

CHEM 1C: General Chemistry**Syllabus**

Instructor: John Saunders, MS
 Email: saundersjohn@fhda.edu
 Office Hours: M/W 1³⁰-2³⁰pm & by appt online
 Office: Zoom PMI: 433 914 4512

Lecture:	Zoom	M/W	12:00-1:15pm	
Lab:	Zoom	M/W	2:30-3:30pm	46692
		M/W	4:00-5:00pm	46957

Pre-requisites:

CHEM 1B with a grade of C or better. EWRT 1A or ESL 5 recommended.

Course Description

This is the third and final quarter in the year long General Chemistry sequence. In this class, advanced equilibrium concepts pertaining to solubility and buffers will be discussed. This will be followed with an introduction to electrochemistry, the chemistry of transition metals, and nuclear chemistry.

Required Materials:

- Lecture Text: Silberberg, Amateis; *Chemistry: The Molecular Nature of Matter of Change*; 8th Ed. (earlier editions should be fine for content, but the problem numbers might not line up, there is also a free e-version through McGraw Hill Connect Homework)
- Connect through McGraw Hill: this is the online homework which is free and provides a free textbook online
- Lab Text: online PDFs via canvas
- Lab Notebook: any notebook is fine, **but you must have a specific section for lab work!**
- Calculator: scientific with log functions, not your cell phone
- Scanning Application on your phone (adobe scan is free and works well)

Attendance:

Lectures and Labs will be mandatory attendance. The times listed at the top of the syllabus are the set times you should be ready to be online via zoom and engaged in class. You have already agreed to this by signing up for my course, which means there should be no regularly missing lectures. I expect students to actively engage in our zoom meetings every day we have class. This is ensured by the randomly assigned breakout sessions 1-5 during lecture and group assignments during lab. You will be expected to speak and use your video the entire time on zoom so make sure you are presentable and engaged in the meeting. Any exceptions, please come talk to me ahead of time, or if there are any technical difficulties, we will work through ahead of time.

Failure to participate in zoom meeting will result in lowering of your final grade by at least a full letter grade. **You will be required to meet with me at least twice individually via zoom.** We will set up dates for this during the first lab section.

Class Conduct/Zoom Expectations

- Log into Zoom on time or early. (check canvas for the PMI)
- Do not disrupt class by talking with your microphone unmuted when not called on.

CHEM 1C: General Chemistry**Syllabus**

- Actively participate in zoom lectures and breakout sessions with instructor and fellow students
- Ask questions and be curious. Send questions in private if you feel the need, that's completely fine!
- Always use your real name as it appears on the roster, this way I can keep attendance when necessary.
- You are expected to be at each lecture and lab meeting. Please contact me with any issues that arise ahead of time. The quizzes and break out sessions will be unannounced to help track attendance.
- Use the nonverbals (raise hand, yes, no, slower, faster) to help communicate your needs with me without interrupting the flow of the class.
- Be prepared to talk on the microphone every class. This might mean you need to use your phone to dial in if your microphone doesn't work.
- If your internet is lagging, make sure to turn off the video.
- On the first day of class, you will need to have video on for a minute to introduce yourself.

Grades:

Your grade will be based on several parts and divided as shown to the right:

- **Lecture** – lecture will be interactive and mandatory to attend. They will be made up of several subparts: quizzes, break-out sessions, and exams

