



جامعة المجمعة
Majmaah University

وكالة الجامعة للشؤون التعليمية
البرامج الدراسية والتطوير

(5)

مختصر توصيف الكيمياء

CHEM-101

(Course Syllabus)

:(Course Information) *

كيمياء عامة-1	:
CHEM-101	:
لا يوجد	:
لا يوجد	:
	:
3	:
Module Title:	General Chemistry-1
Module ID:	CHEM-101
Prerequisite (Co-requisite):	Nil
Co-requisite:	Nil
Course Level:	1st level
Credit Hours:	3

Module Description

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The course covered the general concepts of chemistry and its application which includes matter and its physical and chemical properties, atomic theory and the periodic table, chemical formulas, chemical bonding, the mole concept and mass relationships in chemical reactions, physical properties of solutions, acids and bases, gas laws, thermochemistry, chemical kinetics and chemical equilibrium.

Module Aims

: أهداف

1	Studying the matter states, physical and chemical properties of matter, pure compounds and mixtures, in addition to the studying of quantities units and significant figures.	
2	Studying the atomic theory, atoms, molecules and ions, periodic table, atomic number, mass number, chemical naming and formula and chemical bonding.	
3	Studying the mole concept and the mass relationships in chemical reactions.	
4	Studying the properties of acids and bases, the pH scale and the ionization of weak acid and bases and solving some problems.	
5	Studying the chemical equilibrium and the factors that affect on it.	
6	Studying the thermochemistry and the principles of thermodynamics and solving some problems.	
7	Studying the principles of chemical kinetics, rate of the reaction and solving some problems.	

Learning Outcomes:
التعليم:

1	Knowledge about the matter states and the physical and chemical properties of matter, pure compounds and mixtures, quantities units and significant figures	
2	Knowledge about atom and atomic theories.	
3	Knowledge about the mole concept and chemical calculation such as number of moles, number of molecules, percent composition of compounds, empirical and molecular formula.	
4	Knowledge about the modern periodic table, the elements arrangements, periods and groups, properties of elements and their electronic configuration.	
5	Knowledge about the chemical formula and chemical naming of covalent and ionic compounds (IUPAC), in addition to the types of chemical bonding.	
6	Knowledge about the properties of acids and bases, the pH scale and the ionization of weak acid and bases and solving some problems.	
7	Studying the thermochemistry and the principles of thermodynamics and solving some problems.	
8	Studying the principles of chemical kinetics, rate of the reaction and solving some problems.	

Course Contents:
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ساعات التدريس (Hours)	الأسابيع (Weeks)	(Subjects)
3	1	Matter and Measurements
3	1	Atoms, Molecules and Ions
3	1	Mass Relationships in Chemical Reactions
3	1	Reactions in Aqueous Solutions
3	1	Gases
3	1	Thermochemistry
3	1	Chemical Bonding
6	2	Physical properties of solutions
6	2	Chemical Kinetics
6	2	Chemical Equilibrium
3	1	Acids and Bases

Textbook and References:
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ISBN	Publishing Year	Publisher	اسم المؤلف (رئيسي) Author's Name	Textbook title
10: 0073402753 13: 9780073402758	2013	Mc Graw Hil	Raymond Chang and Kenneth Goldsby	General Chemistry: The Essential Concepts
	Publishing Year	Publisher	اسم المؤلف (رئيسي) Author's Name	Reference
978-007-127220-9	2010	Mc Graw Hil	Raymond Chang	Chemistry (10th edition)
10: 0321571630	2009	PIE (PS)	McMurry, John E.; Fay, Robert C	General Chemistry: Atoms First (International Edition)

