CHEM 25: Preparatory Course for General Chemistry Syllabus

Instructor: John Saunders, MS
Email: saundersjohn@fhda.edu
Office Hours: by appt
OH Link: smccd.zoom.us/j/4139444512
Appointment: calendly.com/saundersj

Lectures:	M/W	8^{30}-10^{20}am	Mandatory Zoom Meeting	22997 22998
Labs:	M W	11^{30}-2^{20}pm	Asynchronous	22997 22998

Pre-requisites:

MATH 114 or equivalent. EWRT 1A or ESL 5 recommended.

Course Description

An introduction to the core theory and problem-solving techniques of chemistry as preparation for CHEM 1A and other science related fields. An introduction to gravimetric and volumetric analysis, rudimentary laboratory equipment and operations, and the preparation and maintenance of a laboratory notebook.

Student Learning Outcomes:

1. Asses the fundamental concepts of modern atomic and molecular theory.
2. Evaluate the standard classes of chemical reactions.
3. Demonstrate a fundamental understanding of mathematical concepts pertaining to chemical experimentation and calculations.

Required Materials:

- Textbook: Tro, N.A.; *Introductory Chemistry,* 6th Ed. (earlier editions should be fine for content, or use online readings) [NOTE: this is OPTIONAL and not the recommended text per the school]
- Chem101 – online platform for taking exams, doing homework, and practice
- Lab Manual: online via canvas
- Calculator: Scientific calculator (with log functions)
- Scanning App: Adobe Scan App – used for converting pictures to PDFs (any free app will do)
- Internet: stable connection during synchronous zoom meetings

Attendance

Lecture times are set per myportal and are synchronous zoom meetings. Look at Canvas for the links to the zoom meetings and make sure to show up! During lectures we will spend time reviewing material and preparing for exams, but the chapter videos and notes will be posted on canvas ahead of time. This means you are expected to watch the videos, take notes, and process the material prior to coming to class. Make sure to watch them thoroughly and then have questions to ask during zoom class. I will take some time to quickly review the notes, but this is not meant to be the first time you are learning the material.

Lab times are asynchronous times, meaning we are NOT meeting for the lab times. You will be expected to use this time to study and conduct the experiments on your own. However, all labs will be reviewed during

lecture times before you begin the experiment/lab activity. Make sure to preview all lab work before coming to lecture to understand what will be asked about that material.

Zoom Expectations

- Log into Zoom on time or early to sit in the waiting room. The login information is posted on Canvas under the "Zoom Meeting" tab on the Welcome Page.
- Be on zoom during the synchronous meeting times and make sure to be actively participating and paying attention. Zoom meetings may be recorded, but not posted so you should pay attention to what is discussed. TAKE NOTES ON WHAT I SAY IN CASE YOU FORGET WHAT IS MENTIONED!
- Keep your microphone muted until you are ready to speak or have been called on. Except during exams, where the microphones will stay unmuted the entire time, otherwise this constitutes cheating.
- Have your video turned on during meetings. If you don't have your video on, you will be considered absent from class and could miss the chance to receive credit for attending. Discuss with your professor if there are any special accommodations that might be needed.
- Always use your real name as it appears on the roster, this way I can keep attendance when necessary.
- Use the nonverbals (raise hand, yes, no, slower, faster) to help communicate your needs with me without interrupting the flow of the class.

Grades:

DISCLAIMER: I will NOT assign letter grades until the end of the term; I then create my own grading scale based on the distribution of percentages in the course. An example of a previous term is shown to the right. My goal in this course is to challenge you and develop your critical thinking. The level of difficulty will demonstrate that and test you, but the grades are meant to show your level of effort & understanding in the course. Again, DO NOT ASSUME GRADES DURING THE COURSE!

Letter Grade	A	B	C	D	F
Standard Scale	90-100	80-89.9	70-79.9	60-69.9	<60
An Old Scale	88-100	74-87.9	64-73.9	54-63.9	<54

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

Discussion	20
HW	150
Problem Sets	100
Lab	250
Exams	480
Total	**1000**

- Discussions (2%) – there will be several discussions on canvas to complete. Each will be associated with a different chapter material and require you to share with other students and interact with their posts. I encourage you to use this as an opportunity to chat with other students and be curious about the material.
- Homework (15%) – the homework will be given through chem101 and will be due 2 weeks after the material is released on canvas, at midnight (11:59pm) on that Sunday. Make sure to complete the homework early as it will give you a good idea of material that might show up on exams. The homework is selected to help you focus on key problems for each chapter and to help you understand the material through practice. If you need extensions or more trials on the homework, please reach out to me!
- Problem Sets (10%) – there will be a problem set for different exams. They are posted on chem101 and will be available 1 week prior to the exam and close at the start of the exam. You are welcome and encouraged to solve these in study groups but be careful not to split up the work. In a group you should discuss the problem

and ways to potentially solve it. Brainstorm the problem, don't let 1 student solve it. I'm also happy to help talk through any tough problems during reviews/office hours. A good thing to note is that problem sets tend to be harder than homework/exam questions you might see, but the goal is to practice critical thinking.

