



ASU
APPLIED SCIENCE PRIVATE UNIVERSITY



Amman- Jordan

عمان - الأردن



كلية الصيدلة
Faculty Of Pharmacy



The Bachelor Degree in Pharmacy
of Applied Science Private
University is Certified by the
Accreditation Council for Pharmacy
Education



المستوى الذهبي

جامعة كل العرب

Faculty : Pharmacy

Department: Clinical pharmacy and therapeutics

Academic Year: 2020/2021

Semester: First

(Course Syllabus)

Subject Name	Credit Hours	Course No.	Prerequisite	Concurrent course
Pharmacology I	2	906310	907222 Microbiology II	906312 Pathology and Phathophysiology

Coordinator Name	Lecturer/s	Room No.	E-mail	Course website	Office Hours
Samar Khater, Msc	Samar Khater, Msc	4210	samar_ktr@asu.edu.jo	http://bio.asu.edu.jo/bio/index.jsp	As announced on time table

Course Description:

The course is designed to cover the major concepts students need to know about the basis of drug action and the use of drugs in therapy. The first part of the course introduces the principles of pharmacokinetics and pharmacodynamics including types of drug-receptor interaction. The second part deals with systemic pharmacology and will include drugs affecting the autonomic system and drugs affecting the cardiovascular system.

Course objectives:

- 1- To provide students with solid foundation in pharmacology to enable them to understand the basic pharmacodynamic and pharmacokinetic principles of drug action.
- 2- To provide students with comprehensive information concerning major drug classes affecting the autonomic nervous system and cardiovascular system and their clinical uses.
- 3- To prepare students to the following courses of pharmacology II and pharmacology III.

Intended Learning Outcomes:

Following the successful completion of this course, the student should be able to:

A. Knowledge and understanding:

- A1. Define Pharmacology and its different divisions
- A2. List the sources of drugs and name drugs from different sources
- A3. List and define the different names used for a drug



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- A4. List the stages of pharmacokinetics and briefly describe the factors affecting each stage and their influence on drug action
- A5. Describe the pharmacodynamic principles of drug action with special reference to receptor –drug interactions.
- A6. Differentiate between different drug receptor classes.
- A7. Be familiar with the principle of drug-response relationships and parameters related to it as: potency, efficacy, agonist, partial agonist, inverse agonists, different types of drug antagonists and therapeutic index of drugs
- A8. Outline the functions and structure of the autonomic nervous system and list the classes of drugs affecting the autonomic system
- A9. For each class of drugs affecting the autonomic nervous system, the student should be able to describe the mechanism of action and relate it to clinical uses, adverse effects and list generic names of these drugs
- A10. List drug groups used in treatment of cardiovascular diseases (hypertension, angina, heart failure) with their mechanism of action and adverse effects.

B. Subject specific skills:

- B1. Ability to interpret drug actions and uses in context with their mechanism of action.
- B2. Be able to name one or two prototype drug(s) of each pharmacological group mainly those of clinical importance
- B3. Identify the common serious adverse effects and contraindications of each prototype drug, mechanism of drug toxicity, interactions and factors that may modify drug action

C. Cognitive and Intellectual skills:

N/A

D. Transferable Skills:

- D1. Students are expected to be able to apply key scientific principles that make the foundation of pharmacological sciences

Teaching and Learning Methods:

Development of ILOs is promoted through the following **teaching and learning methods:**

ILOs	Learning Methods	Evaluation Methods
A1-A10 B1-B3 D1	Lectures using data show slides and animations (to explain the theoretical background for each subject) Class discussion	Electronic multiple-choice question exams Participation (answering questions during lectures)



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Course Content:

Week	Date	Lecture number	Topic's Details	Exams/ /quizes/ holidays	Main Reference (chapter)	ILOs achieved
1	18- 17/10/2020	2	Definitions and introduction		2,3,4 (Notes)	A1, A2, A3
2	25- 29/10/2020	2	Pharmacokinetic principles		1, (1)	A4
3,4	1-12/11 /2020	4	Drug-Receptor Interactions & Pharmacodynamics		1, (2)	A5, A6
5,6	15-22/11/2020	4	The Autonomic Nervous system physiology Cholinergic Agonists		1, (3) 1, (4)	A8 A9,B1, B2, B3
Midterm Exam						
7	29/11- 3/12/2020	2	Cholinergic Antagonists		1, (5)	A9, B1, B2, B3
8,9	6-17/12//2020	4	Adrenergic agonists		1, (6)	A9, B1, B2, B3
10	20-24/12/2020	2	Adrenergic antagonists		1, (7)	A9, B1, B2, B3
11	27-31/12/2020	2	Diuretics		1,(16)	A10, B1,B2, B3
12						
12,13	3-14/1/2021	4	Antihypertensives		1,(17)	A10, B1,B2, B3
14	17-21/1/2021	4	Drugs for heart failure		1, (18)	A10, B1, B2, B3
15	24/1/2021		Antianginal Drugs		1, (20)	A10, B1, B2, B3
16	26/1-4/2/2021		Final Exams			

Grade Distribution:

Your course grade will be determined by the following:

Assessment Method	% of Final Grade	Due Date
Midterm exam	35	To be announced
Assignments and quizzes	15	To be announced
Final exam	50	To be announced
Participation in class discussion	2 bonus marks	During the semester

* Provisional dates are scheduled in the course schedule. Each instructor will announce the exact date for the quizzes of each section at the beginning of the semester.

Distribution of examination material (may vary depending on material included):

Fax:5232899 _ Amman – Jordan _ Tel :5609999

Form code: UF 130/1

Resolution number 24/233

Accreditation date: 31/01/2018



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Course Policies:

A- Attendance policies:

Attendance: Mandatory.

- First warning – with 3 absences
- Last warning – with 4 absences
- Failing in the subject – with 5 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.

Midterm Exam:	35 points
Assignments and quizzes:	15 points
Final Exam:	50 points
Total:	<u>100 points</u>

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

Classrooms, internet classes, ASU online web site (messages, assignment, and notes)

24. Required equipment:

Data show connected to a computer

Make-up Exam Policy:

Make-up exams will be offered for valid reasons. They may be different from regular exams, both in content and format.

Textbooks information:

Main Reference:

- 1) Main Reference: Pharmacology, Lippincott's illustrated reviews, 7th edition, Richard A. Harvey, et al., 2019.



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Other References:

- 1) Katzung, B.G., Basic & Clinical Pharmacology, 14th edition, the Mc Grow Hill Companies, 2018.
- 2) Rang and Dale's Pharmacology, 8th edition, Churchill Livingstone Elsevier, 2016
- 3) Brenner and Stevens Pharmacology, 5th Edition, Saunders Elsevier, 2018.
- 4) Website: Pharmacology Animation Book, <http://animationbook.net>

Additional information:

No side talks during lecture

No mobile phones during lecture

Entering the lecture theatre after the instructor is not permitted.

Homework should be done by students independently and will be asked at the exams

Course Material and Announcements

Students need to use the e-learning page at the ASU website in order to get all lecture handouts and guidelines which will be uploaded there.

In addition, course related announcements and exam results will be posted on the ASU online AND/OR course website and is the responsibility of each student to check the sites regularly.

Name of Course Coordinator: Samar Khater, Msc. **Signature:** *Samar Khater* **Date:** 12/10/2020

Head of curriculum committee: Dr. Reem AbuTyeh **Signature:**

د. ريم ابوتايه

Head of Department: Dr. May AbuTaha **Signature:**

د. ميار ابوتاحا

د. ميار ابوتاحا

Dean: Prof. Iman Basheti **Signature:**

Copy to:
Head of Department

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