

College of Southern Nevada
CHM 122 – 4001 - General Chemistry II
Grading Policy (Syllabus), Spring 2025

This course is taught through the Physical Science Department at the College of Southern Nevada (CSN). For more information about the department, visit the college's website: <https://www.csn.edu>.

Course Description

CHEM 122 is the second course in a two-semester general chemistry sequence for science and pre-professional majors, covering fundamental principles, laws, and theories of chemistry, including the properties and reactions of metals and nonmetals, correlated to their electronic structure. Includes a separate lab component see CHEM 122 L. Prerequisite is satisfactory completion of CHEM 121, please check the college handbook for more information.

Instructor:	Dr. Drake
Office:	Henderson Campus, Building H-317T
Email:	Please use Canvas or the contact form on elementsulfur.com

Office hours

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9 – 10 AM	Meetings Or Off Campus	Meetings Or Off Campus	Chem 122 Laboratory 9:00 AM	Chem 121 Laboratory 9:00 AM	Meetings Or Off Campus
10 – 11 AM					
11 AM – 12 PM					
12 – 1 PM	Chem 122 Lecture 12:30 PM	Chem 121 Lecture 12:30 PM	Chem 122 Lecture 12:30 PM	Chem 121 Lecture 12:30 PM	
1 – 2 PM	Office Hours 2 – 4 PM H Building Room 317 T	Chem 121 Laboratory 2:30 PM	Office Hours 2 – 4 PM H Building Room 317 T	Office Hours 2 – 4 PM H Building Room 317 T	
2 – 3 PM					
3 – 4 PM	Meetings Or Off Campus	CHEM 103 Lecture	Meetings Or Off Campus	Meetings	
4 – 5 PM					
5 – 6 PM					
6 – 7 PM					
7 – 8 PM				CHEM 103 Lecture	

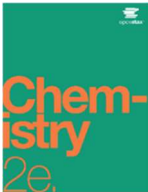

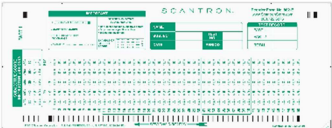

Course Format

This course meets on campus twice a week (M, W at 12:30 PM) for 1 hour and 20 minutes. Attendance is and participation in all aspects of the course, including lectures and lab, is expected for success. Class sessions will include lectures, while assigned homework, class project, and exams will assess students' comprehension of chemical concepts. Students are expected to read each chapter before it is covered in lecture to prepare for the course. Success in this class requires a strong work ethic, including individual study (reading and homework), active participation in class, and a proactive approach to learning, such as asking questions and helping peers understand the material.

The instructor reserves the right to change the contents of this syllabus with proper notification on Canvas.

Required Course Materials

Please refer to this document in lieu of any items listed in the bookstore. There are four required items for lecture in addition to standard college materials (e.g. paper, pencil/pen etc...). Prices are based on CSN Bookstore prices, cost can vary based on where you shop. Price does not include taxes and other incidentals.

Textbook: (Free)	 <p>This course will use Chemistry: 2e a free, openly licensed textbook from OpenStax and can be downloaded for free at https://openstax.org/details/books/chemistry-2e. Assigned course reading will be selected from this textbook. Please see schedule to identify readings. Any additional instructor materials will be posted to the Canvas course shell.</p>
Calculator: (\$13.99)	 <p>A non-programmable scientific calculator. I have provided my favorite calculator the (TI-30xa) and the one I will use in class. You cannot use your cell phone, smart technology, or graphing/programming (alpha numeric) calculator during any examination. This is to condition you in preparation for the ACS final you will take at the end of the semester.</p>
Scantrons: (\$1.84)	 <p>You will need to bring four scantrons over the course of the semester for your regular exams this semester. For your final I will provide a special answer form call a par score form courtesy of the department.</p>
Technology & Internet Access (\$45.00)	 <p>The course requires the completion of online homework. The student should have either mobile or computer access to complete their aktiv chemistry assignment. To purchase access please refer to coursework section to this syllabus.</p>
Laboratory*: (\$4-9)	<p>Please see your respective lab instructor for their required course materials. <u>ONLY IF YOU HAVE ME</u> will you need to purchase a composition book, 7-1/2" x 9-3/4", Quad Ruled, 100 Sheets. No substitutes. You can also find this at Office Depot for about \$6.00.</p>

Attendance

College enrollment assumes maturity, seriousness of purpose and self-discipline for meeting the responsibilities associated with the courses for which a student registers. Students are expected to attend each meeting of every course for which they have registered. Attendance is essential for normal progress in a college course. Under no circumstances will an absence, for any reason, excuse a student from completing assigned work in a given course. After an absence, it is the student's responsibility to check with the instructor about the possibility on completion of missed assignments. (Note: logging into the course remotely does not qualify as participation and will not be counted as meeting the attendance requirement.)

