

Introductory Chemistry

Chemistry 110

Section: D100

Term: 2010 Fall

Instructor: Dr. S. Lavieri

Discussion Topics: General fundamental concepts and nomenclature; stoichiometry and chemical calculations; nuclear and atomic structures, the periodic table, the chemical bond; the properties of gases, liquids, solids and solutions; chemical kinetics and chemical equilibrium. This course has the same lecture component as Chem 111 but no laboratory work.

3 hours/week lecture; 1 hour/week tutorial;

Lectures - Topics

1 - Units, Measurements, Significant Figures

3 - Basic concepts; Matter, Atoms, Nucleus

2 - Electronic structure, the Periodic Table

1 - Chemical Nomenclature

Midterm Exam I

3 - The Mole, Chemical Formula Reactions and Equations

3 - Stoichiometry

1 - States of Matter and Energy

3 - Gas Laws

2 - Solutions, concentration and molarity

Midterm Exam II

2 - Ionic and Covalent Bonding

3 - Reaction Rates and Chemical Equilibrium, Solubility Equilibrium

4 - Acids and Bases

4 - Oxidation and Reduction

Grading: Problem Sets 10%; 2 Mid-Term Exams 30%; In Class and Tutorial Evaluations 10%; Final Exam 50%

Required Texts: Stoker, "Introduction to Chemical Principles", 9th Ed. 2007, Prentice Hall.

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Recommended Texts: None

Materials/Supplies: iClicker, Calculator without memory for writing exams must meet Chemistry Department Specifications

Prerequisite/Corequisite: B.C. High School Math 12(or equiv.)(or Math 100, corequisite) or permission of the department. No previous training in chemistry is required for this course. Students with credit for high school Chem 12(or equiv.) or any university chemistry course may not take Chem 110 or Chem 111 for further credit. If BC high school Mathematics 12 credit not obtained, then Math 100 must be taken as a corequisite to Chem 110. Students may not count both Chem 110 and 111 for credit.

Notes: Students who have successfully completed B.C. High School Chem 12 (or equivalent) normally start with CHEM 121.

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