

Chemistry Spring Syllabus

Hutchison High School Room 140 Hours: 7:15 AM - 2:45 PM.

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Course Description:

Chemistry is a year-long physical science class which builds a strong foundation for college level chemistry and biology courses. Students learn about the structure of matter in order to explain how and why substances behave the way they do.

Laboratory work is an integral part of the learning process and is a significant part of the class. Following proper scientific procedures and protocols, as well as discussing and analyzing results in written and oral format is stressed. Additionally, the ability to read and process material from text is a skill students will be working on all year.

To be prepared for this course you should have completed Algebra I with a B or better.

Course Outline:

Using the text book Glencoe Chemistry: Matter and Change (supplemented with other materials), we shall complete the following through the course of the year:

Semester 1	Semester 2
Unit 1. Intro. to Chemistry & Data Analysis	Unit 7. Hydrocarbons
Unit 2. Properties of Matter	Unit 8. Chemical Reactions
Unit 3. Atomic Structure	Unit 9. The Mole
Unit 4. Electrons in Atoms & The Periodic Table	Unit 10. Stoichiometry
	Unit 11. Gas Laws
Unit 5. Ionic Compounds	Unit 12. Solutions & Acids and Bases
Unit 6. Covalent Compounds	Unit 13. Redox Reactions & Electrochemistry

Assignment Dialog Box:

To communicate due dates, point values, and other details, each assignment will have a dialog box at the top. Here is an example:

Chemistry		Lab 4.5 - Practice Reactions				
Name:						Correction Credit: Half
Lab /Hwk Points:	E.C.	Missed:	Late, No Units, No Work Fee:	First Score:	Corrections:	Final Score:
16	1 2		-1 -2 -3 -4			

Note: A late fee will apply to any late assignments, unless there is a legitimate excuse.

Chemistry Booklet:

At the beginning of the semester, a Chemistry Booklet will be given to each student. This booklet contains this syllabus, approximate sequence of lesson plans, and assigned problems for the entire semester and/or unit. The booklet is organized into units, with homework and labs per unit available to view and work on at any time. There also is a resource portion that will be available for you to use during tests and quizzes, unless expressly told otherwise.

Attendance:

It is your responsibility to ask for any work missed due to excused, unexpected absences when you return. Also, if you are keeping track of where we are in the semester in the Semester Plans portion of your Booklet, you'll have a fair idea as to what you'll be missing. Assignments you miss are due upon your return.

Missed labs must be made up within two weeks of your return.

Grading Policy:

Grades are weighted, as shown here. Assignment point values and penalties are clearly labeled.

Component	Value
Tests and Quizzes	30.0 %
Homework	17.5 %
Labs	30.0 %
In-Class Work	10.0 %
Semester Final	12.5 %
Total	100.0 %

The grading scale is the standard percentage scale:

Grade (%)	Letter Grade
90 -100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

chapters
concepts

Tests and Quizzes:

There will be several unit tests each semester, covering one or more textbook at a time, as well as proficiency quizzes covering within individual chapters.

Students may use the entirety of their Booklets and hand written notes on some (not all) tests and quizzes.

Homework:

Daily Booklet homework will be a 5 to 10 problem set following a section of notes, and are checked for completion the next day when a student enters class. If you were absent, indicate on the assignment so you won't lose points. Once class starts, we will go over any problems students had on specific problems. Students are expected to attempt all problems.

Booklets are collected at the end of a unit, and points given based on completion. Extra credit is offered for early Booklet submission.

Labs

All labs require data acquisition and written responses made in your lab Booklet. Lab work is checked when Booklets are collected at the end of a unit. Some labs are more detailed and require a formal product turned in. For any lab, a question and answer session will occur after all groups have finished their data collection, and before the lab is due - most likely at the start of next class.

In-Class Work

Some assignments during the semester will be done in the classroom only. Such assignments are Unit Review presentations and problem sets, or instructional games that might be done to reinforce a concept or topic.

