

## HONORS CHEMISTRY Introduction

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Chemistry is a comprehensive course offering to the student general background knowledge about the composition and structure of the physical world. The goal of chemistry is to instill in the student a curiosity about matter and its interaction; to initiate a lifetime of using an organized, evidence based problem solving approach; and to recognize the significance of chemistry to the understanding of all other sciences and its applications to everyday lives and real world situations. The chemistry curriculum is designed to develop the students reasoning and analytical skills. Experimental investigations are designed, analyzed, interpreted, applied, and communicated throughout the course.

### UNITS OF STUDY:

Fall Semester		Spring Semester	
Unit	Summary Statement	Unit	Summary Statement
Classification of Matter	SI Units, Dimensional Analysis, Chemical and Physical Properties/Changes	Kinetic Molecular Theory	Position, motion, and energy of particles in states of matter
Atomic Theory	Significant Scientists, Structure of Atom, subatomic particles	Bonding	Interaction of atoms to form complex structures
Periodicity	Periodic trends are observable and predictable patterns	Solutions	Investigate types, concentration, and solubility of homogeneous mixtures
Formula Writing	Write the chemical symbols and names of substances	Equilibrium	Describe factors that affect systems at equilibrium
Equations	Represent chemical changes in symbolic form	Acids and Bases	Differentiate between acids, bases, buffers, and salts based on their properties
The Mole	Introduction of the concept of the mole conversions and Avogadro's number	Titration	Practical application of acid/base reactions.
Stoichiometry	Calculate and measure quantitative relationships in chemical changes	Thermodynamics and Kinetics	Reactions in matter that involve changes in energy

### STUDENT OBJECTIVES: REQUIREMENTS AND GRADES

1. *Classwork / Lab* - Laboratory experiences are a major focus of this course. All students are expected to participate fully in these activities whether graded or non-graded.
2. *Homework / Written Assignments* - Assignments may be reading the text, answering questions, problem solving, or completing work begun in class. Work may introduce, reinforce or review concepts introduced in the classroom. Most homework assignments are due the day after assigned. Homework may be given for practice and/or grade.
3. *Tests* - Tests usually consist of a variety of multiple choice, short answer, BCR and problems.
4. *Quizzes* - Frequently throughout the semester short quizzes will be given. These quizzes may be unannounced and based on the homework from previous days.
5. Grades are calculated based on a weighted average: 50 % Tests, 25 % Quizzes, 20 % labs and 5 % Graded Homework and Homework Quizzes. (HW quizzes are not reassessable.)

### MATERIALS:

- TEXTBOOK- *Chemistry* - Prentice Hall – ISBN: 0-13-251210-6
- Loose-leaf paper, binder or folder and writing instruments
- Calculator –This calculator should be able to perform logarithmic functions, exponents, and square roots. (Any programmable calculator must be “Mem cleared” and checked by your teacher before use on tests or quiz. “Mem cleared” removes all games and functions from your calculator.) If you don't have a calculator one can be borrowed from the teacher.

## EXPECTATIONS:

### A. Classroom

- Participate in class in a scholarly manner. Ask *AND* answer questions.
- Be on time to class and ready to begin when the bell rings. If you have a pass, show it immediately upon entering class. If you don't show the pass, it tardy will remain unexcused.
- Personal needs should be taken care of either *before* or *after* class.
- A science laboratory is an inappropriate location for eating and drinking. All behaviors should be appropriate to the learning environment. Safety in the classroom and laboratory is a primary concern, any students who do not follow safety rules and precautions will not be permitted to complete the activity.
- Bring materials to class daily: textbook, notebook, calculator, pencils/pens. Students are not allowed to borrow one another's calculators during a test.
- Expect both announced and UNANNOUNCED quizzes. These will be based on previous classwork or homework. If you do your daily homework, there should be no real surprises in class.

### B. Assignments

- All assignments will be collected on the *due date*. All assignments turned in after the *due date* will be penalized 10%. No assignment will be accepted after the *deadline*. Assignments not completed by the deadline will be given a 0%.
  - ◆**Homework** -The due date and deadline for daily homework assignments are the same.
  - ◆**Other Assignments** –The deadline will be the day after the due date. Work must be turned in directly to the teacher. No work will be accepted in the teacher's mailbox, desktop, or other locations.
- Make Up for Lab Work- After an excused absence, a student should make arrangements *immediately* upon his/her return to school. Only students with an *excused* absence will receive credit for the laboratory or quiz/test. No consideration will be given for labs not made up within the allotted time.
- Science, by its nature, is often a cooperative endeavor in the laboratory as such we will be working in groups to perform the laboratory activities. It should be noted that lab reports are done individually. Students may consult lab partners about calculations but they are not permitted to copy any part of the partners lab report including data. ALL students must record the data at the time the lab is done. Lab reports and other analysis are to be *done as individuals* followed by consultation with the group to produce the best quality responses and eliminate careless errors. There will be no tolerance for copying answers in lab reports (or any other work.) There is a difference between working as a group to produce the best quality answers and copying one member of the group's answers. The policy for academic dishonesty and cheating is outlined in the agenda book and will be followed. Students should read and understand the policy and the consequences associated with these actions. Labs may also be checked by lab quizzes and are usually a summative part of unit tests.
- This is a course that requires you to build your understanding. Missed concepts will prevent students from developing the necessary background for a strong foundation. If the student is having difficulty, he/she should NOT WAIT for the test day to try to get help. Chemistry staff is available most lunches to offer help. The Honors Chemistry help schedule is posted outside room 222 and room 291.

## GRADING

- Grades will be determined on a 100% scale.
- Students who have not met their learning goals may have the opportunity to be reassessed if all homework leading up to the quiz has been completed. The reassessment may be in the same format or an alternative format. **Reassessment will be available for each quiz, however a student may only reassess up to 2 quizzes per quarter.**
- Reassessment must occur before the unit test.
- Students must complete all homework, labs, etc with legitimate effort in order to be eligible for reassessment.
- Unit tests, labs and homework quizzes will not be reassessed.