

Name of School:

Name of Course: **General Chemistry**

Instructor Information

Name:

E-mail address:

School phone number:

Web page address:

Best times to be reached:

Course Description

This two-term course is a laboratory-oriented approach to the entry-level study of chemistry. Basic laws, theories, and relationships of unit analysis; structure of matter and energy; periodic law; chemical nomenclature; chemical reactions; kinetic molecular theory; the mole concept and solutions will be some of the topics studied. Completion of this course provides a critical thinking background and a basic understanding of the principles of chemistry. There is an additional fee for materials.

District Standards and Power Benchmarks

Standard 1: Understands and applies the principles of scientific inquiry

Benchmark A: Formulates and revises scientific explanations and models

Benchmark B: Understands how scientific knowledge changes with new evidence

Benchmark C: Uses technology and mathematics to perform accurate scientific investigations and communications

Benchmark D: Demonstrates safe handling procedures

Standard 2: Understands and applies the principles of physical science

Benchmark A: Shows how periodicity of the elements relates to atomic structure

Benchmark B: Recognizes patterns in the properties of matter

Benchmark C: Verifies evidence that the conservation of atoms in chemical reactions leads to the principle of conservation of matter

Benchmark D: Uses the gas laws to explain the properties of gases

Benchmark E: Analyzes solutions and their behavior

Course Information

General Chemistry is a two-term course with the pre-requisite of a unit of science and algebra. One unit of credit will be earned for the completion of this course.

General Chemistry is highly recommended/required for admission into most 4-year colleges. General Chemistry is not required for graduation from the Davenport Community Schools.

It is highly recommended that you earned a C or better in algebra.

Course Outline/Calendar

Unit 1: Measurement and Calculations
Topics: Scientific Methods, Units of Measurement, Using Scientific Measurements
Unit 2: Atomic Theory and The Periodic Table
Topics: Atomic Models, The Spectrum, Periodic Trends
Unit 3: Chemical Bonding
Topics: Chemical Bonding, Bonding Models – Lewis Structures, Chemical Names
Unit 4: States of Matter
Topics: Kinetic Molecular Theory, Gas Laws
Unit 5: Chemical Reactions and Equations
Topics: Chemical Equations and Types of Reactions
Unit 6: Stoichiometry
Topics: Stoichiometry
Unit 7: Solutions and Their Properties
Topics: Properties of Water; Solutions; Acids, Bases, and pH

Text/Other Required Materials/Resources

Davis et al. (2003). <i>Modern Chemistry</i> . Austin TX: Holt, Rinehart and Winston. Lab Manual (purchase in Activities Office) Goggles (purchase in Activities Office)
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Instructional Procedures & Support

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Classroom Management Procedures

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Assessment Plan

The students are assessed on a point system. In addition to classwork, labs, tests and quizzes, the students are assessed on: a Periodic Table Assessment, Characteristics of Bonds Assessment, Stoichiometry Lab, Boyle's Law Lab Assessment, and a Spreadsheet Integration Project.

Grading System

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F