



Jordan University of Science and Technology
Faculty of Pharmacy
Pharmacy Department

PHAR222 Pharmaceutical Organic Chemistry

First Semester 2021-2022

Course Catalog

3 Credit Hours. This course is a customized course for pharmacy students. It is designed to enrich students' knowledge in organic chemistry that would lead to better understanding of medicinal chemistry. The course includes a general review of organic functional groups with emphasis on the physicochemical properties of biological importance such as carboxylic acid and its derivatives, amines, sulfuric acids, sulfonic acids, sulfonamides, carbonates and ureas. In addition, the course introduces students to important subjects in organic chemistry such as resonance, acidity, basicity, aromaticity and stereochemistry of organic compounds. The course also is designed to explain in detail the chemical basis of drug metabolism.

Text Book

Title	Organic Chemistry
Author(s)	Wade, L. G. and J. W. Simek
Edition	9th Edition
Short Name	Ref #1
Other Information	2019

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Lead Optimization for Medicinal Chemists: Pharmacokinetic Properties of Functional Groups and Organic Compounds	Florencio Zaragoza D? rwald	4th Edition	
Ref #3	Review of Organic Functional Groups: Introduction to Medicinal Organic Chemistry	Thomas L. Lemke	3rd Edition	
Ref #4	Wilson and Gisvolds Textbook of Organic Medicinal and Pharmaceutical Chemistry	John H. Block, John M. Beale	11th Edition	
Handouts	Handouts	Dr. Bthina Al-Oudat	1st Edition	

Instructor

Name	Dr. RUFAlDA AL ZOUBl
Office Location	-

Office Hours	Sun : 11:00 - 12:00 Mon : 11:45 - 12:45 Wed : 11:45 - 12:45 Thu : 08:00 - 11:00
Email	rmaalzoubi1@just.edu.jo

Instructor	
Name	Dr. Buthina Al-Oudat
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Instructor	
Name	Dr. LARA ALFAKHORI
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Office Hours	
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Class Schedule & Room	
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Section 1:
Lecture Time: Sun : 08:30 - 10:00
Room: D4202

Section 2:
Lecture Time: Sun : 10:00 - 11:30
Room: D4202

Section 3:
Lecture Time: Sun : 13:00 - 14:30
Room: D4203

Section 5:
Lecture Time: Mon : 10:00 - 11:30
Room: M2202

Section 6:
Lecture Time: Mon : 11:30 - 13:00
Room: D4203

Section 7:
Lecture Time: Mon : 14:30 - 16:00
Room: D4203

Section 8:
Lecture Time: Tue : 08:30 - 10:00
Room: D4202

Section 9:
Lecture Time: Tue : 10:00 - 11:30
Room: D4202

Section 10:
Lecture Time: Tue : 13:00 - 14:30
Room: D4203

Section 12:
Lecture Time: Wed : 10:00 - 11:30
Room: M2202

Section 13:
Lecture Time: Wed : 11:30 - 13:00
Room: D4203

Section 14:
Lecture Time: Wed : 14:30 - 16:00
Room: D4203

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Introduction (Drawing and Hybridization)	From Ref #1 , Section I From Handouts
Weeks 2, 3	Electron Delocalization and Resonance	From Ref #1 , Section II From Handouts

Week 4	Aromaticity	From Ref #1 , Section III From Handouts
Weeks 5, 6	Organic acids and bases	From Ref #1 , Section IV From Handouts
Weeks 7, 8	Organic Functional Groups	From Ref #2 , From Ref #3 , Section VI From Handouts
Weeks 9, 10, 11	Stereochemistry	From Ref #1 , Section VII From Handouts
Weeks 12, 13, 14	Metabolism	From Ref #4 , Section VIII From Handouts

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
To remember basic information related to organic compounds such as hybridization, nomenclature and drawing of chemical structures. [1SO1.1, 1SO3.1]	10%	
To gain an understanding of electron delocalization and resonance [1SO1.1, 1SO3.1]	10%	
To gain an understanding of organic acids and bases [1SO1.1, 1SO3.1]	10%	
To gain an understanding of aromaticity and criteria for aromaticity [1SO1.1, 1SO3.1]	10%	
To have good understanding of stereochemistry of organic compounds [1SO1.1, 1SO3.1]	20%	
To be able to recognize organic functional groups and learn their physical and chemical properties in addition to their reactions and syntheses [1SO1.1, 1SO3.1]	20%	
To understand the chemical basis of drug metabolism [1SO1.1, 1SO3.1]	20%	

Relationship to Program Student Outcomes (Out of 100%)														
SO1.1	SO2.1	SO3.2	SO3.3	SO2.2	SO2.3	SO2.4	SO3.1	SO3.4	SO3.5	SO3.6	SO4.1	SO4.2	SO4.3	SO4.4
50							50							

Evaluation	
Assessment Tool	Weight
Mid-term Exam	50%
Final Exam	50%

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 college of pharmacy and will not be given unless there is a valid excuse.
Cheating	Prohibited; and in case of cheating the student will be subjected to punishment according to the standard JUST policy.
Attendance	Excellent attendance is expected. JUST policy requires the faculty member to assign ZERO grade (35) if a student misses 20% of the classes. If the student misses a class, it is his/her responsibility to find out about any announcements or assignments he/she may have missed.
Participation	Excellent participation is expected.

Withdraw	Last day to drop the course is before the twelve (12th) week of semester.
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