CHEMISTRY I – Honors 2025-2026
COMMON SYLLABUS

Teacher: Michelle Gray

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Ms. Gray's Fall Schedule:

- 1st Block: Chemistry CP
- 2nd Block: Planning
- 3rd Block: Chemistry Honors
- 4th Block: Chemistry CP

Course Description:

This introductory chemistry course is designed to help students explore the foundational principles of chemistry through hands-on lab investigations and real-world applications. Students will develop problem-solving skills while discovering the relationships that govern chemical behavior and reactions. Key topics include atomic structure, the periodic table, chemical bonding, chemical reactions, stoichiometry, energy changes and equilibrium.Honors students will also explore redox reactions, states of matter, solutions and gas laws. Emphasis will be placed on critical thinking, data analysis, and scientific communication throughout the course. Biology 1 is a prerequisite for this course.

Instructional Philosophy:

The 90 minute class periods are structured to maximize the learning experience for students by using a mix of activities to increase interest and diversify instruction. These activities include, but are not limited to, cooperative learning, project-based learning, lab exercises, inquiry experiments, student-led instruction, and teacher-led instruction. All students are required to participate in all activities and lab exercises. Students' individual strengths and weaknesses will be considered to optimize learning. Technology will be utilized, when applicable, to increase student achievement and enhance learning.

Textbook: Savvas: Experience Chemistry (e-book available through ClassLinks)

Student Supplies:

3-ring binder, paper, pencils, scientific calculator, charged chromebook, & wired earbuds

Learning Objectives:

These objectives are based on the South Carolina College and Career Ready Science Standards 2021, starting on page 198.

1. Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.
2. Explain simple chemical reactions based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.
3. Explain the structure, properties, and transformations of matter, as well as the contact forces between material objects due to the attraction and repulsion between electric charges.
4. Support the claim that atoms, and therefore mass, are conserved during a chemical reaction.
5. Provide evidence that the transfer of thermal energy when two components of different temperatures are combined within a closed system results in a more uniform energy distribution among the components in the system.
6. Illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.

Grading Policy:

- **Quarter Grade:** Determined by the weighted average of assessments during the quarter. The assessments are classified as a minor assessment or major assessment.
  - **Major Assessments: 60% total**
    Will include:
    - ***Unit Tests:*** Based on material, laboratory work, and literacy covered in each unit. Each test includes multiple choice and open-ended essay items.
    - ***Projects:*** Opportunities to show understanding of material in a non-test format
  - **Minor Assessments: 40% total**
    Will include
    - ***Lab Experiments***: Graded at teacher's discretion.
    - ***Classwork & Homework***: Graded at teacher's discretion.
    - ***Quizzes:*** Quizzes are normally based on the previous days' information and activities.

Final Course Grade: First Quarter Grade (45%), Second Quarter Grade (45%), Final Exam Grade (10%)

Late/Missing Work Policies:

Minor Grades (Homework and Classwork)

- A zero will be put in the gradebook as a placeholder until the assignment is completed and turned in.
- The teacher may deduct for lateness:
  - Up to 20 % for assignments turned in before the major assessment.
  - Up to 40 % for assignments turned in after the major assessment.
- All late work must be turned in before the date determined by the grading deadlines. (Ex. end of grading period)

Example: The assignment is due on March 8. The student turns in a completed assignment on March 11. The test is on March 15. The student could earn between 80 and 100 percent of the possible points.

Quizzes & Tests

- If a quiz or test is missing, a student is expected to make it up.
- A zero will be used as a placeholder until the quiz or test is completed.
- We will not take any percentage off for late quizzes and tests.
- Students may make up quizzes and tests until the end of the grading period (with enough time for teachers to grade before grades are due.)

Major Assessments (Not Tests)

- Teacher rubrics will include due dates and expectations for completion.
- The teacher may deduct for lateness:
  - Up to 20 % for projects turned in before the next major grade
  - Up to 30 % for projects turned in after the next major grade
- All late work must be turned in before the date determined by grading deadlines.

Remediation/Redo/Retake:

Remediation is ongoing throughout the unit as needed. There will be additional opportunities to show mastery at the mid-term and final exam.

Classroom Expectations:

- Come to class prepared and ready to learn - Try Your Best - Show respect for yourself and others - Follow all Lab Safety and WHHS policies

Recommended YouTube channels for extra help: Tyler DeWitt, Khan Academy, Crash Course, Brightstorm, Professor Dave Explains. ***It's Not Rocket Science*** (correlates with our notes taken in class and will be posted in Google Classroom).

GENERAL COURSE PACING GUIDE: ***Sections in bold are how the Honors course exceeds the outcomes of the grade level course***

Unit	Unit Name	Weeks	Month	Additional Assessments
0	Lab Safety and SEP Skills	1	August/January	Lab Safety Quiz
1	Atomic Structure & the Periodic Table	2	August/January	Flame Test Lab
2	Chemical Bonding & Compounds	2.5	August/January	Ionic vs. Covalent Lab
3	Chemical Reactions **including Redox**	1.5	September/February	Types of Reactions Lab Titration Lab
4	Stoichiometry **with percent yield**	1.5	September/February	Stoichiometry Lab
5	**States of Matter**	1.5	October/March	Hydrogen Gas Lab
6	**Solutions**	2	October/March	Molarity Lab
7	**Acids & Bases**	1	November/April	Titration Lab
8	Thermodynamics **and Kinetics**	2	November/April	Lab in a Bag
9	Nuclear with Light & Waves **with calculations**	2	December / May	Half Life Lab
N/A	Review and Final Exam	1	December / May	Final Exams

Syllabus is subject to change based on student pacing and teacher discretion.
Students will be notified of changes as the semester progresses.