Semester Final

The comprehensive semester final is worth 12.5% of your grade. It will consist of roughly 70% conceptual questions and 30% mathematical. Students can use Booklets, as well as any hand written notes you have taken during the semester.

Redo Policy:

Students have the option of redoing any incorrect answers on in-class assignments and labs for at least 50% credit back. For example, if a student missed six points on an assignment and does all corrections, s/he will earn three points back. Corrections must be done in a different color (don't erase your original error) and can be turned back in within two weeks of return or before the end of the semester, whichever occurs first.

Redoing tests is different. Students correct all their mistakes on a separate sheet of paper, staple it to the original, and turn that in for correction. Problems must be reworked, and answered completely. For example, don't just write A, B, C, or D for multiple choice, explain your correction thoroughly. Afterwards, students have the right to take another version of the test. The best score will be recorded. Additionally, corrections made on test retakes will receive half credit back.

Again, all redoing of tests, homework, or labs MUST BE DONE WITHIN TWO WEEKS of the Unit Test.

Late Work:

You will be told exactly when assignments are due. Work submitted up to two weeks after the due date will be accepted, but will receive a late fee. After the two week time period is up, late work will not be accepted.

In an effort to make students do and turn in late work, lunch detentions shall be given to students who are more than three days late turning in assignments. Unless extenuating circumstances exist, a student more than three days late turning in work will spend lunch with me, completing and submitting late work for grading.

Work turned in after the last day of instruction (just before finals) will receive no credit.

Cheating Policy:

Students (and accomplices) caught cheating on assessments will suffer the following consequences:

1. First Strike: students will earn a zero for that assignment, have to contact their parents, and will be reported to the administration.
2. Second Strike and on: students will earn a zero for that assignment, have parental contact, and will have administrative referral for disciplinary action.

Class Expectations

1. Be in class on time, with all necessary materials.
2. Show respect to all people in the class, as well as the classroom itself.
3. While all school and district rules must be followed; what we emphasize:
 - a. No hats, hoods, or headgear,
 - b. Wear school and science lab appropriate clothing,
 - c. Leave all backpacks and large purses in your locker,
 - d. Have a hall pass or an escort to leave this room,
 - e. Computers are permitted ONLY if they are used in a learning context. Playing games or surfing the web in a non-scholastic manner will result in loss of technology privileges, even if you are done with all your work.
 - f. Phones, smart or otherwise, are immediately subject to confiscation.
4. **Absolutely no food** is allowed in class – eat it before you get here or leave it in your locker or it goes in the trash. Students may drink liquids at their desks if they are stored in a plastic container with a screw-top lid (no fast food cups), but no drinking in the laboratory area!
5. A seating chart will be established that divides students into lab groups shortly after school starts. You are responsible for your seat and surrounding area; please report any graffiti or damage immediately, so you don't get blamed for it.

Repercussions:

Not meeting expectations will result in the following repercussions:

1. Verbal reminder of what is expected,
2. Second verbal reminder,
3. Third verbal reminder and guardian contact,
4. Office referral (lunch detentions first, then stronger repercussions).

I will record infractions, so students know how close they are to lunch detentions etc.

Supply List:

School issued textbook,
Writing sticks, such as pens and pencils,
3-Ring binder with paper OR spiral notebook,
Scientific Calculator (recommended)

A note on calculators:

Calculators (but not cell phone ones!) may be used on most tests and quizzes. Also, if you plan on going further academically, consider purchasing your own graphing calculator and use it as long as you have it. Classroom calculators are available, but must not leave the classroom.

Chemistry Spring Semester Plan

This is the expected sequence of classroom events throughout the spring semester. As we cover certain topics, check them off so that you can see what assignments are coming up.

Unit 7 – Hydrocarbons and Organic Chemistry – Chapters 21–22 of your book.

1. Notes 7.1 – Hydrocarbons, Naming Alkanes – Booklet Problems.
Naming Alkanes Worksheet
2. Notes 7.2 – Alkenes, Alkynes, and Cyclic Hydrocarbons – Booklet Problems.
Lab 7.1: Take The Benzene Challenge!
Naming Aromatics Worksheet
Naming molecules Quiz
3. Notes 7.3 – Functional Groups: Halogens, Alcohols, and Ethers – Booklet Problems.
Lab 7.2: Steam Distillation
Unit 7 Review
Unit 7 Test and Booklet Check

Unit 8 – Chemical Reactions – Chapter 9 of your book.

