



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	0120142	Course title	General Chemistry Lab
Number of credit hours	1	Pre-requisite/co-requisite	General Chemistry

### Brief course description

This course covers the practical applications of the most important theoretical concepts included in the General Chemistry course like qualitative and quantitative studies, stoichiometry, volumetric analysis and thermochemical changes.

	Course goals and learning outcomes
<b>Goal 1</b>	Allowing the students to support their theoretical knowledge when they use their own observation.
Learning outcomes	1.1 Having the basic skills of lab work. 1.2 Testing their theoretical knowledge
<b>Goal 2</b>	To teach the students how to collect data and interpret their results.
Learning outcomes	2.1 Collecting data and interpreting results. 2.2 Working efficiently within certain determined period of time.
<b>Goal 3</b>	To teach the students the various standard techniques used in chemistry and in most other fields of science.
Learning outcomes	3.1 Using different lab tools, instruments and glassware. 3.2 Experiencing some physical and chemical tests. 3.3 Standardizing unknown solutions. 3.4 Determining enthalpy change of a reaction experimentally.
<b>Textbook</b>	Laboratory Manual for General Chemistry, Al Zaytoonah University, M.Sc. Sawsan Shraim, 2017
<b>Supplementary references</b>	1- Chemistry , The Central Science , Brown , Le May , Bursten, Prentice Hall, 14th Edition (2017). 2- Chemistry in the Laboratory, James M. Postma ( <i>California State University, Chico</i> ) , Julian L. Roberts ( <i>University of Redlands</i> ) , Anne Roberts, 8 <sup>th</sup> Edition, 2017 3- Chemistry, by Raymond Chang., Kenneth Goldsby, 12 <sup>th</sup> edition , AP Student Edition, 2016.



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Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1	Check in.		
02	1	Instructions and Lab. Equipment.	1	
03	1	Measurements and Chemical Observation.	8	
04	1	Stoichiometry-I.	12	
05	1	Stoichiometry-II.	17	
06	1	Limiting reactant.	24	
07	1	Determination of an unknown.		
08	1	Volumetric analysis (I): Acid-Base titrations	31	
09	1	Volumetric analysis (II): Redox titrations.	39	
10	1	Chemical Equilibrium.	45	
11	1	Thermochemistry [Determination of $H_f$ for $MgO$ ].	50	
12	1	Spectrophotometric Determination of the Solubility of $NiSO_4 \cdot 6H_2O$ .	57	
13	1	Determination of an unknown.		
14	1	Oral exam		
15	1	Check out		
16	1	Final Exam		

<b>Theoretical course evaluation methods and weight</b>	First exam 25% Second exam 25% Final exam 50%	<b>Practical (clinical) course evaluation methods</b>	Semester students' work = 50% (Reports, research, quizzes, etc.) 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 teacher	M.Sc. Sawsan Shraim	Office Number	218
Phone number (extension)	315	Email	<a href="mailto:sawsan.shraim@zuj.edu.jo">sawsan.shraim@zuj.edu.jo</a>
Office hours			