

Course Syllabus

Course Overview - Chemistry 1C - Summer Session 2 - 2023

When Do The Classes Meet?

- The course is 5 weeks from July 31 to Sep 1.
- All lectures are prerecorded and can be found on Canvas under Assignments (each lecture has a 6-question multiple choice quiz in it).
- Note that these lectures were made in the summer of 2020 so there are some references to the pandemic. Check the notes in the textbox above each video for updates on erroneous or misleading information in the videos.
- There are 4 discussion sections led by the TAs in the course and 1 problem solving session led by the instructor. These are not required but are highly recommended since the course moves at a fast pace and many of the homework problems are difficult. This is the weekly schedule starting Monday July 31 and ending Friday September 1.

Section Day/Time	TA/Instructor	Zoom Link
Monday 3:00-4:00 PM	Yasaman Bolandi	https://ucsc.zoom.us/j/5149352284? pwd=R1VyVlhqbXBiSziWcVBML2hnbRnRpUT09  (https://ucsc.zoom.us/j/5149352284? pwd=R1VyVlhqbXBiSziWcVBML2hnbRnRpUT09)
Tuesday 3:00-4:00 PM	Yasaman Bolandi	https://ucsc.zoom.us/j/5149352284? pwd=R1VyVlhqbXBiSziWcVBML2hnbRnRpUT09  (https://ucsc.zoom.us/j/5149352284? pwd=R1VyVlhqbXBiSziWcVBML2hnbRnRpUT09)
Wednesday 2:00-3:00 PM	Riley Ball	https://ucsc.zoom.us/j/98457308498? pwd=VVQreE1tanBsSGUwb3JZbzJ6V3ppdz09  (https://ucsc.zoom.us/j/98457308498? pwd=VVQreE1tanBsSGUwb3JZbzJ6V3ppdz09)
Thursday 2:00-4:00 PM	Peter Weiss	https://ucsc.zoom.us/j/9775776872? pwd=dmR4M1VOMG10QUxON3dYNm1mdzFkUT09  (https://ucsc.zoom.us/j/9775776872? pwd=dmR4M1VOMG10QUxON3dYNm1mdzFkUT09)
Friday 2:00-3:00 PM	Riley Ball	https://ucsc.zoom.us/j/98457308498? pwd=VVQreE1tanBsSGUwb3JZbzJ6V3ppdz09  (https://ucsc.zoom.us/j/98457308498? pwd=VVQreE1tanBsSGUwb3JZbzJ6V3ppdz09)

What is Covered

- This course covers thermodynamics (the 1st, 2nd, and 3rd laws), electrochemistry, the nature of pure substances, properties of solutions, and nuclear chemistry.
- In our textbook, Zumdahl and Decoste, 8th ed., we cover chapters 9, 10, 11, 16, 17, and 20. The textbook is available with your Cengage Web Assign subscription. Go to the Register for WebAssign for the First Time and purchase Cengage Unlimite

What Students Will Do

- Read the assigned pages in the textbook. These are specified on the pages called "Topics Covered" for each week on Modules.
- Watch the prerecorded video lectures and complete the associated video quizzes by their due dates. The lectures and quizzes are found under "Assignments".
- Complete the homework assignments found under "Assignments".
- Review the lecture slides found in modules.
- Work extra problems found in modules.
- Attend problem-solving session with Dr. Weiss.
- Attend TA-led discussion sections
- Log into Canvas regularly, our web portal for the course.
- Post homework problem-specific questions to WebAssign Messages (Ask Your Teacher).
- Complete 6 end-of-chapter problem homework assignments.
- Take 6 60-min quizzes, one after each chapter, lowest score dropped
- Take 1 3-hr final exam, cumulative.

General Learning Outcomes

- Recognize how energy flow controls the outcome of a chemical reaction.
- Develop a quantitative understanding of why a reaction goes forward or backward or not at all.
- Utilize electrochemical potentials to predict reaction outcomes.
- Analyze the forces attracting molecules to one another.
- Know the microscopic structures of pure solids, liquids, and gases.
- Predict outcomes of the solution processes by knowing the physical properties of solutions.
- Solve problems involving nuclear decay processes and mass to energy conversions.

Required Materials

- Cengage Web Assign Subscription, which includes access to our textbook *Chemical Principles*, 8th edition, by Zumdahl and Decoste.
- You should also have a hand-held scientific calculator but an online calculator will also do.

