

## CHEM 1C Syllabus

**Instructor:** Dr. Sergey Ulyanov

**Email:** [ulyanovsergey@fhda.edu](mailto:ulyanovsergey@fhda.edu)

**Office Hours:** Before or after lab and lecture

Course		Room	Days	Time
Lecture	CHEM D001C.11	MLS103	Mo, We	3:30 PM - 04:15 PM
	CHEM D001C.12			
Lab	CHEM D001C.11	SC2208		08:30 PM - 11:20 PM

### PREREQUISITES:

Chemistry 1B with a grade of C or better.

### REQUIRED MATERIALS:

- **Textbook:** Introductory Chemistry, 7th edition by Nivaldo J. Tro (Pearson: 2023, ISBN13: 9780138198411 (available on Pearson.com)
- **Lab Manual:** Preparation for General Chemistry by Ram Subramaniam (McGraw-Hill Create; ISBN 9781307817706 available at the De Anza bookstore only) or on [Amazon](#).
- **Computer** with Internet access
- **Scientific calculator** - Ensure you can work with scientific notation (e.g., EXP, EE, log, and ln).
- **Safety goggles.** They are required during lab experiment sessions. The college provides them. However, if you want to own a personal pair, they are available in the [campus bookstore](#) or on [Amazon](#).

### CHEM 1C FALL 2025 COURSE DESCRIPTION:

- **Lecture:** This is the third quarter of a three-quarter sequence that covers various aspects of the reactivity of aqueous solutions. Topics include the application of equilibrium to explore colligative properties, such as boiling point elevation and freezing point depression; buffer solutions that resist pH changes due to small amounts of acid or base; solubility and the formation of precipitates, including the calculation of solubility through equilibrium constants; and electrochemistry. The course will also address the fundamentals of nuclear structure and radioactive decay, provide an overview of the chemical and physical properties of the main group elements, and offer a brief introduction to the structure of organic molecules.
- **Laboratory:** To complement the lectures, laboratory experiments will introduce essential techniques used in general chemistry, with a strong emphasis on qualitative analysis. Key experiments include measuring the effects of freezing point depression, observing the common-ion effect through gravimetric analysis, measuring voltage in an electrochemical cell, forming transition metal complexes, and identifying unknown ions through a qualitative analysis scheme.
- **Grades:** No artificial grading curve will be applied; final grades will be based solely on the total number of points earned. Final grades will be assigned according to a plus/minus grading scale. A minimum grade of **"C"** is required to pass this course.
- **Final Curve:** While we expect all students to perform their best, we understand that unforeseen circumstances can impact performance on individual assessments. Therefore, the lowest score from Homework, Lab, and Exam will be dropped. However, the score for the final lecture exam will not be dropped.

**Please note:** At De Anza College, an “A+” grade is considered excellent and is worth 4.0 points. However, according to the California Education Code, grades cannot exceed 4.0 in GPA calculations. As a result, even if you receive an “A+” in this class, it will be recorded as an “A” on your transcript and will not have any additional impact on your GPA.

Point distribution	
Task	Pts
Lab Reports	20%
Homework	20%
3 Exams	30%
Final Exam	30%
TOTAL:	100%

Grade scale			
Grade	%	Grade	%
A+	100	C+	73 – 76
A	90 – 99	C	70 – 72
A–	87 – 89	D+	66 – 69
B+	84 – 86	D	63 – 65
B	80 – 83	D–	60 – 62
B–	77 – 79	F	0 – 59

#### GRADING POLICIES:

To pass the course, you must take the **Final Exam**. If you miss the Final Exam, you will not receive a passing grade for the course. Please note that there are no make-up exams available for the final. To ensure fairness for all students, advance or make-up exams will not be offered. A grade of “**F**” will also be assigned for cheating or disruptive behavior during lectures or labs. Incomplete “**I**” grades may be awarded only for extenuating circumstances, such as verified illness or legitimate emergencies. At the end of the term, a mark of “**I**” (Incomplete) will be given when academic work is unfinished due to unforeseeable, emergency, and justifiable reasons. Students may qualify for an **Incomplete** only after at **least 75%** of the course duration has passed. If an Incomplete is granted, all exams and lab work completed before the Incomplete will still factor into your grade; only the material not yet completed can be made up later. You must also be passing the course to receive an Incomplete grade.

#### CANVAS COURSE WEBSITE:

Course materials will be available on Canvas, including lecture notes, blank lab exercises, and other relevant resources. Grades will also be updated on this platform throughout the quarter. Announcements and notifications will be communicated via Canvas; please check it daily.

