



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Pharmacology 1
2	Course number	1203363
3	Credit hours (theory, practical)	3 (theory)
	Contact hours (theory, practical)	3 (theory)
4	Prerequisites/corequisites	Prerequisite: Physiology II (0551215)
5	Program title	PharmD & Pharmacy
6	Program code	
7	Awarding institution	The University of Jordan
8	Faculty	Pharmacy
9	Department	Biopharmaceutics & Clinical Pharmacy
10	Level of course	undergraduate
11	Year of study and semester (s)	First semester of the 3rd year
12	Final Qualification	PharmD and BSc Pharmacy
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Dr. Sameh Al-Zubiedi

Office 203

Phone 5 355 000, Ext. 23368.

E-mail: s.alzubiedi@ju.edu.jo

Office hours to be announced

17. Other instructors:

Office hours to be announced

18. Course Description:

As stated in the approved study plan.

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 pharmacological basis 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.

19. Course aims and outcomes:

The central goal of the Pharmacology I course is two-fold. First, to provide students with working knowledge and a solid background 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, students will be aware of how drugs affect the body in intended and unintended ways, and you will be ready to move on to Pharmacology II and other relevant courses.

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-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: Student 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.

Program Competencies Achieved:

- 2.3 Identify pathophysiological basis of major human diseases
- 2.4 Assess symptoms and diagnostic tests and correlate them with associated diseases
- 2.8 Identify indications, side effects and contraindications of medicines
- 2.9 Identify drug-drug and drug-food interactions of medicines
- 2.15 Verify that patient therapy is based on best scientific evidence available
- 2.17 Advise patients and other health professionals on proper usage of medicines including their strength, frequency, dosage form and route of administration
- 2.18 Identify any medication-related problems and take appropriate actions to resolve them
- 2.19 Recommend necessary modifications to patient therapy to optimize its safety and efficacy
- 7.4 Follow new advances in science related to the profession
- 7.5 Utilize information technology tools to enhance working experience

20. Topic Outline and Schedule:

1.

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction to pharmacology	1	Dr. Sameh	2. A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Pharmacokinetics	2	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Pharmacodynamics	3	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Cholinoceptor-activating & cholinesterase-inhibiting drugs	4	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Cholinoceptor blocking drugs	5	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Adrenoceptor-agonists & sympathomimetic drugs	6	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Adrenoceptor Antagonist Drugs	7	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Antihypertensive agents & Diuretics	8	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Vasodilators & treatment of Angina Pectoris	9	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Drugs used in Heart failure	10	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below

Agents used in Cardiac Arrhythmias	11	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Agents used in Hyperlipidemia	12	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Drugs used in disorders of coagulation	13	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Supportive care for cancer patients (pain, miscellaneous adverse effects)	14	Dr. Sameh	A1-3, B1, C1	Exams and assignment	Specified in each lecture. General references provided below
Final Exam	15				

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following <u>teaching and learning methods</u> :		
ILO/s	Learning Methods	Evaluation Methods
A1-3, B1, C1	Lectures	Exams
D1	Assignment	Pharmacology flash cards
Learning skills: <ol style="list-style-type: none"> Critical thinking Digital literacy Problem-solving skills Self-directed learning 		

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following <u>assessment methods and requirements</u> :
<ol style="list-style-type: none"> Exams Assignments

23. Course Policies:

A- Attendance policies:
Attendance: Mandatory.
First warning – with 4 absences
Last warning – with 5 absences
Failing in the subject – with 6 absences

B- Absences from exams and handing in assignments on time:

Will result in zero achievement unless health report or other significant excuse is documented.

C- Health and safety procedures:

NA

D- Honesty policy regarding cheating, plagiarism, misbehavior:

The participation, the commitment of cheating will lead to applying all following penalties together

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

E- Grading policy:

Exams and Quizzes.

Mid Exam:	40 points
Assignments	10 points
Final Exam:	50 points
Total	100 points

F- Available university services that support achievement in the course:

Classrooms, internet classes

24. Required equipment:

Data show and internet connection

25. References:

A- Required book (s), assigned reading and audio-visuals:

- 1 Basic & Clinical & Pharmacology, ed. Katzung, 13th edition, 2015. McGraw-Hill Medical. ISBN-13: 978-0071825054
- Pharmacology: Examination & Book review. Ed. Trevor, 10th edition, 2012. McGraw-Hill Medical. **ISBN-13: 978-0071789233**
- Goodman & Gilman's The Pharmacological Basis of Therapeutics, ed. Brunton, 12th edition, 2011. McGraw-Hill Medical. **ISBN-13: 978-0071624428**
- Rang and Dale's Pharmacology. Ed. Rang, 8th edition, 2015. Churchill Livingstone. **ISBN-13: 978-**

0702053627

- Lippincott's Illustrated Reviews: Pharmacology, Ed. Whalen 6th edition, 2014. Wolters Kluwer Health/Lippincott Williams & Wilkins. **ISBN-13: 9781451191776**

26. Additional information:

Other learning resources:

1. Access Pharmacy: <http://accesspharmacy.mhmedical.com/>
2. UpToDate: www.uptodate.com

Name of Course Coordinator: Sameh Al-Zubiedi-Signature: ----- Date: Jan, 31, 2016

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: Nailya Bulatova Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----

Copy to:

Head of Department
Assistant Dean for Quality Assurance
Course File