There may be unannounced extra credit assignments in class so please make every effort to show up.

Withdrawal (dropping)

Simply not showing up will not withdraw (drop) you from the course as the student must initiate this process. You may withdraw from the course typically up to the twelfth week. Please check the CSN for calendar drop deadline information and about how to withdrawal (drop) from the course.

Course Learning Outcomes

Upon the completion of this course students should demonstrate:

Chapter 12 – Kinetics

1. Explain how reaction rates represent changes in reactant or product amounts over time.
2. Identify factors like surface area, temperature, concentration, and catalysts that affect reaction rates.
3. Define rate laws and describe their relationship to reactant concentration and reaction order.
4. Use integrated rate laws to determine how concentrations change over time and calculate half-lives.
5. Compare zero-, first-, and second-order half-lives based on their dependence on concentration.
6. Apply collision theory and the Arrhenius equation to explain how molecular collisions affect reaction rates.
7. Define reaction mechanisms and explain the role of the rate-determining step in overall rate laws.
8. Evaluate reaction mechanisms by comparing experimental and theoretical rate laws.
9. Differentiate between homogeneous and heterogeneous catalysts and their effects on activation energy.

Chapter 14 – Acid-Base Equilibria

1. Define Brønsted-Lowry acids and bases and describe their conjugate pairs.
2. Explain the autoionization of water and the significance of the ion product constant, K_w .
3. Use pH and pOH to classify solutions as acidic, basic, or neutral.
4. Relate the strength of acids and bases to their ionization constants.
5. Compare conjugate acid-base pairs and describe their relative strengths.
6. Explain how salts hydrolyze in water to form acidic or basic solutions.
7. Describe the stepwise ionization of polyprotic acids and their decreasing ionization constants.
8. Define buffers and explain their function in resisting pH changes.
9. Explain how buffer capacity is influenced by the amounts of weak acid and base.
10. Analyze acid-base titration curves to determine equivalence points and choose indicators.

Chapter 16 – Thermodynamics

1. Differentiate between spontaneous and nonspontaneous processes based on energy input requirements.
2. Describe spontaneity in terms of the natural tendency of processes to occur under certain conditions.
3. Define entropy (S) as a measure of matter and energy dispersal within a system.
4. Predict changes in entropy for various physical and chemical processes using phase and complexity.
5. Relate entropy changes to temperature, reversible heat, and the number of microstates in a system.
6. State and apply the second law of thermodynamics to determine the spontaneity of a process.
7. Explain the third law of thermodynamics and its implication for entropy at absolute zero.
8. Calculate standard entropy changes (ΔS°) for a process using tabulated entropy values.
9. Define Gibbs free energy (G) and explain its role in predicting spontaneity.
10. Determine spontaneity, no spontaneity, or equilibrium using ΔG values.

Chapter 13 – Fundamental Equilibrium Concepts

1. Describe equilibrium as the state where forward and reverse reactions occur at equal rates.
2. Explain equilibrium as a dynamic process with constant reactant and product amounts.
3. Define the reaction quotient (Q) and equilibrium constant (K).
4. Differentiate between homogeneous and heterogeneous equilibria.
5. Predict equilibrium shifts using Le Châtelier's principle.
6. Explain how catalysts affect equilibrium rates without changing K.
7. Use ICE tables to calculate equilibrium concentrations.
8. Calculate K from equilibrium concentrations or partial pressures.
9. Relate the magnitude of K to reaction favorability.
10. Solve problems to determine reaction direction and equilibrium state.