Graded Elements of the Course

- **End of Chapter Problems (Homework) (25% of your grade):** Given on WebAssign, these problems are from the end of each chapter we are covering (6 problem sets total). 5 tries per problem. Focus on quantitative problems. Use the Ask Your Teacher message platform for questions.
- **Video Quizzes (25% of your grade, lowest score dropped):** These questions will be available at the completion of video segments. They will focus mostly on the conceptual aspects of the material. 2-tries for each video quiz. Note that Yuja does not provide the correct answer after the quiz. The key for each week's video quizzes is posted to Canvas after the due date.
- **Chapter Quizzes (25% of your grade, best 5 out of 6):** There are 6 quizzes on Web Assign (one for each chapter), with the lowest score dropped. These are timed tests (60 min) that can be accessed during a 3-day window. The questions are mostly quantitative.
- **Final Exam (25% of your grade):** This test will be cumulative of the course and will be given on Web Assign. It is a 3-hour test that can be accessed during a 2-day window.
- The Chapter Quizzes and the Final Exam are open-book, open-note, open-internet. However, you must work independently (no asking anyone for help) and cannot post material to Chegg or similar sites. Abuse of the honor system will not be tolerated and penalties are severe. See the page on Academic Integrity for more information
- Late Policy: Assignments may be turned in late and each case will be examined by the instructor. Request an extension for the homework, quizzes, and exams on WebAssign Messages. The video quizzes require no instructor-granted extensions. Credit may or may not be granted for late work, it depends on the circumstances.

Time Budget for this Course

For this course, estimates of workload (per week) are:

- Reading the textbook – 2 hours
- Watching the lecture videos – 5 hours
- Completing the video quizzes – 2 hours
- Completing the end of chapter problems – 4 hours
- Attending problem solving sessions on Zoom or watching on Webcast – 5 hours
- Reviewing and studying for the quizzes and final exam – 3 hours

Letter grade equivalent of percentage score:

- A+: 96.50-100
- A: 92.50-96.49
- A-: 89.50-92.49
- B+: 85.50-89.49
- B: 81.50-85.49
- B-: 76.50-81.49
- C+: 71.50-76.49
- C: 59.50-71.49
- D: 54.50-59.49

The Teaching Team

Instructor

- Dr. Peter Weiss – Continuing Lecturer
 - [pweiss@ucsc.edu \(mailto:pweiss@ucsc.edu\)](mailto:pweiss@ucsc.edu)
 - (831) 459-1616
 - Research website: [https://fognet.ucsc.edu \(https://fognet.ucsc.edu\)](https://fognet.ucsc.edu)

TAs

- Riley Ball [rpbball@ucsc.edu \(mailto:rpbball@ucsc.edu\)](mailto:rpbball@ucsc.edu)
- Seyedeh Yasaman Bolandi [sbolandi@ucsc.edu \(mailto:sbolandi@ucsc.edu\)](mailto:sbolandi@ucsc.edu)

Small Group Tutoring

- Linus Bangert
[cbangert@ucsc.edu \(mailto:cbangert@ucsc.edu\)](mailto:cbangert@ucsc.edu)

Statement on Title IX:

- The university cherishes the free and open exchange of ideas and enlargement of knowledge. To maintain this freedom and openness requires objectivity, mutual trust, and confidence; it requires the absence of coercion, intimidation, or exploitation. The principal responsibility for maintaining these conditions must rest upon those members of the university community who exercise most authority and leadership: faculty, managers, and supervisors. The university has therefore instituted a number of measures designed to protect its community from sex discrimination, sexual harassment, sexual violence, and other related prohibited conduct. Information about the Title IX Office, the online reporting link, applicable campus resources, reporting responsibilities, the UC Policy on Sexual Violence and Sexual Harassment and the UC Santa Cruz Procedures for Reporting and Responding to Reports of Sexual Violence and Sexual Harassment can be found at titleix.ucsc.edu. The Title IX/Sexual Harassment Office is located at 105 Kerr Hall. In addition to the online reporting option, you can contact the Title IX Office by calling 831-459-2462.






Statement on Academic Integrity















- General Statements: Academic integrity is the cornerstone of a university education. The opposite of academic integrity is academic dishonesty, and this is a bad thing. Academic dishonesty diminishes the university as an institution and all members of the university community. It tarnishes the value of a UCSC degree. All members of the UCSC community have an explicit responsibility to foster an environment of trust, honesty, fairness, respect, and responsibility. All members of the university community are expected to present as their original work only that which is truly their own. All members of the community are expected to report observed instances of cheating, plagiarism, and















other forms of academic dishonesty in order to ensure that the integrity of scholarship is valued and preserved at UCSC. In the event a student is found in violation of the UCSC Academic Integrity policy, he or she may face both academic sanctions imposed by the instructor of record and disciplinary sanctions imposed either by the provost of his or her college or the Academic Tribunal convened to hear the case. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript. For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the Academic Integrity page at the Division of Undergraduate Education.





- Statements specific to Chem 1C: You are encouraged to work with your peers on the Homework and the Video Quizzes, whether that is in section, ACE, MSI, small-group tutoring, or a group that you form on your own. However, a good rule of thumb is that whatever you type into a box or whatever button or drop-down you select, that choice must have come from you and not from someone else telling you what to do. **For the quizzes and exams, you absolutely must work alone and you are prohibited to get input from any other individual, whether that is a tutor, friend, or another student.** You are prohibited from posting quiz and exam questions to Chegg.com or other similar sites that will work out the answers for you. While the instructors may not be able to proctor your every online action during a test, just remember that your fellow students may be seeing your online activity and they are likely to report you since these types of actions (posting to Chegg) give you an unfair advantage. In this class all reports of academic misconduct are acted upon, which means opening an investigation through your college provost. If you have any questions about what is and what is not considered academic misconduct, do not hesitate to ask the instructor of the course.

