

Welcome to Chemistry!

Chemistry I: 2019-2020

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Classroom: Room 418

Office: Room 418 A

Chem Lab: Room 418 L

Required Materials:

1. A large section in a 3-ring binder dedicated to chemistry. Bring this to class every day.
2. A scientific calculator* that can handle scientific notation, square roots, and exponents.

See me if you are not sure about your calculator. Bring your calculator to class every day.

*Note: **Graphing calculators will not be allowed on any tests or quizzes.** Non-graphing calculators will be available for students to check out during class on test/quiz days and on most other class days.

3. A textbook (*Modern Chemistry* by Sarquis and Sarquis, Houghton Mifflin Harcourt, 2017).

You will be told when you need to bring your textbook to class.

For online access, go to <https://my.hrw.com>.

Your username is your full 4j email address, and your password is your six digit student number.

Course Description:

Curriculum:

First trimester ("Chemistry A") topics will likely include chemical and physical change, atoms, ions, molecules, isotopes, significant figures, the periodic table, formula writing and naming, chemical reactions, percent composition, moles, stoichiometry, molarity, atomic models (history, evidence, and structure), electron configurations, periodic trends, and oxidation-reduction.

Second trimester ("Chemistry B") topics will likely include oxidation and reduction, ionic and covalent bonding, organic chemistry, solutions, intermolecular forces, energy, states and properties of matter, gas laws, kinetic molecular theory, reaction rates, acids and bases, and nuclear processes.

Both Chemistry A and Chemistry B will include lab work. Students will work with a variety of equipment including burets, pipets, graduated cylinders, beakers, Erlenmeyer flasks, volumetric flasks, test tubes, spot plates, crucibles, Bunsen burners, thermometers, temperature probes, pH probes, calorimeters, a digital balance, and a spectrophotometer.

Chemistry will help prepare students for further science classes at South, including Physics, Anatomy, Biology II(A), and Chemistry II (AP), or for a first year college chemistry course. Most students go on to take Physics for their next science course.

Skills: Students will be expected to demonstrate the following skills.

- Solve problems for each curriculum topic listed above.
- Explain concepts and answer conceptual questions related to each curriculum topic listed above.
- Translate quantitative or technical information into visual form (a table or a chart).
- Identify the appropriate lab equipment to collect specific types of data, and correctly use the equipment to collect and record qualitative and quantitative data.
- Use data from labs (collected by the student personally, or given to the student) to solve mathematical problems and answer conceptual questions.
- Identify patterns and correlations observed in data that is collected in lab or otherwise given, and express this information mathematically and in words.
- Answer concluding questions and write conclusion paragraphs to summarize lab data and to examine strengths and weaknesses in data collection methods and results.

Grading and Instruction:

Instruction methods will include lecture, lab, discussion, individual classroom work, group classroom work, homework and reading assignments, demonstrations, and videos. Assessments will include tests, quizzes, in-class work, homework assignments, and lab reports. Assignment due dates, lab dates, and test/quiz dates will be posted on the classroom chalkboard and on the course website.

Tests and quizzes (including the final exam) will account for 55% of the overall grade, daily homework assignments will account for 20%, and lab reports will account for 25%. Grades will be posted every couple of weeks in the classroom and on Synergy/Student Vue.

- A: 90.0 % and above
- B: 80.0 to 90.0 %
- C: 70.0 to 80.0%
- D: 60.0 to 70.0%
- F: Below 60.0%

Plus and minus grades may be given to students at the top or bottom of a grade range. +/- grades will appear on the permanent transcript at the end of the trimester, but they do not affect student GPA. Each trimester will have a cumulative final exam. The Chemistry B final exam will include material from both Chem A and Chem B, so save your notes and assignments! Under certain (rare) circumstances, a student may do a grade contract to change their final grade in chemistry A by improving their performance in chemistry B.

Late work policy:

All assignments are **due at the beginning of the period** unless otherwise noted. Some assignments will be checked off during class and some will be collected and graded more thoroughly. **Late check-off assignments will receive a zero. On collected assignments and lab reports, late work will be penalized at 20% per day.** *Appropriate modifications and accommodations will be made for students with identified special needs.*

Academic Honesty:

Any student found copying or otherwise cheating will receive a zero on the particular test or assignment. So will any student who allows another student to copy. Working together is fine, but make sure you put everything into your own words. Do all calculations on your own calculator, even if you have the same data as your lab partner. If cheating does occur, SEHS teachers will notify the administration and the student's counselor. Please be aware that all classroom rules still apply during make-up tests, for example, phones and electronic devices must be turned off and put away for the duration of the make-up test or quiz.

