Jerash University
Faculty of Science
Department of Science/Chemistry

Course Information

Course Title	**General Chemistry(I)**
Course Number	**0301101**
Prerequisites	**None**
Course Website	**www.getnickt.com**
Instructor	
Office Location	
Office Phone	
Office Hours	
E-mail	

Course Description

This course covers the following topics: Basic concepts: matter, units of measurements, uncertainty in measurements. Stoichiometery equations, atomic and molecular weights, moles, chemical calculations, Reactions in solution and their calculations, Structure of the atom periodic properties of the elements, Chemical bonding, Gases.

Text Book

Title	**General Chemistry: The Essential Concepts.**
Author(s)	**Raymond Chang**
Publisher	**McGrow Hill**
Year	
Edition	**7th Edition.**
Book Website	**General Chemistry: The Essential Concepts.**
References	**Chemistry, the Central Science. By: T.L. Brown.**

Assessment Policy

Assessment Type	Expected Due Date	Weight
First Exam	**First Exam: 18/3/2014 – 25/3/2014**	**25%**
Second Exam	**Second Exam: 27/4/2014 – 4/5/2014**	**25%**
Final Exam	**To be announced by the department.**	**50%**
Over all		**100%**

Course Objectives

1.	**The course will introduce the student to the world of chemistry, Problem solving, data evaluation, and analysis are stressed. Applications of chemistry to daily life are included.**
2.	**Describe and use the scientific method; Use the periodic table.**
3.	**Give the electronic configurations of elements; Use formulas; Know 3 basic types of chemical reactions (Acid-base, precipitation, redox).**
4.	**Use moles and molarity; Understand the 3 states of matter; Work with the ideal gas law; Draw Lewis structures.**

Useful Resources
Library Books. Internet.

Course Content		
Week	Topics	Chapter in Text (handouts)
1	Scientific method, measurement and the metric system, dimensional analysis, significant figures and laboratory calculations, overview of elements, compounds, physical and chemical change.	Chapter 1
1	Atomic mass, % composition, moles, Avogadro's number, molar mass, determining empirical formulas, chemical reactions and chemical equations, limiting reagents and yields.	Chapter 3
1	Aqueous solutions, precipitation reactions, acid base reactions, molarity, and gravimetric analysis.	Chapter 4
2	Electromagnetic radiation, Bohr's Theory, introduction to quantum mechanics, quantum numbers, Electron configuration, the building-up principle.	Chapter 7
1	Periodic classification of the elements, periodic variation in physical properties, atomic and ionic radius, ionization energy, electronic affinity.	Chapter 8
1	Covalent bonds, electronegativity, writing Lewis structures, formal charge, resonance, exceptions to the octet rule, bond strength.	Chapter 9
1	Properties of Solution: ways of expressing concentration, colligative properties.	Chapter 12
1	Acid–Base Equilibria: Acids and bases, the ion product of water, pH, weak acids (bases) and acid (base) ionization constants, percent ionization, Lewis acids and bases.	Chapter 15
1	Gases.	Chapter 5

تعليمات إضافية
1. الغش مخالف لقواعد وقوانين الجامعة، لذلك ستعرض نفسك للعقوبات حسب قوانين الجامعة إن حاولت الغش.
2. حضور المحاضرات أمر أساسي وإذا وصل غيابك عن محاضرات المادة إلى 15% من المجموع الكلي للمحاضرات ستحرم من المادة تبعاً لقوانين الجامعة.
3. الرجاء اغلاق الهواتف الخلوية اثناء المحاضرة ، وعدم استخدامها اثناء الامتحان .