- Lab (25%) – the lab assignments will be a variety of assignments, and everything will be submitted through canvas. Everything will be posted on the Laboratory Information page on canvas under the Welcome module. Make sure to review all the assignments there. Lab assignments will be due 1 week from the day they are conducted/discussed in class and the dates should be reflected on canvas. Late lab assignments will be accepted for a 10%/day penalty, so make sure to submit early in case you have questions or trouble with the lab.
- Exams (48%) – each exam will cover different material with the exceptions of the final exam which is cumulative. In order to pass the course, you must complete all exams and have a passing score on the final itself. The schedule below lists the dates of the exams, make sure you are available for all exams and let me know prior to the start of classes if there is a conflict. Otherwise, you are expected to appear at all exams during the listed times. Exams will take place during synchronous hours of the course. Make sure to show up early on exams days to be prepared for any last-minute information or technology issues. You may also be required to submit your work for the exam so make sure to clearly show work if needed on a problem and be prepared to submit a PDF of that work within a 10-minute window of the end of the exam.

  As chemistry always tends to build on previous knowledge, keeping up with old material will help you throughout the course. To study for the exams, I would recommend completing all homework assignments, reviewing lecture notes in a study group, and completing the problem sets on chem101. If you find that you need extra practice material for a certain section or chapter look at the end of chapter problems in the text and there are usually some sorted by section to practice with answers in the back of the text.

Students Seeking Accommodations

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 on zoom, the burden of proof of lack of cheating almost rests on the students. So during exams, please make sure to clearly show all work and do everything in your power to show you did not use outside sources or chat with others during the exam. This means that you must NOT use google, discord, or

anything chat related during exams. If there is anything fishy during an exam or any work that looks like an outside source, it will be viewed as cheating and will receive a zero on the assignment.

How to Approach Chemistry and This Course

Learning chemistry is like learning a new language. It required a lot of practice and use of the specific language. Which means that one of your best tools will be talking out loud about the material and speaking in chemistry terms when applicable. Working in a study group will definitely help, so I would recommend forming a group of 3-4 students to review notes, ask questions, help with the setup of homework problems, and to teach each other. That's one of the keys towards learning material in general, by teaching and helping others understand, you yourself will have to understand the material even more. The actual process of attempting to explain new material helps you understand it better. 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) always review the materials in the chapter if you are struggling with the homework problem before looking up the answer online
- 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)
- Teach each other
- Rewrite your notes and organize them for yourself

As for a general advice towards approaching online courses, COME TO OFFICE HOURS or SCHEDULE AN APPOINTMENT WITH THE PROF@! Seriously, it helps to come and speak one on one with the professor and ask questions about the material as you are learning it. Curiosity will help you learn by trying to think about the material from all angles. So even though the lecture videos are posted, come to office hours with questions about specific material to dive deeper or seek a new explanation of everything. Also make sure you are spending an appropriate amount of time studying. It should be about 2-3 hours outside of lecture per 1 hour of lecture time, that's time studying, NOT doing homework or labs. That time should be spread out throughout the week, making sure to not spend more than 1 day away from the material, otherwise you start to lose the material from your brain. This means you immerse yourself in the subject regularly so that you are understanding it, rather than just memorizing material (which doesn't work for chemistry). Last minute cramming does not allow for adequate learning, nor does it help your stress level! This is good practice for future college courses and life experiences.

Important Academic Calendar Dates

September 20th	First Day of Classes
October 2nd	Last Day to Add Classes
October 3rd	Last Day to Drop Classes with No Record Of "W"
November 12th	Last Day to Drop with a "W"
December 6th – 10th	Final Exam

CHEM 25: Preparatory Course for General Chemistry Syllabus

Schedule:

CHEM 25 Schedule (subject to change) CRN 22997/22998					
Week #	**Date**	**Monday**	**Date**	**Wed**	**Lab**
1	**9/20**	Intro	**9/22**	Ch 1	Exp 1
2	**9/27**	Ch 2/3	**9/29**	Ch 4	Exp 2
3	**10/4**	***Exam 1 Review***	**10/6**	***Exam 1 (Ch 1-3)***	Exp 3
4	**10/11**	Ch 9	**10/13**	Ch 10	Exp 4
5	**10/18**	***Exam 2 Review***	**10/20**	***Exam 2 (Ch 4, 9, 10)***	Exp 5
6	**10/25**	Ch 5	**10/27**	Ch 6	Exp 6
7	**11/1**	Ch 7	**11/3**	Ch 8	Exp 7
8	**11/8**	***Exam 3 Review***	**11/10**	***Exam 3 (Ch 5-8)***	Exp 8
9	**11/15**	Ch 11	**11/17**	Ch 12	Exp 9
10	**11/22**	Ch 13	**11/24**	Ch 14	Exp 10
11	**11/29**	***Exam 4 Review***	**12/1**	***Exam 4 (Ch 11-14)***	Exp 11
Finals Week	**12/6**	***Exam 5 (Ch 1-14) Wednesday 7-9am***			

Student Learning Outcome(s):

*Assess the fundamental concepts of modern atomic and molecular theory.
*Evaluate the standard classes of chemical reactions.
*Demonstrate a fundamental understanding of mathematical concepts pertaining to chemical experimentation and calculations.