Study Skills:

Good study skills will help you to enjoy and succeed in chemistry. You should plan to spend an average of 30 to 45 minutes per night on this class. Besides keeping up on your assignments, you will need to pay close attention in class and will often need to take notes. **Check your answers** when we go over worksheets in class. If you get the wrong answer, **fix your work/answer** so that you can use the worksheet as a study guide. When you are doing a reading assignment, pay attention to the example problems in the text and try to work them yourself. **Keep all notes and assignments in your notebook.** We do a lot of worksheets in this class, many of which are better study guides than the book.

Studying for tests and quizzes: You will receive a study guide before each unit test (and for many of our quizzes), with a list of topics and/or practice problems, and a list of assignments that covered the test material. All tests will cover both concepts and problem solving. Tests will usually include some multiple choice, some short answer and/or explanations, and some problems. To study for problem solving, you need to do some practice problems! If the study guide has a problem section, work all of the problems (check your answers) at least a few days before the test, so you have time to come in to office hours if you need help. Go through your worksheets and try several problems on each worksheet, and make sure that you can do each type of problem **FROM BEGINNING TO END** without any help from the book or another person. (You can find all of the "blank" worksheets on the website, or just cover up your work). To study concepts, make sure that you can explain any concepts listed on the study guide (and/or come to office hours and talk through your explanation with me). If we do notes as part of a worksheet or for the entire lesson, see if you can explain all of the ideas and details, and define all the terms.

If you need extra help, **please come see me**. If you come to office hours, we can go at whatever pace you need. Often just a few minutes in office hours can get you back on track, especially if you come in when you are starting to struggle!

Behavior and Attendance:

You are expected to follow all South Eugene High School rules in this class. Additional safety rules will apply to lab situations and will be covered in class. **Cell phones need to be put away in the “cell hotel” during the entire class period. All other electronic devices (except calculators) must be turned off and put away out of sight.** If you need to leave the classroom during class, use the clipboard to sign out and sign back in to class. Above all, please be respectful of all people and materials in the classroom, and come to class prepared to learn. It is very important to me that all students feel comfortable to ask and respond to questions in class.

Good attendance is very important for success in chemistry! For planned excused absences, come see me in advance to see what you will miss, and to schedule make-up tests or labs. For unplanned absences, such as illness, see me the day you return. Students are allowed to make up tests, quizzes, and homework for excused absences only. In general, once you return from an absence or school sponsored activity, you will have as many days to make up the homework as the number of days that you were absent. Tests and quizzes must be made up within two school days of the absence.

Please be on time! Tardiness is rude and can be disruptive to the class. Students with three unexcused tardies will be assigned 1 hour of community service. If you are tardy to class, **bring your assignment to Ms Hocken as soon as you arrive**. If you are more than 10 minutes tardy, you will be counted as absent. Students with five or more unexcused absences may receive reduced credit for the term.

Lab Requirements:

Students must read and sign a chemistry safety contract before they are allowed in the laboratory. For some experiments, you will not be allowed to begin the lab until you have completed a lab ticket, and for others you may be allowed to begin the lab, but you will lose the points without the ticket. Completing pre-lab work is extremely important, not only for safety but also so that you understand the purpose of a lab when you are doing it. **Failure to follow safety rules or other instructions may result in a reduced lab score and/or removal from the chemistry lab.** If you damage any equipment in the lab, you will be charged the replacement cost of the equipment.

Students must participate in the lab procedure in order to earn full credit for the write-up. If you have not done the lab procedure, your lab score will automatically be reduced by 50%. Students with excused absences will have the opportunity to make up the procedure during the designated lab make-up times (usually after school or during lunch). In some cases, it is possible to make up the lab during a free period when another chemistry teacher’s class is doing the lab. You must make up the procedure within one week of the lab absence.

I look forward to another year of teaching chemistry! I hope you will enjoy learning chemistry as much as I enjoy teaching it. Please sign below to indicate that you have read this course description. Parents and students should receive an email from me by the end of next week with info about our first quiz. Thank you!

Student Signature

Parent/Guardian Signature

Date

Student Name (Printed)

Class period: _____

You will need to know the name and symbol for the following elements:

1-20, 22, 24-30, 33, 35-38, 47, 48, 50-56, 74, 78, 79, 80, 82, 83, 84, 86, 87, 88, 90, 92, 94

Spelling counts! So does capitalization. One-letter symbols are always capitalized. Two-letter symbols always start with a capital letter and end with a lowercase letter. For example, sodium (#11) is Na **not** NA and **not** na.

Any element quiz covers all elements that were previously assigned. All element quizzes will be at the very beginning of the class period and will only take a minute or two. Your **first element quiz** will be over elements **1-20 on Thursday, December 5th**.

