Mutah University

Faculty of Science

Chemistry Department

جامعة مؤتة

كلية العلوم

قسم الكيمياء

General Chemistry (1) Course Syllabus

Course Code	Course Name	Credits	Contact Hours
0303101	General Chemistry (1)	3	48

INSTRUCTOR/COORDINATOR	
Name	Dr. Waleed Atef Manasreh
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TEXTBOOK

Steven S. Zumdahl and Susan A. Zumdahl, Chemistry**, 7th edition,** Houghton Mifflin Company **Boston, New York, 2007**

SPECIFIC COURSE INFORMATION

A. Brief Description of the Content of the Course (Catalog Description)

This course is intended to illustrate the basic principles of chemistry it includes atomic and molecular weights, stoichiometry, the mole concept, atomic properties and electronic structures, balancing chemical equation, oxidation-reduction, metathesis reactions, acid and bases, types of chemical bonding including hybridization and molecular structures.

B. Pre-requisites (P) or Co-requisites (C)

C. Course Type (Required or Elective)

Required (Compulsory department course)

SPECIFIC GOALS

A. Specific Outcomes of Instruction

The student must be able to:

1. distinguish between the physical and chemical properties of matter. [SLO 1]
2. perform mathematical operations involving significant figures. [SLO 1]
3. describe the arrangement of the periodic table. [SLO 1]
4. identify and write electron configurations. [SLO 1]
5. draw Lewis structures for molecules, [SLO 1]
6. name ionic and covalent compounds using the rules for nomenclature of inorganic compounds;
7. perform stoichiometric calculations. [SLO 1]
8. use the Ideal Gas Law to calculate properties of gases. [SLO 1]
9. calculate enthalpy change for a given process, and explain the relationship between enthalpy change and the tendency for reactions to occur. [SLO 1]
10. conduct pH calculations and use the pH scale to classify solutions as acidic, basic, or neutral;
11. write and balance oxidation-reduction reactions. [SLO 1]
12. distinguish different types of nuclear decay. [SLO 1]

B. Student Outcomes Addressed by the Course

1	2	3	4	5	6	7				
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BRIEF LIST OF TOPICS TO BE COVERED

List of Topics	No. of Weeks	Contact Hours
Matter and Measurements	2	6 hours
The Atom	2	6hours
Bonding	2	6 hours
Chemical Formulas and Equations	2	6 hours
States of Matter- Mid Term Exam	2	6 hours
Thermochemistry and Thermodynamics	2	6 hours
Acid-Base and Oxidation-Reduction Reactions	2	6 hours
Nuclear Chemistry	2	6 hours
Final Exam	2	6 hours
Total	16	48 hours

METHODS OF ASSESSMENT

No.	Method of assessment	Week and Date	%
1	First Mid-term exam	8th week	30
2	Homework, Quizzes, Attendance	During the Semester	20
4	Final Examination	Final Week	50
Total			100