

AP Chemistry Course Outline: 2011 – 2012 Academic Year

Mr. Allan, El Diamante High School

I. General Course Objectives

The primary goal of the course is for students to understand the basic principles of modern chemistry while also demonstrating the ability to use that understanding in the solution of mathematically-based laboratory, textbook, and real-life problems.

II. Brief Description of the Course

This is an advanced placement course designed to prepare the student for the AP Chemistry exam. The course covers the equivalent of one full year of college level General Chemistry, comparable to a first year course at a college or university. The course is a rigorous math-based course, with a strong laboratory component. It is intended for students who have demonstrated a willingness to commit considerable time to studying and completing assignments outside of class, and who have successfully completed a prior course in chemistry during high school.

The course will develop the student's ability to incorporate mathematical skills in the solution of chemistry problems, both through the use of textbook problems and laboratory activities. Significant emphasis will be placed on developing the student's ability to solve problems through dimensional analysis and estimation. Students will be required to do extensive writing, and to keep a thorough and accurate ongoing laboratory notebook.

Since passing the AP exam may qualify the student to by-pass a first-year college chemistry course, AP Chemistry should not be considered "college prep." Rather, this is a college class, with college level expectations for behavior, participation and effort.

III. Grading

Point values will be given to graded assignments such as quizzes, tests, and lab reports. Extra-credit may be offered on some tests for particularly challenging problems. There will be no supplemental extra-credit assignments what-so-ever. Grades will be assigned based upon the following percentage cutoffs:

A = 90% B = 80% C = 70% D = 60% F = Less than 60%

Quizzes will be given frequently (generally two per chapter), and are announced in advance. There will be three comprehensive tests per semester, encompassing multiple chapters of study. Tests and quizzes will be timed, since it is important to prepare students to work within the time restriction of the actual AP examination. It is my practice to give tests in the same format as the AP exam, with a multiple choice section comprising about 45% of the available points, and a "free response" section comprising about 55% of the available points.

There are no retakes of tests or quizzes. Students have the option of "correcting" their mistakes on tests (not on quizzes) and submitting the corrected test within two school days of the date that the test was returned to the student. Students may earn as much as half credit on the corrected items. The instructor will provide guidelines for submitting corrected exams.

IV. Laboratory Component

The AP Chemistry Examination includes some questions based on experiences and skills students acquire in the laboratory: making observations of chemical reactions and substances; recording data; calculating and interpreting results based on the quantitative data obtained; and communicating effectively the results of experimental work.

Meaningful laboratory work is important in fulfilling the requirements of a college-level course of a laboratory science and in preparing a student for sophomore-level chemistry courses in college. Because chemistry professors at some institutions ask to see a record of the laboratory work done by an AP student before making a decision about granting credit, placement, or both, in the chemistry program, students need to keep reports of their laboratory work that can be readily reviewed. In this class this will take the form of a permanent, bound laboratory notebook that will be turned in each time that a lab write-up is due.

Lab safety rules will be reviewed and enforced during every lab activity. Goggles must be worn religiously. No student may work in the lab without having a signed lab safety contract on file. Due to the emphasis on laboratory work, any student who cannot follow lab safety rules will be removed from the class.

V. Policies

Unless otherwise specified, all assignments are to be done individually. Students who copy work from others, or allow their own work to be copied are guilty of cheating. Falsifying laboratory results is also cheating. I will follow the VUSD policies regarding cheating. **Late work is not accepted.** Students who are legally absent have two days to make up an assignment for every day they were absent. After that time period, the assignment is late and cannot be submitted for a grade.

I do not anticipate having behavior problems in a class such as AP Chemistry. It is my philosophy to extend to you both my respect and my greatest effort as an instructor. I ask only the same in return, both for myself and for your classmates.

VI. Instructional Materials/Equipment

Text: Chemistry, Steven S. Zumdahl, Sixth Edition, 2003, Houghton-Mifflin Publishing Co., Inc.

In addition to the text, students will need a standard, laboratory notebook, and a calculator. Materials can be provided at no charge to students who cannot afford them.

VII. Assistance

I am available for help during my published office hours. Any student or parent may contact me at home (625-9370) prior to 8 in the evening. My email address is andy.allan59@gmail.com. Feel free to email me anytime.

I highly recommend establishing "study groups" in order to facilitate problem solving and test preparation. Transfer students and students from other schools (if any) may find that there are "gaps" in their knowledge base. In order to cover the amount of material required, I must assume that students have retained some of the fundamentals from first year chemistry, and I base my assumptions upon the curriculum covered in first year chemistry at El Diamante. If you find yourself becoming lost, please get help from me as soon as possible.

I also have a website with extensive resources for my students. Generally, materials that I have created for this course are also available at the website, as well as extensive resources for reviewing and practicing the material. Students who do not have Internet access at home may gain Internet access through our school library or in my classroom. The address for my website is: **www.sciencegeek.net**