#### ATTENDANCE:

Attendance is mandatory for all laboratory sessions, and participation in lectures is highly encouraged. There are no opportunities for make-up sessions, nor can you attend other sections. If you miss a lab, you must discuss the matter with the instructor (refer to the Late Work Policy). The first and second unexcused missed labs will result in a score of zero. If you miss a third unexcused lab, you will fail the course.

WEEK	DATE	LECTURES	MONDAY
1	1/5/26	INTRODUCTION AND CH-14: SOLUTIONS AND COLLOIDS	CHECK-IN
	1/7/26	CH-14: SOLUTIONS AND COLLOIDS	pKa OF INDICATOR (1)
2	1/12/26	CH-14: SOLUTIONS AND COLLOIDS	pKa OF INDICATOR (2)
	1/14/26	CH-18: AQUEOUS IONIC EQUILIBRIUM	BUFFERS (1)
3	1/19/26	MARTIN LUTHER KING	NO CLASSES
	1/21/26	CH-18: AQUEOUS IONIC EQUILIBRIUM	BUFFERS (2)
4	1/26/26	CH-18: AQUEOUS IONIC EQUILIBRIUM	FREEZING POINT (1)
	1/28/26	REVIEW FOR EXAM 1	FREEZING POINT (2)
5	2/2/26	EXAM 1: CH-14 AND 18	K <sub>sp</sub> & COMMON ION EFFECT (1)
	2/4/26	CH-20: ELECTROCHEMISTRY	K <sub>sp</sub> & COMMON ION EFFECT (2)
6	2/9/26	CH-20: ELECTROCHEMISTRY	ANIONS (1)
	2/11/26	CH-20: ELECTROCHEMISTRY	ANIONS (2)
7	2/16/26	PRESIDENTS DAY	NO CLASSES
	2/18/26	REVIEW FOR EXAM 2	ELECTROCHEMISTRY (1)
8	2/23/26	EXAM 2: CH-20	ELECTROCHEMISTRY (2) *
	2/25/26	CH-21: NUCLEAR CHEMISTRY	CATIONS (1)
9	3/2/26	CH-21: NUCLEAR CHEMISTRY	CATIONS (2)
	3/4/26	CH-21: NUCLEAR CHEMISTRY	CATIONS (3)
10	3/9/26	CH-26: TRANSITION METALS	CATIONS (4)
	3/11/26	REVIEW FOR EXAM 3	CATIONS (5) *
11	3/16/26	EXAM 3: CH-21 & 26	CHECK OUT
	3/18/26	REVIEW FOR FINAL EXAM	CHECK OUT
12	3/23/26	FINAL EXAM	
* EXTRA DAY			

**LATE WORK POLICY:**

In this course, late submissions will only be accepted under qualifying circumstances and must be accompanied by prior notification and supporting documentation (such as an original funeral notice or doctor's note). If supporting documents are not provided, the score for the late assignment will be reduced by **15% for each day it is late**.

**IMPORTANT DATES:**

January 5th	Fall classes begin
January 18th	Last day to <a href="#">add 12-week classes</a>
January 18th	Last day to <a href="#">drop classes</a> without a W
January 19th	Martin Luther King – no classes; offices closed
February 13 - 16th	Presidents' Holiday – no classes; offices closed
February 27th	Last day to <a href="#">drop classes</a> with a W
March 23rd	<a href="#">Final exams</a>

**WITHDRAWAL POLICY:**

It is your responsibility to withdraw from this course if necessary. If you stop participating and do not formally withdraw by the deadline, you may receive a grade of "F".

**ADD/DROP POLICY:**

Due to safety regulations for the chemistry labs, enrollment in each general chemistry section is strictly limited to 30 students, with no exceptions. Students on the waitlist may attend the lecture until the add deadline passes in an attempt to enroll in the course, but they cannot participate in the wet labs (the first two labs are dry labs). It is essential for students on the waitlist to actively seek a spot in the class. Please note that any student who does not attend all classes and labs during the first week will be required by contract to be dropped from the course, unless you inform me in writing of your absence and provide the relevant documentation for an excusable absence.

**DISABILITY SERVICE SUPPORT:**

De Anza is committed to providing support for all students. Please get in touch with DRC as soon as possible if you require special accommodations. For more information, visit Disability Service Support at [Disability Support Programs and Services](#).

