

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. Pre-requisite: Biology and completion of Algebra I and Geometry.

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
Gather and analyze data
Construct lab reports
Develop basic computer skills
Apply reason, logic, and basic problem-solving skills
Working with tabular data and spreadsheets

Text and Materials:

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

Methods of Instruction:

Lecture
Laboratory experiments
Interactive Notebook
Computer projects

Instructional videos

Worksheets

Methods of Evaluation:

Quizzes- traditional and online assessments

Tests- traditional and online assessments

Homework- traditional and online assessments

Classwork

Class participation

Laboratory reports

Laboratory participation

