

Course Plan for Bachelor Program - Study Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-4.0E
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Study Plan No.	2021/2022	University Specialization	Bachelor of Pharmacy
Course No.	0201330	Course Name	Pharmacology (1)
Credit Hours	2	Prerequisite *Co-requisite	Pathophysiology
Course Type	☐ Mandatory University Requirement ☐ University Elective Requirement	☐ Faculty Mandatory Requirement ☐ Support course family requirements	☒ Mandatory Requirement ☐ Elective Requirement
Teaching Style	☐ Full Online Learning	☐ Blended Learning	☒ Traditional Learning
Teaching Model	☐ 1 Synchronous: 1 Asynchronous	☐ 1 Face to Face: 1 Asynchronous	☒ 2 Traditional

Faculty Member and Study Divisions Information (to be filled in each semester by the subject instructor)

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Name	Academic rank	Office No.	Phone No.	E-mail	
Office Hours (Days/Time)	Sunday, Tuesday, Thursday ()		Monday, Wednesday ()		
Division number	Time	Place	Number of Students	Teaching Style	Approved Model
				Traditional Learning	2 Traditional

Brief Description

This course is designed to discuss the basic concepts of drugs activity, pharmacodynamics and pharmacokinetics. In addition, the basic and clinical pharmacology of drugs acting on autonomic nervous and cardiovascular systems will be introduced. This course will cover the pharmacodynamics, pharmacokinetics, and the clinical uses of those drugs.

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	Lippincott Illustrated Reviews – Pharmacology; K. Whalen, C. Field, and R. Radhakrishnan; 8 th Edition; 2023; Wolters Kluwer			
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	Basic & Clinical Pharmacology; B. G. Katzung; 14 th edition; 2018; McGraw-Hill Education			
Supporting Websites	-			
The Physical Environment for Teaching	☒ Classroom	☐ Labs	☒ Virtual Educational Platform	☐ Others
Necessary Equipment and Software	Moodle			
Supporting People with Special Needs	-			
For Technical Support	E-Learning & Open Educational Resources Center			

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Course learning outcomes (K= Knowledge, S= Skills, C= Competencies)

No.	Course Learning Outcomes	The Associated Program Learning Output Code
Knowledge		
The student should be able to:		
K1	Recognize the general concepts of pharmacodynamics and pharmacokinetics.	MK3
K2	Identify the mechanism of action of autonomic nervous system and cardiovascular drugs along with their modulatory effect on the pathophysiology of relevant diseases.	
K3	Recognize the adverse reactions of drugs covered in this course.	MK3
K4	Discuss the absorption, distribution, metabolism, and excretion (ADME) of drugs covered in this course.	MK3
K5	Outline the clinical uses of drugs covered in this course.	MK3
Skills		
The student should be able to:		
S1	Relate the pharmacodynamics and pharmacokinetics of drugs covered in this course to their clinical uses.	MS2
S2	Predict drug interactions based on the pharmacodynamics and pharmacokinetics of drugs covered in this course.	MS2
Competencies		
The student should be able to:		
C1	Analyze patient's health condition to determine possible therapeutic regimen and appropriate medication counseling.	MC3

Mechanisms for Direct Evaluation of Learning Outcomes

Type of Assessment / Learning Style	Fully Electronic Learning	Blended Learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm Exam	30%	30%	30%	0%
Participation / Practical Applications	0%	0%	30%	60%
Asynchronous Interactive Activities	30%	30%	0%	0%
Final Exam	40%	40%	40%	40%

Note 1: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, and work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Note 2: According to the Regulations of granting Master's degree at Al-Zaytoonah University of Jordan, 40% of final evaluation goes for the final exam, and 60% for the semester work (examinations, reports, research or any scientific activity assigned to the student).

Schedule of Simultaneous / Face-to-Face Encounters and their Topics

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Week	Subject	Learning Style*	Reference ** (Pages in Course Book)
1	Pharmacokinetics (Absorption and distribution)	Lecture	1-12
2	Pharmacokinetics (Metabolism and elimination)	Lecture	13-23
3	Drug-receptor interactions and Pharmacodynamics	Lecture	24-28
4	Dose-response curve and types of agonists and antagonists	Lecture	29-37
5	The autonomic nervous system. Cholinergic agonists	Lecture	39-51 52-65
6	Cholinergic antagonists	Lecture	67-80
7	Adrenergic agonists	Lecture	81-101
8	Adrenoceptor antagonists	Lecture	102-114
9	Diuretic drugs Midterm Exam	Lecture	131-145
10	Antihypertensive drugs	Lecture	115-130
11	Antihypertensive drugs	Lecture	
12	Antianginal Drugs	Lecture	181-192
13	Drugs for Heart Failure	Lecture	146-167
14	Antiarrhythmics	Lecture	168-181
15	Antiarrhythmics	Lecture	
16	Final Exam	-	-

* Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.

** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.

Schedule of Asynchronous Interactive Activities *(in the case of e-learning and blended learning)*

Week	Task / Activity	Reference	Expected Results
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