Lecture	550
HW	250
Lab	200
Total	1000

- Quizzes will be worth 100 points (*10% of your grade*) and will be given during lecture. They will be announced a few lectures ahead and given during lecture at random times. They act in part as an attendance check and a knowledge check. I will assign a problem and you will have 10 minutes to complete the problem ALONE and then upload a PDF of the work to canvas. The work should be done on a separate sheet of paper with the answer clearly highlighted and work neatly shown.
- Break-out Sessions will be worth 50 points (*5% of your grade*) and will be given during lecture at random times when you will be asked to break out with other students via canvas. These will be similar to group quizzes however it is based on material we have not fully covered, and you are being asked to work with others to solve or work through to your best ability some problem. You will have 10 minutes to complete and then upload a PDF of the work to canvas. The work should be done on a separate sheet of paper with the answer clearly highlighted and work neatly shown.
- Exams will be worth 400 points (*40% of your grade*) and will cover specific topics as outlined on the schedule below. However, chemistry always tends to build on previous knowledge, thus keeping up with old material will help you throughout the course. There will be three exams in total (2 midterms and 1 final) each worth 200 points. I will drop the lowest exam score. Each exam will be given via canvas where the file will be available at the start of lecture at which time you may download the file and begin the exam. You can either print it out or write on a clearly label new sheet of paper. BEFORE the end of the 1.25 hours exams time you must upload a PDF of you work to the assignment. Please, please only submit 1 file, this makes grading much quicker and easier for me to get your work back to you in a timely manner. Any late assignments will NOT be graded. If you have an issue with canvas at this time, you may email me the exam for a 10% deduction with the time stamp before the end of the exam. We will have a run through of this procedure beforehand to reduce any chance of user error.

CHEM 1C: General Chemistry**Syllabus**

To study for the exams, I would recommend completing all homework assignments, reviewing lecture notes in a study group, and then attempting the practice exams/problem sets on Canvas.

- **Homework** – outside of lecture, you will be expected to complete a number of assignments on your own including: homework assignments online via McGraw Hill Connect and a research paper
 - **Homework** will be worth 200 points (*20% of your grade*) and will be assigned through McGraw Hill Connect. This is a free service provided by the publishers of our book which is directly related to the 8th edition. You can find a connection through the canvas site to log in and will be given a code on the first day of classes to create a free account. DO NOT PAY FOR THIS SERVICE!
 - **Research Paper** on a famous chemist or chemical will be worth 50 points (*5% of your grade*) and outlined as follows:
 - 1) Identify a famous chemist in history. Someone not related to you and not at FHDA. Pick someone that made a major contribution to the world of chemistry. Or else identify a chemical that made a major contribution to the world (such as how the internal combustion engine revolutionized the automobile and travel industry). Try to pick someone or something relevant to our coursework.
 - 2) Gather information about this person: biographical (gender, ethnicity, sexual identity, family, etc.), area of research, your understanding of their work (in scientific terms based on what you have learned in this class), how did their work advance the field of chemistry, current and previous positions, their path to the current position, schooling (high school, undergraduate, graduate, post graduate), how do you relate to them, what do you find interesting about this person, famous publications, why are you inspired by this person, what challenges did they overcome, what are their interests outside their work, etc. In order to gather this information, you can do any of the following: a) search the internet b) contact the individual and request an in-person or phone interview (DO NOT SEND THEM AN EMAIL QUESTIONNAIRE) c) read what is written about them in other publications. (I recommend using google.scholar as a source for searching their publications)
 - 3) Write a paper that is a profile of this person. The paper should conform to the following specifications:
 - a) One-inch margins on all sides
 - b) 12 point font
 - c) 1.5 spaced
 - d) Minimum two pages and maximum three pages (single side)
 - e) Title your paper as: "Profile of XYZ by ABC"
 - f) Minimum 5 references
 - g) Bibliography (not included in page count)
 - h) Footnotes in ACS (American chemical society) style
 - 4) Have your person of interest approved by the instructor by 4/29/2020 (either via email or zoom (preferred)) You may not choose the same as another student so you should hurry to make sure that your person or chemical isn't already taken!

CHEM 1C: General Chemistry**Syllabus**

5) The final paper is due on 6/8/2020 before class starts at noon. You will submit your assignment on canvas.

- Lab – labs will be worth 200 points (*20% of your grade*). During lab hours, we will review relevant lab techniques and procedures in a variety of methods. You will be expected to be on Zoom with me during lab hours as outlined at the top of the syllabus based on CRN numbers. The remaining 2 hours of lab will be up to you to complete the assignments on your own time each week. However, I am happy to meet via zoom as a group or individually for questions or help.