**ACADEMIC INTEGRITY:**

By enrolling in classes at De Anza College, you agree to abide by the academic integrity policy and adhere to all standards set forth. For more information on [Academic Integrity](#), please visit the college's website. In this course, any form of cheating during exams or using work that is not your own for assignments will result in a score of zero for the entire assignment, regardless of how much of the work was original. Additionally, I am required to report such incidents to the disciplinary committee, which will record it on your transcript. This record can be viewed by four-year colleges when you apply for transfer.

**ACADEMIC HONESTY:**

When you log into Canvas, you acknowledge and agree to produce your own work, complete class assignments and discussions independently, and take exams, tests, or quizzes without assistance. All academic work must come from your thoughts, research, or self-expression. Academic misconduct includes, but is not limited to, the following:

**Types of Academic Dishonesty:**

- **Sharing Access or Passwords to Canvas:** Keep your username and password confidential.
- **Cheating:** Obtaining, attempting to obtain, or aiding another to get credit for work by dishonest or deceptive means.
- **Plagiarism:** Using the words or ideas of the original creator without attribution as if they were your own. Plagiarism ranges from copying someone else's work verbatim to elaborating on or altering someone else's work.
- **Self-Plagiarism:** Submitting or reusing parts of a previous paper without referencing the source to which it was first submitted. This includes retaking a course and turning in previously submitted documents and data.
- **Unacceptable Collaboration:** Using answers, solutions, or ideas that result from collaboration without citing the fact of the partnership.
- **Falsification of Data:** Making up or falsifying information and data. Examples include making up or altering data for an experiment or citing references to sources you did not use.
- **Pay/Outsourcing Services:** Employing an assignment writing service or having another person, student, or artificial intelligence (AI) program write the paper for you.
- **Enabling:** Aiding and abetting another student in an act of academic dishonesty. Examples include giving someone a paper to copy and/or allowing someone to access your account.
- **Unauthorized or Malicious Interference:** Deliberately interfering with the work or activities of another person on purpose to cause the other harm or irreparable damage.
- **Inappropriate Use of Course Materials:** Distributing materials in this class and on Canvas, including the syllabus, exams, slides, handouts, study aids, and presentations that may be protected by copyright and are provided solely for the educational use of students enrolled in this course. You are not permitted to redistribute them for purposes unapproved by the instructor; in particular, you are not permitted to post course materials, quiz or exam questions, or discussions on commercial websites. Unauthorized use of course materials may be considered academic misconduct.

**DISABILITY SERVICE SUPPORT:**

De Anza is committed to providing support for all students. Please contact DRC as soon as possible if you require special accommodations. For more information, visit Disability Service Support at [Disability Support Programs and Services](#).

**ELECTRONIC SOURCES:**

Students may use cell phones, tablets, computers, and other electronic devices during lectures and labs, provided that no assessments are taking place and their use does not disrupt the class. Specifically, cell phone conversations are not permitted during class, and all cell phones must remain silent. Electronic devices may not be used during assessments, except for approved, dedicated calculators, unless you have verified academic accommodations.

**LABORATORY PROCEDURES:**

All students are expected to arrive at the lab on time and come prepared to conduct the experiment scheduled for that session. This preparation includes studying the experiment in advance, understanding its purpose and procedure, being familiar with the relevant chemistry, and having prepared your laboratory notebook beforehand. Please follow these procedures for each experiment: (Complete steps 1-3 before arriving at the lab; perform steps 4-8 during the lab.)

**Lab Preparation Guidelines:**

1. **Read the Lab Manual:** Understand the principles and procedures outlined in the manual.
2. **Complete a Prelab:** Fill out a prelab section in your notebook.
3. **Submit Your Notebook:** Prepare your notebook for submission on Canvas. Check the due time on Canvas!
4. **Attend the Lab Introduction: Ensure you** attend the lab introduction at the start of the lab period. Feel free to take notes during the lab discussions.
5. **Perform the Procedure:** Follow the instructions carefully.
6. **Clean Up Thoroughly:** Be conscientious about cleaning up your work area and any shared spaces, such as the chemical supply table and balance room.
7. **Instructor Signature:** Before leaving the lab, have the instructor sign your notebook and the report data pages.
8. **Finish Your Report:** Complete your report at home. It should be written on blank pages that you print out. Remember to answer any follow-up questions and perform necessary calculations.
9. **Write a Conclusion:** Include a conclusion section in your report.
10. **Submit Your Report:** Submit your completed report and the data pages with the instructor's signature by the due date.

