



AMMAN - JORDAN

المستوى الذهبي

جامعة كل العرب

Course Syllabus
Faculty of Arts & Sciences

Academic Department Basic Science and Humanities

Academic Year 2021/ 2022 Semester: Second

Course Title :	General Chemistry for Pharmacy Students
Course No. :	1501132
Prerequisite :	-
Concurrent :	-
Department :	Basic Science and Humanities
Coordinator :	Dr. Waed Alahmad
Mode of Instruction	<u>On-Campus Learning</u> 3 hours in-class (Synonym) learning

*** Instructor:**

Lecturer	Office Phone	Room No.	Office Hours	E-mail
Dr. Waed Alahmad	1414	221	9-10 STTh. 9.30-11 MW	W_alahmad@asu.edu.jo
Nawal Hassan Bahtiti	1282	223	10-12.30 STTh 12.30-2 M	nawal_h@asu.edu.jo

Course Description

General Chemistry for pharmacy students. Covers fundamentals of chemistry including Matter and Classification, atoms and Molecules, Measurements, SI units, and the mole, reactions in aqueous solutions, redox reactions, stoichiometry, chemical equations and metathesis reactions, atomic structure, chemical bonding, molecular structure, and chemical equilibrium. Lecture sessions are designed to clarify the concepts covered in this course and to study example problems which must be learnt to solve. Attendance is expected and students are responsible for being denied from the final exam if the absence exceeds 15% of the lecture sessions. They will be provided with partial outlines of the course material via Blackboard.

Intended Learning Outcomes

Upon the completion of the course, this module should lead to the following learning outcomes:

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A. Knowledge and Understanding (Student should):

- A1 Be able to understand the basic concepts of *atomic structure*
- A2 Be able to understand the basic concepts of *chemical bonding*
- A3 Be able to understand the basic concepts of *molecular structure*
- A4 Understand concepts of chemical reactions.

B. Cognitive and Intellectual Skills (Student should):

- B1 Distinguish chemical applications needs and requirements
- B2 Analyze and compare the different applications requirements

C. Subject Specific Skills (Student should):

- C1 Implement solution of acid-base reactions.
- C2 Implement solution of redox reactions.
- C3 Learn how to implement different applications of chemistry.

Program Learning Outcomes (PLOs):

1. -----
2. -----
3. -----
4. -----
5. -----

Course Learning Outcomes Alignment Matrix				
	CLO. 1	CLO. 2	CLO. 3	CLO. 4
PLO.1:				
PLO 2:				
PLO.3:				
PLO.4:				
PLO. 5				



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		10.4 Valence Bond Theory 424 10.5 Hybrid Orbitals and Molecular Geometry 427			
13	Mon. 30/5/2022 Wed. 1/6/2022	10.6 Hybrid Orbitals and Multiple Bonds 439 10.7 Molecular Orbitals Theory Basics 445 10.8 Delocalized Molecular Orbitals 452 10.10 Atomic Size and the Tendency towards Multiple Bond Formation 456	In-class lecture		
14	Mon. 6/6/2022 Wed. 8/6/2022	15.1 Dynamic Equilibrium in Chemical System 696 15.2 Equilibrium Laws 698 15.3 Equilibrium Laws Based on Pressures or Concentrations 703 15.4 Equilibrium Laws for Heterogeneous Reactions 706	In-class lecture		
15	Mon. 13/6/2022 Wed. 15/6/2022	15.5 Position of Equilibrium and the Equilibrium Constant 708 15.6 Equilibrium and Le Chatelier's Principle 710 15.7 Calculating Equilibrium Constants 715 15.8 Using Equilibrium Constants to Calculate Concentrations 719	In-class lecture		
16					

Grading Plan and Assessment Tools

Assessment Tools	Weights	Due date
Mid-term	30	TBA
Assignments	10	TBA
Quizzes	10	TBA
Inter active lectures	
Group Work	
Presentation	
Reports	
Project	
Case-Study	
Final Exam	50	TBA

Supplementary Reading

Textbook:

- Principles of Chemistry: A Molecular Approach, Nivaldo J. Tro, Published by Brand: Prentice Hall (2011), ISBN 10: 0321750098 ISBN 13: 9780321750099

References:

- Silberberg, M.; Amateis, P., Chemistry: The Molecular Nature of Matter and Change, 7th Ed., 2015, McGraw-Hill.
- Ebbing, D. D.; Gammon, S. D., General Chemistry, 8th Ed., Houghton Mifflin Co.



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APPLIED SCIENCE PRIVATE UNIVERSITY

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Subject Coordinator

Dr. Waed Alahmad

Signature: -----

Head of Curriculum Committee

Dr. Hussam Miqdad

Signature: -----

Department Head

Dr. Hussam Miqdad

Signature: -----

Faculty Dean

Dr. Hadeel Ali Saed

Signature: -----

Copy to:

- Department Head.
- Head of Curriculum Committee.
- Course File.

Amman – Jordan : عمان – الأردن : Tel: 5609999 _ فاكس: 5232899 _

UF 28 / 2 : رمز النموذج:

رقم القرار 24 / 233

تاريخ الاعتماد 2021/10/18