

Chemistry II Syllabus

Course Description:

Chemistry II is the continuation of Chemistry. One of my goals for Chemistry II is to have everyone feel comfortable and function logically and properly in a laboratory setting. My other goal is that I want all of you to know how to start to solve abstract real life problems (in and out of school). The methods to learn problem solving in Chemistry are to conduct experiments and think. Experiments can be called controlled observations.

Experiments are controlled observation since WE define the parameters in the lab. We need to have that control so we can determine the cause and effect of what we are observing. At this point you may be thinking of the “Scientific Method.” The way the Scientific Method has been taught in the past is to 1) state the problem; 2) hypothesize a solution; 3) design an experiment to test hypothesis; 4) conduct the experiment; 5) observe, record, organize data; 6) does your hypothesis hold true?; 7) if true, propose theory, if false hypothesize again. However in real life and real experiments as the experiment (life) unfolds, you may observe that your hypothesis is incorrect as you are designing your experiment or within the first few minutes, or as you are discussing it with a friend, does this mean you should just keep going? NO, in reality you would stop and modify you solution in the moment. This is where we are headed, being able to solve problems with a “*fluid*” problem solving technique, calling it what ever you want. My method is basically, 1) ask a question, 2) try something; 3) does it work?; 4) if so, questioned answered move on to something else; if not try something else and keep going until the problem is solved. In life this could take years, in Chemistry II you will have a defined time limit.

In order to perform experiments we need to understand and use the chemical and physical properties of substances. We need to understand and use chemical and physical reactions to our advantage. That means we need to know how reactions work and how these reactions can work for us. Most chemical reactions occur in solutions, thus to understand and perform chemical reactions properly we need to understand solutions. The most common type of solution that is used in labs is a solid dissolved in a liquid, usually water (aqueous). To fully understand solutions we should comprehend what solids and liquids actually are and how intermolecular attractive forces affect their properties and reactions.

Once this is accomplished we venture into other branches of chemistry – Electrochemistry, Organic and Biochemistry (time permitting). We then apply what we know to what we don’t know and see if we can figure out more “stuff”.

This semester you will be required to get notes, watch videos, and gather information **out of class**. While in class we will focus on applying that gathered information to solving the world’s mysteries...O.K. we’ll start with some basic chemistry problems but apply them to real life as often as possible. You will be visiting my website to stay up to date as to what is expected, when assignments are due, test dates, sites to visit, and fun to be had! If you do not have access to the Internet out of class, let me know ASAP and we will work something out.

Time - Line :

Topic	Classroom activities	Labs	Tests	Total blocks
Reactions in Aqueous Solutions	6	1	1	8
Intermolecular Forces and Liquids and Solids	5	2	1	8
Physical Properties of Solutions	5	1	1	7
Gases	5	1	1	7
Thermochemistry	5	1	1	7
Chemical Kinetics	5	1	1	7
Chemical Equilibrium	5	1	1	7
Acid and Bases	5	1	1	7
Acid Base Equilibria and Solubility Equilibria	5	2	1	8
Qualitative Analysis	1	5	1	7
Entropy, Free Energy and Equilibrium	5	1	1	7
Electrochemistry	5	1	1	7
Organic Chemistry	5			5
Totals	62	18	12	92

Texts : Chang, CHEMISTRY *ninth edition* ; Supplemental Text Heath - Heath Chemistry and others.

Website: <http://www.etownschools.org//Domain/672>

Assessment Techniques :

Your grade will be based on the total number of points you earn divided by the total number of points possible. This number will then be multiplied by 100 to give a percentage. Please refer to your student handbook for the grading scale.

Example : Suppose you earn 654 points the first quarter and the total possible score is 750. Your grade will be computed as follows: $(654 / 750) \times 100 = 87\%$

Here are the different opportunities to earn points !!!!

75 - 150 pts.
14% of final grade

10 - 25 pts.

25 - 50 pts.

125 pts

200 pts.

50 pts.

Tests – Must be completed by the end of the testing block.

Comprehensive Final

Quizzes - announced and unannounced

Lab Notebooks / Worksheets

Lab Reports

Qualitative Lab Results (unknown identity and flow chart)

Demonstration – Choose a demonstration to perform in front of the class. Create a handout that explains what you are doing and the chemistry behind it. Discuss that chemistry with the class, you as the expert. Clean up afterwards.

- * End of Chapter Problems - assigned as follows - you are responsible for getting the correct answers. All problems will be assigned at the beginning of the topic/chapter. If you do not do homework you will find the tests VERY difficult.

NO LATE WORK WILL BE ACCEPTED FOR POINTS !!!!!

Class expectations :

- ~ You are expected to keep a separate notebook for this class. This notebook should be a three ring binder, preferably. I will not collect or grade your classroom notebook. You are expected to have a separate notebook for laboratory work. This will be supplied.
- ~ You are expected to be prepared for class each day. This entails bringing your book, notebook, calculator, pen/pencil and paper for notes. This also includes reading assigned text and trying homework problems.
- ~ You are expected to participate in class to the best of your ability. I expect you to show an honest effort the entire year.
- ~ This is a weighted course therefore be prepared for a greater workload and more difficult tests. Tests are designed to be finished in one block, **no extended time will be given.**

Make - Up Policy

If you are absent from school on the day a homework assignment is given, you will be given a number of days equal to the number of days you were absent to complete and turn in for credit all homework assignments missed during your absence. If the assignments are not completed in that time period, it will result in a zero for each assignment not completed and returned.

If you are absent from school on the day any assignment is collected, that assignment will be due the next day you are in school. If it is not turned in at that time, it will result in a zero for that assignment.

Late homework assignments will not be accepted and will be recorded as a zero. Lab reports that are turned in late will be recorded as a zero.

If you miss a quiz, lab, quest, or a test due to being absent from school, you will have one week from the day you return to class to make up the assignment. If the assignment is not completed within this time period it will result in a zero for that assignment.

If you are going to miss class because of any extracurricular activity on the day an assignment is due or assigned, it is your responsibility to see me before the missed class. No extensions will be given for these assignments. They are due, with the rest of the class, when scheduled, just as if you were in class. This includes any tests, quizzes, quests or labs that may be scheduled.

If a test, quiz, quest or lab is missed due too an extracurricular activity, it will be made up

in your next available study hall or the next scheduled office hours, which ever comes first. If it is not completed within this time period it will result in a zero for the assignment.

I RESERVE THE RIGHT TO ALTER ANY OF THE ABOVE SITUATIONS WHERE EXTENUATING CIRCUMSTANCE WARRANT CONSIDERATION

HOMEWORK POLICY EASD SCIENCE DEPARTMENT

Homework Assignments meet the following description:

- Short term
- Typically assigned overnight
- Due at the beginning of the following / next class period
- May be randomly collected and evaluated

Used For:

- Previewing (e.g. reading assignment; lab directions)
- Drill / Practice of learned skill (e.g. vocabulary, formula writing, genetic crosses)
- Summarizing lesson / concept

Evaluation:

- Standards' based
- May evaluate the actual assignment or give a short quiz based on the assignment (with or without using the homework assignment for reference)
- Homework assignments will not exceed 10% of quarter grade.

Grading Scale:

≥ 90% accuracy	5 points
≥ 80% accuracy	4 points
≥ 70% accuracy	3 points
≥ 60% accuracy	2 points
≤ 59% accuracy	1 point
no attempt	0 points

Point values may have a multiplier (e.g. x2) to even out the size and nature of assignments (estimated time required to complete assignment, number of vocabulary terms, number of questions, number of problems, etc.)