جامعـة الزيتونــة الأردنيــة
Al-Zaytoonah University of Jordan
كلية الصيدلة
Faculty of Pharmacy

" عراقة وجودة"
"Tradition and Quality"

Course Plan for Bachelor Program - Study Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-4.0E

Study Plan No.	2022/2023		University Specialization		Bachelor of Physical Therapy
Course No.	0201391		Course Name		Pharmacology
Credit Hours	1		Prerequisite *Co-requisite		Pathology
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		☑ 1 Traditional

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

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 musculoskeletal and central nervous systems will be introduced. It will cover the pharmacodynamics, pharmacokinetics, and the clinical uses of those drugs.

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	Pharmacology for Physiotherapy; Udaykumar, Padmaja; 2nd Edition; 2011; JAYPEE BROTHERS MEDICAL PUBLISHERS
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	Pharmacology in Rehabilitation; Ciccone, Charles D.; 4th Edition; 1953; F. A. Davis Company
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 Email: elearning@zuj.edu.jo; Phone: +962 6 429 1511 ext. 425/362

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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 drugs used for musculoskeletal and central nervous system disorders.	**MK3**
K3	Recall the adverse reactions of covered drugs.	**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	Relating the pharmacokinetics and pharmacodynamics to the clinical use of drugs for the drugs covered in this course.	**MS2**
S2	Predict drug-drug interactions based on the pharmacodynamics and pharmacokinetics of drugs covered in this course.	**MS2**
Competencies		
The student should be able to:		
C1	Develop his/her professional and personal performance by continuously following-up lectures, submitting tasks on time, and staying up to date with the latest drug information.	**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%	**20%**	50%
Asynchronous Interactive Activities	20%	20%	**0%**	0%
Final Exam	50%	50%	**50%**	50%

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	Introduction and Sources of Drugs Routes of Drug Administration	Lecture	1-2 3-8
2	Routes of Drug Administration	Lecture	3-8
3	Pharmacokinetics	Lecture	8-16
4	Pharmacokinetics	Lecture	8-16
5	Pharmacodynamics	Lecture	18-20
6	Adverse drug reactions	Lecture	26-28
7	Drug interactions	Lecture	28-29
8	Skeletal muscle relaxants **Midterm Exam**	Lecture	51-55
9	Drugs used in the treatment of local muscle spasm	Lecture	55
10	Drugs used in other musculoskeletal diseases Agents used in the prevention and treatment of osteoporosis	Lecture	56
11	Drugs used in the treatment of immunological and inflammatory neuromuscular diseases	Lecture	56-59
12	Drugs and exercise	Lecture	60-61
13	Sedative hypnotics	Lecture	106-107
14	Opioid analgesics and antagonists		118-126
15	Nonsteroidal anti-inflammatory drugs (NSAIDs)		126-133
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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