

Department: Science

Course Name: Honors Chemistry

Course Description:

This course is designed to be an advanced high school science course exploring chemistry. Students develop and apply problem-solving skills to laboratory experiments as well as written problems. A conceptual approach to understanding the basic interaction of matter and energy are developed. A scientific calculator is allowed on all assignments requiring calculations. This course serves as a preparatory course for most college-level chemistry programs, as well as for the Advanced Placement Chemistry class. Co-requisite: Honors Algebra II/Trigonometry or higher.

Content:

Matter and Measurement
Atoms, Molecules, and Ions
Stoichiometry
Electronic Structure
Periodic Properties
Chemical Bonding
Molecular Geometry
Gases
Kinetics
Equilibrium
Acids and Bases
Aqueous Reactions

Skills:

Gather and analyze data
Apply math skills to chemistry concepts
Apply reason, logic, and basic problem-solving skills
Utilize a learning management system for accessing content, assignments, and assignment submissions
Develop basic spreadsheet skills
Construct lab reports

Text and Materials:

Brown, LeMay, and Bursten, Chemistry the Central Science (Prentice Hall 10th ed.)

Methods of Instruction:

Lecture
Interactive lessons
Laboratory experiments
Demonstrations
Computer projects with spreadsheets
Electronic flashcards
Presentation ipad app
Worksheets

Methods of Evaluation:

Tests(including online assessments)
Quizzes

Lab reports
Homework(submitted electronically with LMS)
Class work
Class participation
Lab participation