**DRESS CODE FOR THE LAB:**

- **A T-shirt** is the minimum coverage required for the upper body and
- **Long pants** are mandatory.
- **Shoes** must cover the entire foot.
- **Shirt and t-shirt** must extend at least 6 inches below the top of the pants.
- **Ankles** must be covered by pants, socks, or shoes (consider bringing an extra pair of long socks with you).
- **Safety splash goggles** are required.

**Important Note:** Failure to meet these dress code requirements will result in being unable to participate in the lab until the issues are resolved.

**LAB SAFETY:**

Safety in the lab is a top priority. We will emphasize safety during the first day of class. Students who are absent from this crucial session will be dropped from the course. As an important first assignment, all students must read, sign, and complete the safety contract by the deadline, along with the safety quiz. Throughout the quarter, any unsafe behavior, whether intentional or unintentional, will be noted and may result in dismissal from the course. **Safety goggles** must be worn **AT ALL TIMES** as long as any student is conducting lab work with chemicals present on the lab bench. Students will receive one or two warnings for wearing their goggles incorrectly, such as on their forehead or around their neck, instead of over their eyes. If these warnings are ignored, points may be deducted, or expulsion from the lab may occur, resulting in zero credit for that session. Students with prescription glasses must wear safety goggles over their prescription glasses. If you have any questions about safety after obtaining your certificate in Canvas, please don't hesitate to ask me.

**CHEMICAL DISPOSAL:**

Proper disposal of chemicals is crucial for protecting the environment, and it is essential to comply with county, state, and federal regulations. At De Anza, students are required to dispose of waste in the designated waste bottles prepared by their own instructors. Be sure to check the **label for your instructor's name** and the contents of the waste bottle. If you have any questions, please consult your instructor for guidance.

**CLEANUP:**

After completing your experiment, it is important to clean up your lab area and return all equipment to its designated storage locations. If you spill any chemicals in the reagent area, clean it up immediately and place them in the appropriate waste bottle. Neglecting to clean up will result in a lower lab performance grade. In the event of a large reagent spill, please notify your instructor for assistance with cleanup.

**CHECK-OUT:**

Check-out will take place during the last lab session. If students drop the course, they must check out during their regular laboratory section meeting with the lab instructor or attend the lab check-out session.

**TARDINESS:**

Students must arrive on time at the lab to receive full credit. You will be considered tardy if you arrive more than 5 minutes late. Each instance of tardiness will result in a 10% deduction from your lab notebook preparation score. If you are more than 15 minutes late, you will not be permitted to participate in the experiment that day and will be marked absent.

**FACULTY RESPONSE:**

Class emails will be answered within **24 to 36 hours**. If you have questions regarding any assignments or exams, please submit them before the due date. After the semester has ended, you may contact the faculty member using the instructor's De Anza email address, but please do so only for urgent matters. Email should not be used for office hours; instead, it should be used for inquiries about absences or scheduling.

**CHANGES TO THE SYLLABUS:**

The instructor reserves the right to modify the class syllabus. The syllabus serves as a guide, and every effort will be made to provide an accurate overview of the class. However, unforeseen circumstances may necessitate modifications. If any changes are made, students will be notified via class email, the discussion board, and/or the announcements tool.

**DIVERSITY STATEMENT:**

As an Instructor, I value human diversity in my classes, which can be expressed through various aspects, including race, ethnicity, culture, political and social views, religious and spiritual beliefs, language, geographic characteristics, gender, gender identities, sexual orientations, learning and physical abilities, age, and social or economic class. I am committed to respecting the individuality and unique perspectives of each student in this class. Students are encouraged to share their views as individuals, rather than as representatives of any particular group. I believe that multicultural and intercultural awareness, as well as the competencies that accompany them, are essential leadership skills. Therefore, I aim to present materials and classroom activities that respect and celebrate the diversity of thought, background, and experience. A key aspect of your collegiate education is to challenge assumptions and explore new, sometimes difficult perspectives on various issues. If any student feels uncomfortable with the content or perspectives presented by me, guest speakers, or fellow students, I encourage them to contact me immediately to discuss their feelings. I am committed to using each student's preferred language, so if their preferred name (or its pronunciation) differs from what we are using, I ask that each student inform me of their preferred gender pronouns. Additionally, I welcome and encourage student suggestions on how to meaningfully incorporate diversity into my course.

**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.

**Office Hours:**

M,W 8:30 AM - 9:30 AM

SC2208

M,W 8:30 AM - 9:30 AM

SC2208