Students with Disabilities

Students who are seeking support from the Disability Support Programs and Services (DSPS) should contact them directly at their office in LCW 110 or at (408) 864-8839 or via www.deanza.edu/dsps. De Anza College has the policy to accommodate all individuals regardless of disabilities, as such any students are welcome to come and speak with me privately regarding any accommodations necessary. They should email me directly and we can meet, please plan to bring your Accommodation Memo from the DSPS. Anything discussed will be kept in strict confidence and will not influence or affect your grade.

Academic Integrity

Academic integrity is a very serious thing. Cheating, copying, plagiarizing, or any form of using other person's work as your own is a serious offense. For more details about De Anza college's Academic Integrity policy go to <http://www.deanza.edu/studenthandbook/academic-integrity.html> to view. Any instance of academic dishonesty will not be tolerated and said students will not receive a passing grade in the course.

Since this course is now meeting remotely via Zoom, it will place the responsibility of being totally honest onto your shoulders, that is why I ask that you think twice before looking to cheat or take an easy way to finish an exam, quiz, or lab assignment. I believe every student wants to work hard and own their own work, please show me that I'm right.

How to Approach This Course:

This course will move fast covering a variety of topics. In general chemistry is best studied through repetition of practice problems and group discussion of theories. I recommend forming a study group as soon as you can and meeting regularly. A good idea for a study group is to come together with a plan of action for each session. For example, come to the group planning to review a practice exam or working on hard challenge problems that some people did not understand.

In order to do well in chemistry, I advise a variety of methods to study:

- Read ahead in the textbook
- Complete homework problems (first with help if need be, second without help)
- Complete lab assignments
- Flashcards and study group work to teach each other (the best way to see if you know something, is if you can teach it to someone else)

CHEM 1C: General Chemistry**Syllabus**

- Attend lecture actively
- Attend office hours with questions, talk to me!

Important Academic Calendar Dates:

April 13 th	First Day of Classes
April 25 th	Last Day to Add Classes
April 26 th	Last Day to Drop Classes with No Record Of “W” & Full Refund/Credit
June 5 th	Last Day to Drop with A “W”
June 22 nd – 26 th	Final Exams

Schedule (subject to change)						
#	Monday			Wednesday		
	Date	Lecture	Lab	Date	Lecture	Lab
1	4/6/20	Professional Development Week				
2	4/13/20	Ch 13	<u>Check-In</u>	4/15/20	Ch 13	Warm Up Exercises Lab
3	4/20/20	Ch 13	Enthalpy of Formation Lab	4/22/20	Ch 13/19	Enthalpy of Formation Lab
4	4/27/20	Ch 19	Face to Face # 1 (Research Paper Topics)	4/29/20	Ch 19	Exam 1 Review
5	5/4/20	Ch 19	Freezing Point Depression Lab	5/6/20	Exam 1 - Ch 13 & 19	Freezing Point Depression Lab
6	5/11/20	Ch 21		5/13/20	Ch 21	

CHEM 1C: General Chemistry**Syllabus**

			Buffers and Titrations Lab			Buffers and Titrations Lab
7	5/18/20	Ch 21	Face to Face # 2 (Lab Reports)	5/20/20	Ch 21	Buffers and Titrations Lab
8	5/25/20	<u>Holiday - No Class</u>		5/27/20	Ch 23	Electrochemical Lab
9	6/1/20	Ch 23	Electrochemical Lab	6/3/20	Ch 23	Exam 2 Review
10	6/8/20	Ch 23	Electrochemical Lab	6/10/20	Exam 2 - Ch 21 & 23	Electrochemical Project
11	6/15/20	Ch 24	Electrochemical Project	6/17/10	Ch 24	Exam 3 Review
Finals Week	6/24/20	Exam 3 – Cumulative (Wed 11:30-1:30pm)				

CHEM 1C: General Chemistry

Syllabus

Student Learning Outcome(s):

- *Apply the principles of equilibrium and thermodynamics to electrochemical systems.
- *Apply the principles of transition metal chemistry to predict outcomes of chemical reactions and physical properties.
- *Evaluate isotopic decay pathways.
- *Demonstrate a knowledge of intermolecular forces.