AP Chemistry

Course Overview

The Advanced Placement Chemistry course is designed to be the equivalent of a general chemistry class taken the first year in college. For students planning to major in science, engineering, or medical professions, successful completion of this course will allow them to advance more quickly into higher level chemistry courses or classes that have a college level chemistry class as a prerequisite. For students with other plans for majors, this course will fulfill the laboratory science requirement and make space in their schedules for other courses.

This course is designed to be a second chemistry course for high school students. AP Chemistry students will have already taken a first year chemistry course that emphasized atomic theory, periodic law and tendencies, bonding and molecular structure, intermolecular forces, basic nomenclature, mole theory, stoichiometry, basic gas laws, solids and liquids, solutions and concentrations, energy and chemical processes, equilibrium, acids and bases, redox reactions, nuclear reactions, and descriptive aspects of chemistry. **Topics that will be new to AP Chemistry students to a significant degree include: thermochemistry, colligative properties, gaseous equilibrium, equilibrium of solutions, kinetics, chemical thermodynamics, acid/base equilibrium and buffers, oxidation-reduction and electrochemistry, complex ions, descriptive chemistry, and writing balanced net ionic equations for reactions.** Students will develop a deeper understanding of chemistry problems and learn to present their problem solving clearly both orally and in writing.

Course Design

1. This class will meet for **85 minutes Monday-Friday throughout the spring semester only. Students will be required to attend lunch tutorials each Friday.**
2. **Homework (10%) -** Homework will be assigned most days and will be turned in at the conclusion of the unit. Assignments will include reading the appropriate section of the textbook and working out problems. Answers can be found in the back of the book and worked out solutions are available in the classroom during tutorials. Work must always be shown when appropriate. Students are encouraged to work in groups to help facilitate learning. Expect 3-5 hours of homework a week. The makeup work and late work policies for HSHS will be followed in this class. Please read these sections of the handbook and become familiar with them.
3. **Quizzes (15%) –** Frequent quizzes will be given in class. They may or may not be announced. The best way to be prepared is to keep up with the daily homework. Quizzes will be graded quickly and returned for timely feedback on progress.
4. **Tests (50%) –** A test will be given every two units that will include 20-25 multiple choice questions and 2-3 free response questions. The best materials to use to prepare for each test is the set of graded homework assignments and quizzes that students will have by the end of the unit. There will also be a cumulative exam at the end of the fall semester. Every effort will be made to simulate the format of the AP exam, therefore a strict time limit will be enforced.
5. **Lab Reports (25%) –** Experiments will usually be done in with a lab partner. However, students will turn in an individual lab report for every experiment. (See Requirements for AP Chemistry Labs.) Graded lab reports will be kept in a one inch three-ring binder. This binder may be needed to prove to universities that lab credit should be rewarded.
6. **Delivery –** New material will be presented with notes in class accompanied with discussion of the concepts and modeling of how to solve related problems. Not all topics will be covered in depth with the aim of developing independence and initiative. **Students are expected to further their own learning by keeping up with the assigned readings and being willing to approach problems that are NOT identical to those presented in class.**