Chapter 15 – Equilibria of Other Reaction Classes

1. Define the solubility product constant (K_{sp}) and its relationship to equilibrium in precipitation and dissolution reactions.
2. Write and interpret K_{sp} expressions for slightly soluble ionic compounds.
3. Calculate the solubility of a compound from its K_{sp} and vice versa.
4. Predict when a precipitate will form using the reaction quotient (Q) and compare it to K_{sp} .
5. Define Lewis acids and bases and describe their interactions in forming complex ions.
6. Explain the roles of ligands and metal ions in forming Lewis's acid-base adducts.
7. Relate the formation and dissociation constants to equilibrium processes involving complex ions.
8. Identify and describe coupled equilibria that involve dissolution and neutralization.
9. Analyze how ligand presence affects the solubility of ionic compounds.
10. Apply equilibrium concepts to solve problems involving coupled equilibria.

Chapter 17 – Electrochemistry

1. Define redox reactions in terms of changes in oxidation numbers and electron transfer.
2. Use the half-reaction method to balance redox equations involving aqueous species.
3. Describe galvanic cells and their components, including anode, cathode, and salt bridge.
4. Interpret cell notation and represent galvanic cell construction using chemical symbols.
5. Calculate standard cell potentials (E°_{cell}) using tabulated standard electrode potentials.
6. Relate cell potential to free energy and equilibrium constant for redox processes.
7. Use the Nernst equation to determine cell potential under nonstandard conditions.
8. Explain the operation and applications of batteries and fuel cells.
9. Describe the process of corrosion and methods to prevent it, such as galvanization and cathodic protection.
10. Explain electrolysis and its applications in refining, chemical production, and electroplating.

Chapter 18 – Representative Metals, Metalloids, and Nonmetals

1. Explain the periodic trends and reactivity of representative elements, including alkali and alkaline earth metals.
2. Describe the occurrence and preparation methods for representative metals, including electrolysis and chemical reduction.
3. Identify the structural and general properties of metalloids and their behavior as semiconductors.
4. Compare the structural and chemical properties of nonmetals and their oxides.
5. Discuss the unique chemical behavior and reactivity of hydrogen, including its ionic and covalent compounds.
6. Explain the preparation, decomposition, and uses of carbonates and hydrogen carbonates.
7. Describe the occurrence, preparation, and reactivity of nitrogen and its compounds.
8. Explain the chemical properties, oxidation states, and preparation methods for phosphorus and its acids.
9. Summarize the occurrence, preparation, and reactivity of oxygen and its compounds, including oxides, peroxides, and hydroxides.
10. Describe the chemical properties, reactivity, and applications of sulfur, halogens, and noble gases.

Chapter 21 – Nuclear Chemistry

1. Describe the structure of atomic nuclei and explain nuclear stability using binding energy and mass defect.
2. Identify stable and unstable nuclides using the band of stability and concepts of magic numbers.
3. Write and balance nuclear equations for reactions involving particles such as protons, neutrons, and alpha or beta particles.
4. Explain radioactive decay processes, including alpha, beta, gamma emission, positron emission, and electron capture.
5. Apply first-order kinetics to calculate half-lives and decay rates for radioactive substances.
6. Describe transmutation reactions and the production of artificial elements.
7. Explain nuclear fission and fusion processes and their applications in power generation and weapons.
8. List practical uses of radioisotopes in medicine, industry, and research.
9. Describe the biological effects of ionizing radiation and its impact on living organisms.
10. Identify methods for detecting and minimizing radiation exposure, including shielding and monitoring.

Chapter 20 –Organic Chemistry

1. Describe hydrocarbons as organic compounds made of carbon and hydrogen, and differentiate between alkanes, alkenes, alkynes, and aromatic hydrocarbons.
2. Explain the structure and bonding in saturated and unsaturated hydrocarbons, including double and triple bonds.
3. Define hydrocarbon derivatives as compounds formed by replacing hydrogen atoms with functional groups.
4. Identify alcohols and ethers by their functional groups (-OH and -R-O-R-) and describe their properties.
5. Describe the carbonyl functional group and differentiate between aldehydes, ketones, carboxylic acids, and esters.
6. Explain how the properties of aldehydes, ketones, carboxylic acids, and esters are influenced by their functional groups.
7. Identify amines and amides as nitrogen-containing compounds and distinguish their structural differences.
8. Explain the basicity of amines and the reactions that form amides through condensation.
9. Relate the oxidation states of carbon atoms in alcohols, aldehydes, ketones, carboxylic acids, and esters.
10. Recognize the importance of functional groups in determining the properties and reactivity of organic molecules.

