Prince Sultan University
Department of Mathematical Sciences
SYLLABUS - CHEM 101 (Term 131, First Semester 2013/2014)

Title: General Chemistry
Credit Hours: 4 (3 Theory +1 Lab.)
Textbook: Chemistry, 2th Edition; By Julia Burdge.
Objectives: Chemistry 101 is the first introductory course in general chemistry. The course governs basic concepts and terminology in chemistry. Topics presented include electronic structure, chemical bonding and other basic concepts.

Week	Date	Sec.	Topic
1 and 2	Sep. 01--Feb. 12	1.1 1.3 1.4 1.5 1.6	The Study of Chemistry Scientific Measurements The Prosperities of Matter Uncertainty in Measurements Using Units and Solving Problems
3 and 4	Sep. 15-- Sep.26	2.1 2.2 2.3 2.4 2.6 2.7	The Atomic Theory The Structure of Atom Atomic Number, Mass Number, and Isotopes. The Periodic Table Molecules and Molecular Compounds Ions and Ionic Compounds
5 and 6	Sep. 29— Oct. 10	3.1 3.2 3.3 3.4 3.5 3.6 3.7	Molecular and Formula Masses Percent Composition of Compounds Chemical Equations The Mole and Molar Masses Composition Analysis Calculation with Balanced Chemical Equations Limiting Reactants
Eid Al Adha Vacation (Friday Oct. 11th — Sunday Oct. 20th)			
7	Oct. 21- Oct. 24	4.1 4.2 4.3	General Properties of Aqueous Solutions Precipitation Reactions Acid Base Reactions
First Exam (From Ch.1 to Ch.3) Wednesday October 23th			
8	Oct. 27- Oct. 31	4.5 4.6	Concentration of Solutions Aqueous Reactions and Chemical Analysis
Thursday Oct. 31, 2013 Last day for withdrawal from *all courses* with grade of "W"			
9 and 10	Nov. 03- Nov. 14	5.1 5.2 5.3 5.4 5.5 5.6	Energy and Energy Changes Introduction to Thermodynamics Enthalpy Calorimetry Hess's Law Standard Enthalpies of Formation
11	Nov. 17- Nov. 21	11.1	Properties of Gases

		11.2 11.3 11.5	The Gas Laws The Ideal Gas Equation Gas Mixtures
12	Nov. 24- Nov. 28	6.1 6.2 6.6 6.7 6.8	The Nature of Light Quantum Theory Quantum Numbers Atomic Orbitals Electron Configuration
Second Exam (Ch.4,5,6, and 10) Monday December 2th			
13	Dec. 01—Dec. 05	7.2 7.3 7.4 7.5 7.6	The Modern Periodic Table Effective Nuclear Charge Periodic Table Trends in Properties of Elements Electron Configuration of Ions Ionic Radius
14	Dec. 08—Dec. 12	8.1 8.2 8.3 8.4	Lewis Dot Symbols Ionic Bonding Covalent Bonding Electronegativity and Polarity
December 12, 2013 Last day for withdrawal from *all courses* with grade of "WP/WF"			
15	Dec. 15—Dec. 19	8.5 8.6 8.7 8.8	Drawing Lewis Structures Lewis Structure and Formula Charge Resonance Exceptions of Octet Rule
16	Dec. 22—Dec. 23	9.1 9.4 9.5	Molecular Geometry Hybridization of Atomic Orbitals Hybridization of Molecules Containing Multiple Bonds
	Dec. 24—Dec. 26		Final Exams Preparation Period
17	Dec. 29—Jan. 16	**Final Exam (All Chapters)**	

Grading Policy:
4 Credit Hours 100%: (3 Theory 75% + 1 Lab. 25%)

CHEM. 101 (Theory)					
First	***Second***	***Quizzes***	***Homework***	***Attendance***	***Final***
13	***13***	***3***	***3***	***3***	***40***
Total: 75 %					

Lab.			
Reports	***Quizzes***	***Mid. (practical)***	***Mid. (Theory + practical)***
8	***2***	***4***	***11 (7 +4)***
Total: 25 %			

Class attendance:

- It is not allowed for any student to **miss** any class lecture unless absolutely necessary.

- In case a student **misses** a class, he must contact any one of his classmates to get all information and topics covered of classes he **missed.**

• The University's policy on absence is as follows:

5 absences: first warning,
9 absences: second warning
13 absences: recommendation for DN (Denial Notice), which results in dismissal from the course after being issued an official DN.

• It is your responsibility to **check** your number of absences regularly.

• It is very important that you be in class **on time**.

• The attendance will be taken during the **first 5 minutes** of the class. If you come to class after 5 minutes, you will be marked **absent.**

• **5 points are assigned to attendance.**

Quizzes and Homework:

• Between 3-5 Quizzes will be given during some lessons. The quiz covers the materials discussed during the previous lectures or the Material covered during the same lecture. **(Absent students will take zero with no chance to repeat the quiz)**

• For the best performance in the course you need to do the *HOMEWORK PROBLEMS* assigned by the instructor to be ready for the quizzes and the exams.

• **5 points are assigned for Quizzes and Home works.**

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Exams:

• There will be Two Major Exams given during the term.

• A Final Exam at the end of the term covers all the Chapters covered during the term and it is worth 40% of your total grade.

Course Instructor:

IHAB SHAWISH

GOOD LUCK