



كلية الصيدلة جامعة الزيتونة الأردنية
Faculty of Pharmacy
Al-Zaytoonah University of Jordan

" نحو تعليم صيدلاني متميز "
Toward Excellence in Pharmaceutical
Education

جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية الصيدلة
Faculty of Pharmacy



" Tradition and Quality "

Detailed Course Description - Course Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-3.0E
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Faculty	Pharmacy	Department	Pharmacy
Course number	0201414	Course title	Medicinal Chemistry-2
Number of credit hours	3	Pre-requisite/co-requisite	Medicinal Chemistry-1

Brief course description

The aim of the course is to provide the student with some classes of pharmacodynamic drugs (their structure, chemical names, synthesis, metabolism, structure activity relationship, mode of action, uses), In addition, they can demonstrate knowledge upon how to act, attach to the receptor, the biochemical basics of their action and identifying the common pharmacophore of each class.

Course goals and learning outcomes	
Goal 1	To develop students ability to relate chemical structures of drugs to biological activity and metabolism.
Learning outcomes	1.1 Student will be able to interpret and foresee structure-activity/property relationships and metabolism for the various types of drugs at a molecular level.
Goal 2	To explain the chemical mechanisms of drug action. Factors affecting the mode of action of drugs: physical-chemical, stereo-chemical and electronic factors;
Learning outcomes	2.1 Students should be able to achieve methods to design biologically active molecules.
Textbook	1. Foye's Principles of Medicinal Chemistry, 7 th edition, Thomas L. Lemke and David A. Williams, Lippincott Williams & Wilkins, 2013. 2. Wilson and Gisvold's Textbook of Organic Medicinal and Pharmaceutical Chemistry, 12th edition, J. N. Delgado and W. A. Remers, Lippincott-Raven, 2011.
Supplementary references	1. The Organic Chemistry of Drug Design and Drug Action, 2nd edition, Richard B. Silverman, Elsevier, 2004. 2. Burger's Medicinal Chemistry and Drug Discovery, 6th edition, M. E. Wolff, 2003. 3. The Organic Chemistry of Drug Synthesis, Vol. 1-6, D. Lednicer and L. A. Mitscher, John Wiley and Sons.



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Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1	Drug Receptors Affecting Neurotransmission	Textbook 1/ Chapter 9	
	1	Cholinergic Drugs.		
	1	Cholinergic Drugs.		
02	1	Cholinergic Drugs.	Textbook 1/ Chapter 9	
	1	Anticholinergic Drugs.		
	1	Anticholinergic Drugs.		
03	1	Adrenergic Drugs.	Textbook 1/ Chapter 10	
	1	Adrenergic Drugs.		
	1	Adrenergic Drugs.		
04	1	Antiadrenergic Drugs.	Textbook 1/ Chapters 10	
	1	Antiadrenergic Drugs.		
	1	Antiadrenergic Drugs.		
05	1	Local Anesthetics.	Textbook 1/ Chapters 16	
	1	Drugs Affecting the Central Nervous System		
	1	General anesthetics.		
06	1	Sedative hypnotics.	Textbook 1/ Chapters 15	
	1	Sedative hypnotics.		
	1	Sedative hypnotics.		
07	1	Antiseizure drugs.	Textbook 1/ Chapters 17, 18	
	1	Antidepressants.		
	1	Antidepressants.		
08	1	Antipsychotic and anxiolytic agents.	Textbook 1/ Chapters 13, 14, 19	
	1	Hallucinogens.		
	1	Antiparkinsonian and spasmolytic agents.		
09	1	Drugs Affecting the Cardiovascular System	Textbook 1/ Chapter 21	
	1	Cardiac glycosides.		
	1	Antiarrhythmic drugs.		
10	1	Central sympatholytics and vasodilators.	Textbook 1/ Chapter 24	
	1	Central sympatholytics and vasodilators.		
	1	Peripheral sympatholytics and vasodilators.		
11	1	Diuretics.	Textbook 1/ Chapter 22	
	1	Diuretics.		
	1	Diuretics.		
12	1	Angiotensin converting enzyme inhibitors.	Textbook 1/ Chapter 23	
	1	Angiotensin converting enzyme inhibitors.		
	1	Angiotensin antagonists.		
13	1	Calcium channel blockers.	Textbook 1/ Chapter 23, 25	
	1	Antihyperlipoproteinemics.		
	1	Inhibitors of cholesterol biosynthesis.		
14	1	Antithrombotics.	Textbook 1/	



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	1	Thrombolytics.	Chapter 26	
	1	Coagulants.		
15	1	Non-steroidal Anti-inflammatory Drugs	Textbook 1/ Chapter 31	
	1	Antipyretic analgesics		
	1	Anti-inflammatory analgesics		
16	1	Antihistamines and Related Anti-allergic and	Textbook 1/ Chapter 32	
	1	Antiulcer Agents		
	1	Antihistamines		
	1	Antiulcer Agents		

Theoretical course evaluation methods and weight	First exam 25% Second exam 25% Final exam 50%
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Approved by head of department		Date of approval	
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Extra information (to be updated every semester by corresponding faculty member)

Name of teachers	Dr. "Jamila Isabella" ALI Prof. Ghassan M. Abu Sheikha	Office Number	220
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