

AP Chemistry

Fox Lane High School

AP Chemistry is taught at the same level as a first year college class. You must be prepared to use your book. Read the chapters and solve problems. In May you will take the AP Chemistry Exam. The grade you receive on this test will determine if you get college credit. This test is very competitive. I will help you as much as possible, but only you can make yourself learn chemistry.

Should I take AP Chemistry even if I don't plan to major in science or engineering?

The answer is yes as long as you don't find it too difficult. Almost all four year colleges require students to take science classes before graduating. If you do well on the AP test this college graduation requirement is met.

I plan to major in science or engineering. Should I take physics now?

The answer is yes. The school you go to may require you to have a 4 or 5 to get credit. This is hard to do. Many times students do find themselves taking the class over again, but they find it much easier the second time. It is like building a house, you want a strong foundation.

<u>Grading:</u>	Tests	50%
	Labs	30%
	Quiz/Homework	20%

Tests: Tests will always be announced. Some of the test questions will be similar to those done in class. Other questions will be original and require you to think on the spot. Reading the book and doing additional problems will help to prepare you for these questions. I do not give make up tests, so come prepared the day of the test.

Lab Work: All labs must be carefully written up inside the bound lab notebook. Part II of the AP Chemistry Exam will often ask questions on experiments we will be doing in class. If possible, once you have completed a lab you will be given a question used on an old exam for homework. It is hoped that this will solidify your understanding of the lab and AP examinations.

Quizzes: Most quizzes will be announced. I do not give make up quizzes, so come prepared.

Homework: Homework is due at the start of class the day it is due. I will not grade every assignment. Come to class having attempted all problems and ready to ask questions. The homework I assign is a minimum number of problems. You should not hesitate to do more problems from the book.

Absences: If you miss a day of school it is your responsibility to make up the work you missed. Ask a classmate for notes and assignments. If you missed a test, quiz, or lab you will need to stay after school. All work not made up will be given a grade of zero and that grade will be used for calculating your average. Any work missed due to an illegal absence can not be made up.

Materials for class: In order to get the most from each class come prepared.

Bring with you a: Pen and Pencil
Calculator
Notebook (3 ring binder works best, but I don't check)
Bound Lab Notebook

Classroom Rules:

1. Be in the classroom before the bell rings.
2. Show respect for everyone and everything in the classroom.
3. Come to class ready to learn and **NEVER** act in a way that will keep others from learning.
4. Follow all safety rules for the lab.

Text Book: Chemistry and Chemical Reactivity Fourth Edition John C. Kotz and Paul Treichel Jr. Saunders College Publishing, 1999

Teacher: Mr. Neumann

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Personal Classroom Goal

It is my job and personal goal to provide you the student with a comfortable learning environment where you will be successful. It is my job to provide you with the instruction, assessment and encouragement needed for your success. I would hope you the student take full advantage of this learning environment by challenging yourself to work to your potential and enjoy the challenges of learning chemistry.

Unit Outline	Chapters	Approximate Time
Matter and Measurement Atoms and Elements Molecules and Compounds	1,2,3	3 weeks
Chemical Equations and Stoichiometry Reactions in Aqueous Solutions	4,5	2 weeks
Energy and Chemical Reactions	6	2 weeks
Atomic Structure Atomic Electrons Configurations and Periodicity	7,8	3 weeks
Bonding and Molecular Structure	9,10	3 weeks
Gases and Their Properties Bonding and Molecular Structure	12,13	2 weeks
Solutions and Their Behavior	14	2 weeks
Chemical Kinetics Entropy and Free Energy	15, 20	3 weeks
Chemical Equilibrium Precipitation Reactions	16, 19	3 weeks
Acids and Bases Reactions between Acids and Bases	17,18	3 weeks
Electron Transfer Reactions	21	2 weeks

Labs	Goals	Approximate Time
Synthesis of Nickel Compound	Chemical Reactions	80 minutes
% Ammonia in Ni Compound	Percent Composition	80 minutes
% Chlorine in Ni Compound	Percent Composition/Titration	80 minutes
% Nickel in Ni Compound	Percent Composition/Empirical Formula	80 minutes
Standardizing NaOH	Titration/Solution Preparation	80 minutes
Alum Production	Limiting Reactant	80 minutes
Hess's Law	Hess's Law	80 minutes
Emission Spectra	Bohr Model/Energy Level/Light	100 minutes
Molecular Modeling	Shapes/Polarity	160 minutes
Determination of Molar Mass by Vapor Density	Gas laws/Formulas	80 minutes
Determination of % Carbonate by CO ₂ Production	Gas laws/Ideal Gas Law	80 minutes
Diffusion of Gases	Graham's Law	50 minutes
Aspirin Titration		80 minutes
Colligative Properties- Molecular Weight from Freezing Point Depression	Colligative Properties	80 minutes
Rates of Chemical Reactions	Kinetics/Reaction Order	80 minutes
Determination of K _c for a chemical reaction	Equilibrium/Equilibrium Constant/Using a Spec 20	160 minutes
K _a of acetic acid and buffer solution	Equilibrium/Buffers	80 minutes