



Chemistry - Course Syllabus

Description:

This rigorous full-year course engages students in the study of the composition, properties, changes, and interactions of matter. The components of this course include chemistry and its methods, the composition and properties of matter, changes and interactions of matter, factors affecting the interactions of matter, electrochemistry, organic chemistry, biochemistry, nuclear chemistry, mathematical applications, and applications of chemistry in the real world.

Textbook: Chemistry Principles - Excel Education Systems, Inc. 2019 ©

Course objectives:

Throughout the course, you will meet the following goals:

- Understand and apply the methods of chemistry: scientific thinking, measurements, and using mathematics as a tool for logically solving chemistry problems.
- Describe the composition and properties of matter as well as the changes that matter undergoes.
- Trace the development of the atomic theory.
- Examine the relationship between the elements on the periodic table.
- Describe chemical reactions and interactions in real-world applications.

Contents:

Semester A

- 1: Introduction to Chemistry Principles
- 2: Matter and Change
- 3: Measurement
- 4: Atomic Structure
- 5: Electrons in Atoms
- 6: The Periodic Table
- 7: Chemical Nomenclature
- 8: Ionic and Metallic Bonding
- 9: Covalent Bonding
- 10: The Mole
- 11: Chemical Reactions
- 12: Stoichiometry
- 13: States of Matter

Semester B

- 14: The Properties of Gases
- 15: Water
- 16: Solutions
- 17: Thermochemistry
- 18: Kinetics
- 19: Chemical Equilibrium
- 20: Entropy and Free Energy
- 21: Acids and Bases
- 22: Oxidation Reduction Reactions
- 23: Electrochemistry
- 24: Nuclear Chemistry
- 25: Organic Chemistry
- 26: Biochemistry

Grading Scale

- A = 90-100%**
B = 80-89%
C = 70-79%
D = 60-69%
F = under 59%

Grade Weighting

Unit Quizzes.....	70%
<u>Mid-Term/Final Exams ...</u>	<u>30%</u>
	100%