

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	General Chemistry (1)
Course number	CHEM1301
Faculty	
Department	
Course type	Major Needs
Course level	1
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1	1. To become familiar with the scope, methodology, and application of modern chemistry and to learn to appreciate its ability to explain the physical world.
2	2. To understand that all matter consists of atoms, and that the limitless variety observed around us stems from the ways that these atoms bond with one another.
3	3. To learn problem solving and learning to interpret the data, to employ valid and efficient methods of analysis, and to assess whether or not the results of calculations are reasonable.
4	4. To learn the principles of atomic and molecular theory, stoichiometry, and thermodynamics.
5	5. To generalize the analytical and quantitative skills gained in this course and to apply them in more advanced courses and throughout ones career.

Intended Learning Outcomes

Knowledge and Understanding	<ul style="list-style-type: none">* 1. Be able to know how the atoms are arranged in molecules and ions* 2. Be able to name chemical compounds* 3. Be able to balance chemical equations and use variety of problems* 4. Be able to know properties of solution* 5. Be able to know Energy changes with reactions* 6. Be able to describe the electronic structure of atoms* 7. Be able to know the properties of elements in the periodic table* 8. Be able to differentiate between types of bonds* 9. Be able to determine 3D shapes of molecules* 10. Knowledge of properties and behavior of Gases
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Course Contents

- 1 - The first chemistry course begins with topics such as the mole concept, stoichiometric determination, structure of the atom and the atomic theories, chemical formulas, limiting reactant, electronic configuration of the elements, It includes the periodic table beside the periodic properties of the atoms such as atomic size, ionization energy and electron affinity, The student is also introduced to study the principle of chemical bonding in general terms and stresses the importance of applying theory to practice such as Lewis structure, VSEPR, Valence bond and molecular orbital theories.

Teaching and Learning Methods for the Disabled Students

- 1 - Chemistry, Raymond Chang, McGraw-Hill
- 2 - General Chemistry: Principles and Structure, James E. Brady and Gerard E. Humiston, KIMIA Publisher : New York: John Wiley & Sons.
- 3 - Chemistry , Mortimer, Wadsworth Publishing Co Inc

Books and References

Essential books	General Chemistry Mortimer 6th ed.
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