

ADVANCED PLACEMENT CHEMISTRY SYLLABUS

INSTRUCTOR: Mahua Chakraborty
2013-2014

Goals: To provide hands on experience to students to master the skills in laboratory work.
To help each student achieve success in taking the AP Chemistry exam to get college credit.
To help them clear many concepts in Chemistry by giving them more exposure to laboratory work.

Text: *CHEMISTRY THE CENTRAL SCIENCE 11th Edition*
Brown, Lemay, Murphy

Content: We will cover all material as recommended by the College Board for success on the AP Chemistry Exam. This may be viewed on the College Board website, www.collegeboard.org/ap

This is a very rigorous college course. In order to finish this course by the end of April every student must be prepared to work hard so that we have enough time to review before they take the college board exam somewhere during the first week in May 2014. Every chapter will be followed by a challenging quiz/test and the questions will be taken from the AP Chemistry practice questions.

Your success in this course will directly reflect on the amount of time and effort you put into it. Here are some suggestions that may help you:

- Come to class daily. If you are unable to attend class please email me the reason and make arrangements to collect all the homework for that particular day.
- Participate actively and ask questions as soon as you need help.
- Every student must have a bounded notebook. Keep notes about demonstrations and examples presented in the class.
- Keep up with your work.
- Be open to variety of learning styles and activities.
- Keep aside 2 hours of daily study for mastering the different skills in this course.

Materials: Please bring the following to class daily:

- Blue/Black pen, #2 pencil, and a ruler
- Scientific calculator
- Textbook every day.
- Chemistry lab notebook when indicated.

Important topics in this course :

Most of you probably have covered major topics during your Chemistry I course. However the main topics that are extremely important from AP Board exam point of view are

1st nine week:

- Stoichiometry : Calculations with Chemical Formulas and Equations.
- Aqueous Reactions and Solution Stoichiometry
- Electronic structure Of Atoms
- Basic Concepts Of Chemical Bonding.
- Gases

2nd nine week:

- Chemical Kinetics
- Chemical Equilibrium
- Acid base Equilibria
- Additional aspects of aqueous Equilibria
- Chemical Thermodynamics

3rd nine week:

- Electrochemistry
- Nuclear Chemistry
- Molecular geometry and bonding theories

4th nine week

- Intermolecular forces liquids and solids

The 4th quarter will be mostly practice and preparing for the AP college board exam. If for some reasons we are unable to complete the chapters assigned for each quarter then we should be able to do that during the 4th quarter.

Each chapter test will be multiple choice and followed by Free Response question taken from previous AP chemistry exams.

You will be given an opportunity for extra credit in each quarter. The extra credit work will be assigned during your breaks(fall, winter and spring)

Homework: Homework will be assigned frequently

- HW will be checked in the beginning of the class. Try to attempt all questions to receive credit.
- Make sure to show all calculations.
- HW should not take more than 30-40 minutes.

Class Behavior: KEY word is RESPECT

- Students are expected to speak with respect to and with the teacher and their fellow students.
- No eating or drinking in the class. Before entering the class, make sure you trash your drink . Only a bottle of water is allowed in the class as well as the lab.
- Students are expected NOT to bring any games, throw things, tamper with the equipments etc. in the classroom or the lab.
- Students are expected to sit in their assigned seats and PAY FULL ATTENTION in the class.
- The students are expected to bring the materials needed in the class DAILY.

Grading: Grades for the AP Chemistry course is different from the AP Chemistry Exam. Grades are determined from tests, quizzes, labs, reports, homework assignments, and regular class conducts.

Absences:. If you are absent, be sure to have a classmate pick up all papers and assignments for you. If you are sick for more than one day, have a classmate or a parent bring assignments to you. Lab absences will result in a zero grade unless student is seriously sick. This excuse must be followed with an excuse note from the doctor's office. Each day in chemistry is dependant on understanding the previous day's work. Daily attendance is essential. Pre announced tests and quizzes must be made up on the day that the student returns.