

Department: Science
Course Name: General Chemistry

Course Description:

The General Chemistry course is designed to focus on the basic principles of chemistry that includes a study of elements, structure of matter, and bonding fundamentals. This course incorporates a conceptual approach to chemistry with less emphasis placed on problem solving involving mathematical applications. Regular laboratory work is an integral part of this course.

Content:

Introduction to Chemistry
Matter and Change
Physical and Chemical Properties
Scientific Measurement
Significant Figures
Metric Units
Dimensional Analysis
Structure of the Atom
Electronic Configuration of Atom
Properties of the Periodic Table
Ionic, Metallic, Ionic & Covalent Bonding
Molecular Geometry
Chemical Names & Formulas
Chemical Quantities, Moles
Chemical Reactions
Stoichiometry
Behavior of Gases
Acids, Bases, and Salts
Organic Chemistry
Nuclear Chemistry

Skills:

Apply math concepts to the chemistry
Gather and analyze data
Construct lab reports
Develop basic computer skills
Apply reason, logic, and basic problem-solving skills

Text and Materials:

Wilbraham, Staley, Matta, Waterman, Chemistry, (Pearson, 2012)

Methods of Instruction:

Lecture
Laboratory experiments
Demonstrations
Computer projects
Class projects
Collaborative electronic documents

Instructional videos
Worksheets

Methods of Evaluation:

Quizzes
Tests
Homework
Class work
Class participation
Laboratory reports
Laboratory participation