Course Summary:

Date	Details	Due
Fri Aug 4, 2023	 Introduction to Web Assign (https://canvas.ucsc.edu/courses/63976/assignments/472391)	due by 11:59pm
Sun Aug 6, 2023	 Homework 1 (https://canvas.ucsc.edu/courses/63976/assignments/472380)	due by 11:59pm
	 Quiz 1 (https://canvas.ucsc.edu/courses/63976/assignments/472378)	due by 11:59pm
	  Course Introduction and Practice Video Quiz (https://canvas.ucsc.edu/courses/63976/assignments/470309)	due by 11:59pm

Date	Details	Due
	 Video Quiz Lecture 1 https://canvas.ucsc.edu/courses/63976/assignments/470311	due by 11:59pm
	 Video Quiz Lecture 2 https://canvas.ucsc.edu/courses/63976/assignments/470322	due by 11:59pm
	 Video Quiz Lecture 3 https://canvas.ucsc.edu/courses/63976/assignments/470324	due by 11:59pm
	 Video Quiz Lecture 4 https://canvas.ucsc.edu/courses/63976/assignments/470325	due by 11:59pm
	 Homework 2 https://canvas.ucsc.edu/courses/63976/assignments/472381	due by 11:59pm
	 Quiz 2 https://canvas.ucsc.edu/courses/63976/assignments/472385	due by 11:59pm
	 Video Quiz Lecture 5 https://canvas.ucsc.edu/courses/63976/assignments/470326	due by 11:59pm
Sun Aug 13, 2023	 Video Quiz Lecture 6 https://canvas.ucsc.edu/courses/63976/assignments/470327	due by 11:59pm
	 Video Quiz Lecture 7 https://canvas.ucsc.edu/courses/63976/assignments/470328	due by 11:59pm
	 Video Quiz Lecture 8 https://canvas.ucsc.edu/courses/63976/assignments/470329	due by 11:59pm
	 Video Quiz Lecture 9 https://canvas.ucsc.edu/courses/63976/assignments/470330	due by 11:59pm
	Sun Aug 20, 2023	 Homework 3 https://canvas.ucsc.edu/courses/63976/assignments/472382
 Quiz 3 https://canvas.ucsc.edu/courses/63976/assignments/472387		due by 11:59pm
 Video Quiz Lecture 10 https://canvas.ucsc.edu/courses/63976/assignments/470312		due by 11:59pm

Date	Details	Due
	 Video Quiz Lecture 11 https://canvas.ucsc.edu/courses/63976/assignments/470313	due by 11:59pm
	 Video Quiz Lecture 12 https://canvas.ucsc.edu/courses/63976/assignments/470314	due by 11:59pm
	 Homework 4 https://canvas.ucsc.edu/courses/63976/assignments/472383	due by 11:59pm
	 Quiz 4 https://canvas.ucsc.edu/courses/63976/assignments/472388	due by 11:59pm
Sun Aug 27, 2023	 Video Quiz Lecture 13 https://canvas.ucsc.edu/courses/63976/assignments/470315	due by 11:59pm
	 Video Quiz Lecture 14 https://canvas.ucsc.edu/courses/63976/assignments/470316	due by 11:59pm
	 Video Quiz Lecture 15 https://canvas.ucsc.edu/courses/63976/assignments/470317	due by 11:59pm
Fri Sep 1, 2023	 Final Exam https://canvas.ucsc.edu/courses/63976/assignments/472386	due by 11:59pm
	 Homework 5 https://canvas.ucsc.edu/courses/63976/assignments/472384	due by 11:59pm
	 Homework 6 https://canvas.ucsc.edu/courses/63976/assignments/472379	due by 11:59pm
	 Quiz 5 https://canvas.ucsc.edu/courses/63976/assignments/472389	due by 11:59pm
	 Quiz 6 https://canvas.ucsc.edu/courses/63976/assignments/472390	due by 11:59pm
	 Video Quiz Lecture 16 https://canvas.ucsc.edu/courses/63976/assignments/470318	due by 11:59pm
	 Video Quiz Lecture 17 https://canvas.ucsc.edu/courses/63976/assignments/470319	due by 11:59pm

Date	Details	Due
	 Video Quiz Lecture 18 (https://canvas.ucsc.edu/courses/63976/assignments/470320)	due by 11:59pm
	 Video Quiz Lecture 19 (https://canvas.ucsc.edu/courses/63976/assignments/470321)	due by 11:59pm
	 Video Quiz Lecture 20 (https://canvas.ucsc.edu/courses/63976/assignments/470323)	due by 11:59pm
	 Syllabus Acknowledgement (New Quiz) (https://canvas.ucsc.edu/courses/63976/assignments/441610)	