- Naming Compounds Refresher
1. Notes 8.1 – Reactions and Equations – Booklet Problems.
 2. Notes 8.2 – Classifying Reactions – Booklet Problems.
Lab 8.1: Reactions Practice Lab
 3. Notes 8.3 – Reactivity – Booklet Problems
 4. Notes 8.4 – Reactions in Aqueous Solutions
Reactions Worksheet
Lab 8.2: Double Replacement Lab (Includes Formal Lab Report Instructions)
Unit 8 Review
Unit 8 Test and Booklet Check

Unit 9 – The Mole – Chapter 10 of your book.

1. Notes 9.1 – Measuring Matter – Booklet Problems.
2. Notes 9.2 – Mass and the Mole – Booklet Problems.
3. Notes 9.3 – Moles of Compounds – Booklet Problems.
Lab 9.1: Moles of Matter Activity
4. Notes 9.4 – Percent Composition – Booklet Problems.
5. Notes 9.5 – Empirical & Molecular Formulas – Booklet Problems.
6. Notes 9.6 – Hydrated Formulas – Booklet Problems.
Lab 9.2: Hydrated Crystals Lab
Unit 9 Review
Unit 9 Test and Booklet Check

Unit 10 – Stoichiometry – Chapter 11 of your book.

1. Notes 10.1 – Defining Stoichiometry – Booklet Problems.
2. Notes 10.2 – Stoichiometric Calculations – Booklet Problems.
Stoichiometry Worksheet
3. Notes 10.3 – Limiting Reactants – Booklet Problems.
Limiting Reactant Worksheet
Lab 10.1: Limiting Reactants

4. Notes 10.4 – Percent Yield – Booklet Problems.

Lab 10.2: Percent Yield

Stoichiometry Quiz

Unit 10 Review

Unit 10 Test and Booklet Check.

Spring Break

Unit 11 – Gas Laws – Chapter 13 of your book.

1. Notes 11.1 – Gas Laws – Booklet Problems.
2. Notes 11.2 – Ideal Gas Law – Booklet Problems.
3. Notes 11.3 – Gas Stoichiometry – Booklet Problems.

Lab 11.1: Popcorn Pressure

Unit 11 Review

Unit 11 Test and Booklet Check

Unit 12 – Solutions & Acids and Bases – Chapters 14 & 18 of your book.

1. Notes 12.1 – Types of Mixtures – Booklet Problems.
2. Notes 12.2 – Solution Concentration – Booklet Problems.

Lab 12.1: Solutions

3. Notes 12.3 – Intro to Acids and Bases – Booklet Problems.

Lab 12.2: Measuring pH with Litmus Paper

4. Notes 12.4 – Strengths of Acids – Booklet Problems.
5. Notes 12.5 – pH – Booklet Problems.

Lab 12.3: Salt Hydrolysis

6. Notes 12.6 – Neutralization – Booklet Problems.

Lab 12.4: Neutralization

Unit 12 Review

Unit 12 Test and Booklet Check.

Unit 13 – Redox Reactions and Electrochemistry – Chapters 19 & 20 of your book.

1. Notes 13.1 – Balancing Redox Reactions – Booklet Problems.
2. Notes 13.2 – Balancing Redox Reactions – Booklet Problems.

Lab 13.1: Pollution Lab

3. Notes 13.3 – Voltaic Cells – Booklet Problems.

Lab 13.2: Electrochemical Cells

4. Notes 13.4 – Batteries and Electrolysis – Booklet Problems.

Lab 13.3: Electroplating

Unit 13 Review

Unit 13 Quiz and Booklet Check.

Heading Down the Backstretch

- Spring Semester Test Preparation Questions.
- Spring Semester Review
- Spring Semester Final Exam