
Grade 11 Chemistry Course Syllabus

[Chemistry – 908]

Teacher Contact Information

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Office Hours: Tuesday and Wednesday: 2:30-3:00 pm, Thursday: 6:50-7:15 am

Course Description

Chemistry is designed for the college bound student who has successfully completed Physical Science, Biology, and Algebra I. Geometry, although not required, is desirable as a background for logical thought forms. This class may not be taken if a student has passed Honors Chemistry or BG Chemistry.

This course introduces students to key concepts and theories that provide a foundation for further study in other sciences as well as advanced science disciplines. Chemistry comprises a systematic study of the predictive physical interactions of matter and subsequent events that occur in the natural world. The study of matter through the exploration of classification, its structure and its interactions is how this course is organized.

Students engage in investigations to understand and explain the behavior of matter in a variety of inquiry and design scenarios that incorporate scientific reasoning, analysis, communication skills and real-world applications. An understanding of leading theories and how they have informed current knowledge prepares students with higher order cognitive capabilities of evaluation, prediction, and application. Upon successful completion, students will be prepared for further study in chemistry at the college level.

Course Pre-Requisite(s)

Successful completion of Physical Science, Biology, or Honors Biology, teacher recommendation, and a “B” in Algebra I. Geometry, although not required, is desirable as a background for logical thought forms. This class may not be taken if a student has passed Honors or BG Chemistry.

Student Learning Objectives/Outcomes

- Identify questions and concepts that guide scientific investigations;
- Design and conduct scientific investigations;
- Use technology and mathematics to improve investigations and communications;

- Formulate and revise explanations and models using logic and evidence (critical thinking);
- Recognize and analyze explanations and models; and
- Communicate and defend a scientific argument.

Upon successful completion, students will be prepared for further study in chemistry at the college level. General principles of chemistry will be studied with emphasis on atomic structure and behavior, mole concept, stoichiometric calculations, nomenclature, quantum theory.

Students will be able to interpret and apply the information learned to solve chemical problems, validate and draw logical conclusions for the obtained results and enhance time management skills.

Required Textbooks and Materials

CK-12 Chemistry – Intermediate FlexText book found at www.ck12.org

- Notebook
- Scientific Calculator

Classroom Materials

Students should bring the following to class with them each day:

- Notebook
- Loose Leaf paper
- Folder with pockets
- Pen/Pencil
- Other Materials as needed

Activities and Assignments

The following is a tentative guideline of the activities and assignments for each quarter. This is subject to change.

First Quarter

- Chapter 1: Introduction to Chemistry
- Chapter 2: Matter and Energy
- Chapter 3: Measurement
- Chapter 4: Atomic Structure
- Chapter 5: Electrons in Atoms

Second Quarter

- Chapter 6: The Periodic Table
- Chapter 7: Chemical Nomenclature
- Chapter 8: Ionic and Metallic Bonding
- Chapter 9: Covalent Bonding
- Chapter 10: The Mole

Third Quarter

- Chapter 11: Chemical Reactions
- Chapter 12: Stoichiometry
- Chapter 13: States of Matter
- Chapter 14: The Behavior of Gases
- Chapter 15: Water
- Chapter 16: Solutions

Fourth Quarter

- Chapter 17: Thermochemistry
- Chapter 18: Kinetics
- Chapter 19: Equilibrium
- Chapter 21: Acids and Bases
- Chapter 24: Nuclear Chemistry

Assignments are weighted as follows:

- The grade in this class will be calculated using a weighted grading scale as listed below. A variety of assignments will be given to you. These include tests, quizzes, labs, special projects, and homework.

Grading Weights:

Tests	35%
Quizzes	20%
Homework	10%
Labs	15%
In Class Work/Schoolology	15%
Class Conduct/Participation	5%

Academic Policies

A detailed list of classroom expectations and procedures will be given and reviewed on the first day of class.

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