



Course Syllabus

SY 2013-14

COURSE TITLE: Advanced Placement Chemistry

PREREQUISITE: Chemistry. Students must attain a passing score on the Chemistry SOL Test.

DESCRIPTION: In science, a special emphasis is placed on the research process in all grades. This includes making decisions about the generation and testing of ideas; prediction, measurement, data collection and representation; evaluation of sources of information; collaborative investigation; interpretation and communication of findings; evaluation and verification of findings and considerations relating to the social context of research.

The AP Chemistry program offers students the opportunity to extend their understanding of general and analytical chemistry through a fast-paced, college-level Advanced Placement program. Students are encouraged to take the AP chemistry examination at the conclusion of the course.

MAIN TOPICS: The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions

Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them

Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons

Rates of chemical reactions are determined by details of the molecular collisions

The laws of thermodynamics describe the essential role of energy and explain and predict the direction of changes in matter

Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations

CREDIT INFO: 1 Credit. This course provides one of the credits required for the Standard or Advanced Studies Diploma.