



Jordan University of Science and Technology

Faculty of Pharmacy

Pharmacy Department

PHAR322 Medicinal Chemistry(2)

Summer Semester 2022-2023

Course Catalog

3 Credit Hours. The concept of structural medicinal chemistry would be applied during the course to study the drugs affecting cardiovascular system, antihistamines, histamine-release inhibitors, anti-ulcers, oral hypoglycaemic agents, centrally and peripherally acting analgesics, local anaesthetics, steroids and therapeutically related compounds classes. The concept will be applied through the comprehensive study of the relationship between drugs chemical structures (functional groups composition and 3D shape) and their pharmacodynamics and pharmacokinetic profiles.

Text Book

Title	Foye's Principles of Medicinal Chemistry
Author(s)	Victoria F. Roche, S. Williams Zito, Thomas L Lemke and David A Williams
Edition	8th Edition
Short Name	1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
2	An Introduction to Medicinal Chemistry	Graham Patrick	6th Edition	
3	Wilson and Gisvold's Textbook of Organic Medicinal and Pharmaceutical Chemistry	John H. Block, John M. Beale	12th Edition	

Instructor

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Instructor

Name	Dr. Soraya Alnabulsi
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Office Hours	
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Class Schedule & Room

Section 1:

Lecture Time: Sun, Mon, Tue, Wed : 11:30 - 12:30

Room: M1302

Section 2:

Lecture Time: Sun, Mon, Tue, Wed : 13:00 - 14:00

Room: PH2106

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Antihypertensive drugs_Diuretics	Chapter 21 From 1
Weeks 2, 3	Antihypertensive drugs_Angiotensin converting enzyme inhibitors	Chapter 23 From 1
Week 4	Antihypertensive drugs_Angiotensin II receptor antagonists	Chapter 23 From 1
Week 4	Antihypertensive drugs_Calcium channel blockers	Chapter 23 From 1
	Antihyperlipidemic drugs	Chapter 25 From 1
Week 4	Non-steroidal anti-inflammatory drugs	Chapter 31 From 1
Week 5	Opioid analgesics	Chapter 24 From 2
Week 6	H1-Antihistamines and histamine release inhibitors	Chapter 32 From 1
	Insulin and oral hypoglycaemic agents	Chapter 27 From 1
Weeks 6, 7	H2-antihistamines	Chapter 25 From 2
Week 7	Proton pump inhibitors	Chapter 25 From 2
Week 7	Local anesthetics	Chapter 22 From 3
	Steroid hormones and therapeutically related compounds	Chapter 25 From 2

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Predict, based on structure, the pharmacodynamics and pharmacokinetic profiles of cardiovascular drugs, as well as their physicochemical properties-activity relationship. [1PLO1.1]	30%	First Exam, Active Learning
Predict, based on structure, the pharmacodynamics and pharmacokinetic profiles of antidiabetic agents, as well as their physicochemical properties-activity relationship. [1PLO1.1]	12%	Second Exam
Predict, based on structure, the pharmacodynamics and pharmacokinetic profiles of antihistamines and peptic ulcer drugs, as well as their physicochemical properties-activity relationship. [1PLO1.1]	23%	Final Exam
Predict, based on structure, the pharmacodynamics and pharmacokinetic profiles of NSAIDs and steroidal hormones, as well as their physicochemical properties-activity relationship. [1PLO1.1]	17%	Second Exam, Final Exam
Predict, based on structure, the pharmacodynamics and pharmacokinetic profiles of local anesthetics and opioid analgesics, as well as their physicochemical properties-activity relationship. [1PLO1.1]	18%	Second Exam, Final Exam

Relationship to Program Student Outcomes (Out of 100%)															
PLO1.1	PLO2.1	PLO3.2	PLO3.3	PLO2.2	PLO2.3	PLO2.4	PLO3.1	PLO3.4	PLO3.5	PLO3.6	PLO4.1	PLO4.2	PLO4.3	PLO4.4	PLO5.1
100															

Evaluation	
Assessment Tool	Weight
First Exam	25%
Second Exam	30%
Final Exam	40%
Active Learning	5%

Policy	
Exams	All exams are closed book and notes. The final exam is comprehensive (covers all the material). Incomplete exams need approval from the dean of the faculty. The format for the exams is generally (but NOT always) as follows: Multiple-choice and short essay questions.
Cheating	Prohibited; and in case of cheating the student will be subject to punishment according to JUST policy
Attendance	According to JUST policy: the faculty member to assign ZERO grade (35) if a student misses 20% of the classes that are not excused.
Withdrawal	Last day to drop the course is before the twelve (12th) week of the current semester

