Prince SultanUniversity
Department of General Sciences
SYLLABUS - CHM 101 (Term 152, Second Semester 2016)

Title: General Chemistry

Credit Hours: 4 (3 Theory +1 Lab.)

Textbook: Chemistry, 3th Edition; By Julia Burdge.

Course Description:
Chemistry 101 is the first introductory course in general chemistry. The course governs basic concepts and terminology in chemistry. Topics presented include:

Matter and measurement, molecules and molecular compounds, ions and ionic compounds, nomenclature, chemical reaction types, stoichiometry, atomic and molecular weights, the mole concept, calculations with balanced chemical equations, limiting reactant, the periodic table, general properties of aqueous solutions, concentrations, acid base titration, reactions in aqueous solutions, energy and energy changes, introduction to thermodynamics, the gas laws, quantum numbers and electronic configuration, periodic properties, chemical bonding, intermolecular forces, chemical kinetics and introduction to organic chemistry.

Whatever your ultimate academic career may be, you will gain an appreciation for the influence of chemistry in your life and you will be able to think critically about chemical issues as well as other scientific issues.

Week	Date	Sec.	Topic
1	Jan. 17 – Jan. 21	Introduction 1.1 1.3 1.4 1.5 1.6	Introduction The Study of Chemistry Scientific Measurements The Prosperities of Matter Uncertainty in Measurements Using Units and Solving Problems
2 and 3	Jan. 24 – Feb. 4	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
4 and 5	Feb. 7– Feb.18	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

6 and 7	Feb. 21 - Mar.3	4.1 4.2 4.3 4.5 4.6	General Properties of Aqueous Solutions Precipitation Reactions Acid Base Reactions Concentration of Solutions Aqueous Reactions and Chemical Analysis
First Exam (Ch.1 to Ch.3 all sections + 4.1 and 4.2) Sunday March 6th			
8	Mar. 6 - Mar. 10	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
Midterm Vacation (March. 13-March 17)			
9	Mar. 20 – Mar. 24	10.1 10.2 10.3 10.5	Properties of Gases The Gas Laws The Ideal Gas Equation Gas Mixtures
Thursday March 24th (Last day for dropping with grade of "W")			
10	Mar. 27 – Mar. 31	6.6 6.7 6.8 8.1	Quantum Numbers Atomic Orbitals Electron Configuration Lewis Dot Symbols
11 and 12	Apr. 03 – Apr. 14	8.2 8.3 8.4 8.5 8.7 8.8 9.1	Ionic Bonding Covalent Bonding Electronegativity and Polarity Drawing Lewis Structures Resonance Exceptions of Octet Rule Molecular geometry and VSEPR theory
Second Exam (Ch.4,5,6, and 10) Sunday April 10th			
13	Apr. 17 – Apr. 21	14.1 14.2 14.3	Chemical Kinetics and Reaction Rates The Rate Law First and Second Order Reactions
14	Apr. 24 – Apr. 28	11.1 25.2	Intermolecular forces Classes of Organic Compounds.
Thursday April 28th (Last day for withdrawal all courses with grade of "WF/WD")			
15	May 1 – May 5	25.3 25.5	Nomenclature of Organic Compounds. Addition and Substitution Reactions
May 8– May 9		Final Exam Preparation Period	
May 10 –May 26		**Final Exam (All Chapters)**	

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

CHEM. 101 (Theory)				
First	***Second***	***Quizzes and Homework***	***Attendance***	***Final***
15	***15***	***3***	***2***	***40***
Total: 75 %				

Reports	***Final (Theory + practical)***
10	***15 (8 +7)***

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:

  4 absences: first warning,
  7 absences: second warning
  10 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 10 minutes, you will be marked **absent.**
- **2 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 Examsgiven 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:
IHABSHAWISH

-GOOD LUCK-