scientific principles underpinning the pharmacological sciences.
- D.2- Make appropriate therapeutic treatment decisions for individual patients utilizing drugs from the major drug classes.
- D.3- Know how to obtain subjects specific information through the visit of libraries to answer questions presented in the class.
- D.4- Recognize different resources of pharmacology (books, professional sites and scientific journals) and know how to evaluate the big quantity of information available
- D.5- Take responsibility for own work and to exercise substantial autonomy and initiative in a learning environment.

Course Contents

Week	#	Topic	Chapter	
I. BASIC PRINCIPLES				
1	14/09-18/09	1	Introduction to pharmacology	1
2	21/09-25/09	2	Pharmacokinetics	3
3	21/09-25/09	3	Pharmacodynamics	2
	28/09-02/10			
II. AUTONOMIC DRUGS				
4	05/10-08/10		<i>Eid Al-Adha Holiday (approx.)</i>	
5	12/10-16/10		Cholinoceptor-activating & cholinesterase-inhibiting drugs	7
6	19/10-23/10	6	Cholinoceptor blocking drugs	8
7	26/10-30/10	7	Adrenoceptor-agonists & sympathomimetic drugs	9
8	02/11-06/11	8	Adrenoceptor Antagonist Drugs	10
III. CARDIOVASCULAR-RENAL DRUGS				
9	02/11-06/11	8	Diuretic Agents	15
	09/11- 13/11			
10	09/11- 13/11	9	Antihypertensive Agents	11
	16/11-20/11			
11	16/11-20/11	10	Vasodilators & treatment of Angina Pectoris	12
12	23/11-27/11	12	Drugs used in Heart failure	13
13	30/11-04/12	13	Agents used in Cardiac Arrhythmias	14
IV. DRUGS USED TO TREAT DISEASES OF THE BLOOD, INFLAMMATION, & GOUT				
14	07/12-11/12	14	Agents used in Hyperlipidemia	35
15	14/12-18/12	15	Drugs used in disorders of coagulation	34

Learning Methodology

The course consists of 3 hours / week sessions covering the fundamentals of basic and clinical pharmacology as a translational scientific discipline focused on rational drug development and utilization in therapeutics.

The lectures will include power point presentations that will be prepared for each topic and given to the students as primary source of learning.

The concept acquired by the students will be examined during the semester through two 10-marks quizzes.

Main Reference/s:

- Basic & Clinical & Pharmacology, 13th edition, 2015. ISBN-13: 978-0071825054

References:

- Pharmacology: Examination & Board review. Katzung & Trevor, 10th edition, 2013. SBN-13: 978-0071789233
- Goodman & Gilman's The Pharmacological Basis of Therapeutics, 12th edition, 2011. ISBN-13: 978-0071624428
- Lippincott's Illustrated Reviews: Pharmacology, 6th edition, 2015. ISBN-13: 978-1451191776
- Rang & Dale's Pharmacology, 8th Edition, 2015. ISBN: 9780702053627

Evaluation

Evaluation	Point %	Date	Material
Midterm Exam	<u>40%</u>	<i>To be announced</i>	<i>To be announced</i>
Quiz 2	<u>10%</u>	– <i>First week of December</i>	– NSAIDs, anti-gout and DMARDs (self-reading)
Final Exam	<u>50%</u>	<i>To be announced</i>	<i>To be announced</i>

Important Regulations:

❖ **Attendance:**

- Attendance to the lectures is expected and mandatory.
- Students who are more than 5-10 minutes late for, or who leave early from class will be counted as absent.
- Students are allowed maximum of 15% of scheduled class hours per term. Any single absence beyond that will be reported to the dean and student will be subjected to the rules and regulations of University of Jordan including course dismissal

❖ **Cheating policy:** The participation, the commitment of cheating will lead to applying all following penalties together:

- Failing the subject he/she cheated at
- Failing the other subjects taken in the same course
- Not allowed to register for the next semester
- The summer semester is not considered as a semester

❖ **Makeup exams:** Makeup exams should not be given unless there is a valid excuse: student's hospitalization or death of a first degree family member. Arrangements to take an exam at a time different than the one scheduled MUST be made prior to the scheduled exam time.

❖ **Workload:**

- ❖ Studying resources (material) will mainly be based on and derived from the textbook as well as any other resources to which the student is directed
- ❖ Average workload student should expect to spend is 4-5 hours per week.

