Honors Chemistry
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Course Description:
Welcome to Honors Chemistry. This course is intended for highly motivated science students with a strong work ethic and a solid math background. This one-year laboratory course is designed to introduce students to the general concepts and principles of modern chemistry. This course satisfies one year of the UC entrance requirements for laboratory sciences. The material covered is more than adequate to prepare you for further studies at the college level. Chemical awareness and laboratory safety are promoted throughout the year. Demonstrations and experiments are used to introduce a concept, which is reinforced through lecture, group work, and problem solving activities.

Units Covered:

Unit	Major Topics
1. Structure of Matter	Measurement, Atomic Nature, Radioactivity, Bohr Model
2. Periodic Table	Quantum Model, Electron Structure, Periodic Properties
3. Chemical Bonding	Bonding, Molecular Geometry, Organic Chemistry
4. States of Matter	Gases, Liquids, Solids, Solubility, Colligative Properties
5. Stoichiometry—General	Balanced Equations, Gravimetric Analysis
6. Stoichiometry—Aqueous	Volumetric Analysis, Precipitation Reactions, Acid-Base Reactions, Oxidation-Reduction Reactions
7. Electrochemistry	Oxidation-Reduction, Standard Potential, Voltaic Cell, Electrolytic Cell
8. Thermodynamics	Enthalpy and Entropy, Thermodynamic Analysis
9. Kinetics	Reaction Rate, Reaction Mechanism
10. Equilibrium—General	Equilibrium State, Le Chatelier's Principle
11. Equilibrium—Aqueous	Acid-Base Equilibrium, Buffer Systems, pH profile, Solubility Equilibrium, Solubility Factors

How to be Successful:

1. Cultivate outstanding study habits: complete reading material prior to lecture, work on problems concurrent with lecture, etc. View all assigned videos before class.
2. Listen during lectures, take accurate, thorough notes to focus your attention, and ask questions.
3. Participate during labs; know what you are doing and why.
4. Seek help during 7th period.
5. Organize study groups.
6. Don't try to memorize everything (this isn't Bio), try to understand the concepts.
7. Don't just fill in the correct answers on the practice problems and review guides to get credit. You're wasting your time.

Course Materials:

1. Students should keep an organized three-ring binder, which might include the following sections: Notes, Labs/Activities, Tests/Quizzes and Homework. **Finals are cumulative** and old tests, labs, worksheets, and notes are the best study guides. Please organize your notebook in a way that works for you.
2. The course text is "Chemistry, Matter and Change", 6th edition, Glencoe.
3. ALL STUDENTS WILL NEED TO PROVIDE THEIR OWN **SCIENTIFIC CALCULATOR**.
4. All students are required to have a Lab Notebook that can be purchased from the student store or use your notebook from biology.

Course Assessment/Grading:

Your semester grade will be determined using a weighted average, which means that each of the grading categories described below will represent a certain percentage of your final grade.

Homework:

I have never believed in busy work, so the homework that you are assigned is meant to reinforce what we are learning. Unfortunately, some students choose to copy each other's work; therefore, this category is worth only **10%**, this does not mean it is optional.

Labs:

Lab skills are a very important aspect of chemistry as it reinforces concepts learned in class. College style lab notebooks will be used. This category represents **10%** of grade.

Tests:

This category represents the largest portion of a student's grade, **40%**.

Quizzes:

This category will represent **20%** of the final grade. They will be based on the homework that is assigned, so another reason to complete the homework. Quizzes assess the students understanding of the material on a frequent basis.

Semester Final:

At the conclusion of each semester students will be given a cumulative test assessing their level of understanding of the previous material. This category is worth **20%**.

Grading structure:

A+ 97.0%	B+ 87.0%	C+ 77.0%	D+ 67.0%
A 94.0%	B 84.0%	C 74.0%	D 64.0%
A- 90.0%	B- 80.0%	C- 70.0%	D- 60.0%

Cheating

Copying with the intention of passing another's work off as your own is cheating. This includes copying homework, copying lab data, copying lab reports, and copying on tests and quizzes. You will receive a zero on the assignment, an academic dishonesty referral and a call home. Most importantly you will have lost my respect and will always have the eye of suspicion upon you.

Class Policies:

1. I don't award extra-credit points. If you want a good grade, strive to do well on the assigned work.
2. You should expect approximately 2-3 hours of homework every week. Much of your success depends on the amount of time and effort spent in preparation for this class.
3. Work missed due to an **unexcused** tardy, absence, or truancy may not be made up. Refer to the student handbook for specific information.
4. For an **excused** absence, it is your responsibility to come in on the off day and find out what you missed. Talk to me between classes, lunch or 7th period. "*I didn't know what the assignment was*" is not an excuse. Phone a friend, email, text, email me.
5. If you miss a test or a quiz **(excused absence only)** it is your responsibility to make the test up **on your own time**, usually during 7th period support time. Be responsible and don't miss class.
6. Each student will have two bathroom passes per semester. Once they have been used you're stuck in class.
7. **Absolutely no cell phones, ipods, or other electronic devices in class**. If I see it, or hear it, it's mine!!!
8. Students will cover the cost of all broken glassware.

Safety

Safety is a priority in Chemistry class. We work with chemicals, glassware, and equipment that can be dangerous. Goofing off in the lab will not be tolerated and is grounds for receiving a zero in the lab.

- Unsafe conduct in the laboratory may result in being removed from the laboratory, detention, receipt of a failing grade, and/or dismissal from the course.
- The student and their parent/guardian must sign a safety contract before working in the lab.