

**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  
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)

**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

