

AP Chemistry Syllabus

2007-2008

Chemistry AP General Information:

Chemistry AP will meet for one eighty minute class period and one 45 minute class period every two days. **There will be a minimum of one double period a week devoted to laboratory work.**

Book:

Chemistry: the Central Science by Brown and LeMay 9th edition

Laboratory: Laboratory Experiments for AP Chemistry By: Sally Ann Vonderbrink, Ph.D

Laboratory practices and notebook:

Each student will complete a minimum of 23 labs to be done over 46 hours of laboratory time to grasp a physical understanding of the concepts. These labs will be completed during the double period lab sessions each week. Part of the lab requirement will be for the students to keep a lab notebook in the form of a three ring binder. Each binder will have the lab handout and subsequent lab report that the student completed for each lab. Students will be graded on keeping an accurate lab notebook, completing the lab, and turning in a correct lab write-up.

Homework Policy:

Homework will be due on each test day. Homework is preparation for test and quizzes along with allowing students to practice each concept. Late homework will not be accepted for a grade. All homework must show all work for a full credit.

Test and Quiz Policy:

There will be four exams given throughout the year. Each exam will cover the previous five units. The exams will have both long answer and multiple choice questions for students to complete. Students will have the opportunity to take any unfinished long answer questions home to complete for two-thirds the credit.

On Fridays students will take quizzes that cover the week's topics. There will be nine quizzes given during the quarter and each quiz is worth at least 10 points.

Class Room Expectations:

Students will report on time with their books, paper, pencil, pen, **CALCULATOR**, and lab notebooks. Should students fail to bring those items to class they will be allowed one free pass after that they will be staying after to make up missed class time for locker trips.

***** ALL Students must have their own scientific calculator*****

Course Outline:

Unit	Title	# of days	Labs	Major Exams
1	Matter and Measurements	4	Measurements 101	
2	Atoms, Molecules, and Ions	4	Mole ratios in reactants & Liquid Chromatography	
3	Stoichiometry: Calculations with chemical formulas	6	Analysis of silver alloy, Synthesis of Alum, & Analysis of Alum	
3	Aqueous Reactions & Solution Stoichiometry	6	Activity Series	
4	Thermochemistry	7	Thermochemistry and Hess's Law	Exam
5	Electronic Structure of Atoms	5	Spectrometry Demonstration	
5	Periodic Properties of the Elements	4		
6	Basic Concepts	7		

	of Chemical Bonding			
6	Molecular Geometry and Bonding Theories	5	Molymods lab	
7	Gases	7	Vapor Pressure and Enthalpy of Vaporization of Water	Exam
8	Intermolecular Forces, liquids and solids	5	Molecular Mass of a Volatile liquid	
9	Properties of Solutions	5	Molecular Mass by freezing point depression	
10	Chemical Kinetics	6	Study of the Kinetics of a Reaction	
11	Chemical Equilibrium	5	Determination of equilibrium constant & Equilibrium and LeChatelier's Principle	
12	Acid-Base Equilibria	12	Determination of the dissociation Constant of a weak acid, Determination of the equivalent mass and pKa of an unknown acid, Determination of the solubility product of an ionic compound, Qualitative	Exam

			analysis of cations, and Qualitative analysis of anions	
13	Chemical thermodynamics	6		
14	Electrochemistry	5	Electrochemical Cells and Analysis of a commercial bleach	
15	Nuclear Chemistry	5		
16	Organic Chemistry	5	Preparation of esters	Exam
	AP Review			AP Exam