



A course Syllabus

ITEM	DESCRIPTION
Faculty Name – Department Name	Faculty of applied science
Course Name and Number	Practical general chemistry(2) 15050106
Instructor(s) name(s) and specialization	Loway Hashem Qasem Master of science in chemical engineering
Contact information (Course coordinator)	Email lowayhejjawi@yahoo.com Office location Engineering building third floor Tel. (Internal Extension) 09–2671026 Ex. 217 Mobile: 0569500191
Semester and academic year	2 nd semester 2012/2013
Compulsory / Elective	Compulsory
Prerequisites	Practical general chemistry(1) 15050101
Course Contents (description)	The objective of the general chemistry laboratory course is to become proficient in techniques used by practicing chemist, to carry out experiments safely and carefully in the laboratory, to obtain data accurately and to manipulate the data correctly. This course also complements and consolidates the theoretical knowledge acquired in the general chemistry(2) lecture course (15050102) such as (chemical reactions, chemical kinetics, chemical equilibrium, acid–base chemistry, thermodynamics, and electrochemistry. The laboratory portion of this course will involve exercises that demonstrate and reinforce the lecture material. In as much as this course is only a supplement to general chemistry lecture courses, students must either have had the general chemistry lecture or must be taking the course concurrently.! Also, each student must obtain safety goggles.

<p>Course Objectives</p>	<ol style="list-style-type: none"> 1. Expand your understanding of the Course Objectives. 2. Learn to manipulate chemicals and glassware by working alone. 3. Learn to collect and analyze data from an experiment by working alone. 4. Learn how to use laboratory balances. 5. Learn how to do quantitative analysis such as titrations, pipetting and preparation of solutions by working alone. 6. learn how to collect and treat data on the computer. 7. Utilize critical thinking and quantitative reasoning skills in observing, organizing and analyzing data, synthesizing information, interpreting results, and communicating the results of the analyses and laboratory investigations orally and in writing. 8. Perform chemical experimentation in a safe and scientific manner, using proper scientific and laboratory safety procedures. 9. Students must show work, thought process and/or justification for answers when necessary on laboratory reports. They should also be clear and legible. 										
<p>Intended learning Outcomes and Competences</p>	<p>At the end of this course students should be able to At the end of this course students should be able to Perform chemical experimentation in a safe and scientific manner, using proper scientific and laboratory safety procedures.</p>										
<p>Textbook and References (Online Resources)</p>	<p>Manual for Principles of General Chemistry, J. A. Beran, 9th edition, 2009</p>										
<p>Assessment Criteria</p>	<table border="1"> <tr> <td colspan="2">Mark (100 %)</td> </tr> <tr> <td>midterm exam</td> <td>20</td> </tr> <tr> <td>Reports and assignments</td> <td>30</td> </tr> <tr> <td>Activity, scientific research, Participation, short exams.... etc.</td> <td>20</td> </tr> <tr> <td>Final exam</td> <td>30</td> </tr> </table>	Mark (100 %)		midterm exam	20	Reports and assignments	30	Activity, scientific research, Participation, short exams.... etc.	20	Final exam	30
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(Course schedule)

WEEK	Topics to be discussed	COMMENTS
1	Laboratory Safety and Guidelines	
2	Molar Mass of a Solid	
3	Factors Affecting Reaction Rates	
4	A Rate Law and Activation Energy	
5	LeChâtelier's Principle; Buffers	
6	Potentiometric Analyses	
7	MIDTERM EXAM	
8	Alkalinity of a Water Resource	
9	Bleach Analysis	
10	Molar Solubility; Common-Ion Effect	
11	Thermodynamics of the Dissolution of Borax,	
12	Galvanic Cells, the Nernst Equation	
13	Oxidation-Reduction reactions	
14	Molar volume of carbon dioxide	
15	PRACTICAL EXAM	
16	FINAL EXAM	

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