



Jordan University of Science and Technology

Faculty of Pharmacy

Doctor Of Pharmacy (Pharm D.) Department

PHMD224 Medicinal Chemistry 1 - JNQF Level: 6

First Semester 2023-2024

Course Catalog

3 Credit Hours. This course provides an in-depth look at drugs' pharmacokinetics (absorption and metabolism) and pharmacodynamics, as well as the influence of drugs' physicochemical properties on drug action. The concept of rational drug design and computer-aided drug design will be introduced. The course also explains the structure-activity relationships of drugs acting on the central nervous system and the autonomic nervous system.

Text Book

Title	Foye's principles of medicinal chemistry
Author(s)	Thomas L. Lemke, David A. Williams
Edition	7th Edition
Short Name	Ref #1
Other Information	Textbook

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	An Introduction to Medicinal Chemistry	Graham Patrick	5th Edition	
Ref #3	Wilson and Gisvold's textbook of Organic Medicinal and Pharmaceutical Chemistry	John H. Block, John M. Beale	12th Edition	

Instructor

Name	Dr. RUFAIDA AL ZOUBI
Office Location	P2 - L-2 room 106
Office Hours	Sun : 11:30 - 13:15 Mon : 08:00 - 09:30 Tue : 11:30 - 13:15 Thu : 11:30 - 12:30
Email	rmaalzoubi1@just.edu.jo

Class Schedule & Room

Section 1:
Lecture Time: Sun, Tue, Thu : 10:30 - 11:30
Room: NF39

Prerequisites

Line Number	Course Name	Prerequisite Type
912620	CHEM262 Biochemistry	Prerequisite / Study
301240	PHAR124 Pharmaceutical Organic Chemistry	Prerequisite / Study

Tentative List of Topics Covered

Weeks	Topic	References
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Week 1	Introduction to medicinal chemistry	From Ref #1
Weeks 1, 2, 3	Physico-chemical properties of drug compounds	From Ref #1
Weeks 4, 5, 6	Pharmacokinetics	From Ref #1
Weeks 7, 8	Pharmacodynamics	From Ref #1
Week 8	Bioisosterism	From Ref #2
Weeks 9, 10	Adrenergic system	From Ref #1
Weeks 11, 12	Cholinergic system	From Ref #1
Week 13	Sedative-Hypnotics	From Ref #1
Week 13	Antipsychotics	From Ref #1
Week 14	Antidepressants and anti-Parkinson's	From Ref #1

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Predict the physicochemical properties and pharmacokinetic profile of drug compounds based on their chemical structure. [1PLO1.1][1L6K1, 1L6K2]	34%	First Exam, Final Exam
Predict drugs' interaction with macro-molecular targets based on their chemical structures. [1PLO3.1][1L6K1, 1L6K2, 1L6C4]	23%	Second Exam, Active Learning, Final Exam
Identify structural properties of drugs that act at the peripheral nervous system. [1PLO3.1][1L6K1, 1L6K2, 1L6C4]	24%	Second Exam, Final Exam
Identify structural properties for drugs acting at the central nervous system. [1PLO3.1][1L6K1, 1L6K2, 1L6C4]	19%	Final Exam

Relationship to Program Student Outcomes (Out of 100%)															
PLO1.1	PLO2.1	PLO2.2	PLO2.3	PLO2.4	PLO3.1	PLO3.2	PLO3.3	PLO3.4	PLO3.5	PLO3.6	PLO4.1	PLO4.2	PLO4.3	PLO4.4	PLO5.1
34					66										

Relationship to NQF Outcomes (Out of 100%)		
L6K1	L6K2	L6C4
39	39	22

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

Policy	
Exams	<ol style="list-style-type: none"> The format for the exams is generally (but NOT always) as follows: Multiple-choice and short essay questions. Grades will not be given out via e-mail All exams are closed book and notes. The final exam is comprehensive (covers all the material). Instructor should return exam papers graded to students not after the week following the exam date. Incomplete exams should not be given unless there is a valid excuse and they need approval from the dean. Arrangements to take an exam at a time different than the one scheduled MUST be made prior to the scheduled exam time.
Cheating	<p>The commitment of the acts of cheating and deceit such as copying during examinations, altering examinations for re-grade, plagiarism of homework assignments, and in any way representing the work of others as your own is dishonest and will not be tolerated. Standard JUST policy will be applied.</p> <p>المادة 7: إذا ضنبت الطالب أثناء الامتحان أو الاختبار متلبساً بالبعث فتوقع عليه العقوبات التالية مجتمعة</p> <p>أ- اعتباره راسباً في ذلك الامتحان أو الاختبار</p> <p>ب- الغاء تسجيله في بقية المساقات المسجل لها في ذلك الفصل</p> <p>ج- فصله من الجامعة لمدة فصل دراسي واحد، و هو الفصل التالي للفصل الذي ضبط فيه</p>

Attendance	<ol style="list-style-type: none">1. Excellent attendance is expected.2. JUST policy requires the faculty member to assign ZERO grade (35) if a student misses 10% of the classes that are not excused, and a total of 20% with approved valid excuses.3. If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed.
Participation	Students are expected be proactive and to be fully engaged in interactive class discussions.
Drop date (withdraw)	Last day to drop the course is last day before the final exams

Date Printed: 2023-11-26