Handout – The Chemistry of the Environment

1. Describe the structure and composition of Earth's atmosphere, including temperature variations and major components.
2. Calculate gas concentrations in parts per million (ppm) and relate them to environmental impacts.
3. Explain photodissociation and photoionization and their roles in atmospheric processes.
4. Analyze the effects of ozone in filtering solar radiation and the impact of chlorofluorocarbons (CFCs) on ozone depletion.
5. Explain the origins, behavior, and environmental impacts of sulfur oxides, nitrogen oxides, acid rain, and photochemical smog.
6. Describe the greenhouse effect and the roles of water and carbon dioxide in regulating Earth's atmospheric temperature.
7. Summarize the global water cycle and its significance in maintaining natural systems.
8. Explain the salinity of water, methods like reverse osmosis for desalination, and their importance in water quality.
9. Outline key steps in water treatment for domestic use and the relationship between dissolved oxygen and water quality.
10. Define the principles of green chemistry and compare reactions to evaluate their environmental sustainability.

Grading

I round all grades to the nearest whole percentage using the rounding rules taught in CHEM 121.

Final Letter Grades	Item	Points each	Number of items	Subtotal
A: 900–1000 points (90–100%)	Exams	100	4	400
B: 800–899 points (80–89%)	Laboratory	250	1	250
C: 700–799 points (70–79%)	Final	150	1	150
D: 600–699 points (60–69%)	Project	150	1	150
F: Below 600 points (Below 60%)	Homework	25	4	100
			Total	1000

Coursework:

A. Exams

a. Progress Exams

Progress exams are a critical component of this course, designed to evaluate your understanding and application of the material. There will be four progress exams to monitor your performance at key points during the semester, contributing significantly to your final grade. Each progress exam will consist of 24 required questions: 20 multiple-choice questions worth 4 points each, and 4 calculation-based or long-form questions worth 5 points each. Only the calculation/long-form questions are eligible for partial credit. Extra credit can be earned on the exam; for more information, please see the extra credit section.

b. Final Exam

The final exam is cumulative and is a standardized ACS exam. It will consist of 50-70 questions depending on the exam year provided. All questions are multiple choice. We will be providing a Parscore® answer sheet along with scrap paper as you CANNOT write on the exam. Points will be deducted if you do. You will need a number 2 pencil and a non-graphing calculator. You will be given additional time beyond a normal lecture to complete. Specific will be provide as the final approaches. The exam will start at the normal time at the date provided your course calendar. It cannot be taken at an alternative time or date because the course will have officially ended at that point. The date of the final exam is provided well in advance to ensure you can plan accordingly. To prepare for the exam you may purchase an official study guide at the following address:

<https://acsexamsinstitute.com/>

B. Laboratory

The laboratory component is an essential part of this course, providing hands-on experience to reinforce and expand your understanding of key concepts. The laboratory is worth 250 points, contributing 25% of your overall grade, and includes assessments such as quizzes and laboratory reports.

For specific details about laboratory assignments, schedules, and expectations, please consult your laboratory instructor directly. If you are in my section, additional information about the laboratory can be found at elementsulfur.com. Since the Canvas shell is managed at the department level, any edits I make would apply to all 121L sections. Using my website allows me to share information directly with you in a more efficient manner.

C. Finals

Information about the final exam has been thoroughly covered in Section A: Exams. Please refer to that section for details regarding the structure, policies, and importance of the final exam.

D. Infographic project

As part of this course, students will complete an infographic assignment designed to enhance their understanding of key chemistry concepts while developing skills in scientific communication. Each student will create a visually engaging and scientifically accurate infographic on a specific topic related to the course material. The assignment will require students to conduct research, synthesize information, and present three real-world applications of their chosen topic in a clear and compelling format. Infographics must include appropriate visuals, concise explanations, and proper citations in ACS format. In addition to submitting their work, students will deliver a 3-5-minute in-class presentation to explain their infographic to their peers. This assignment emphasizes creativity, critical thinking, and the ability to communicate complex ideas to a broader audience. Key real-world skills. Detailed instructions, including deadlines and assessment criteria, will be provided in class.

E. Online Homework Policy – Aktiv Chemistry

This course uses the Aktiv Chemistry platform for online homework assignments. Aktiv Chemistry provides an interactive environment to help you practice and master course concepts. Access to the platform requires a subscription, which must be purchased directly through Aktiv Chemistry's website. A 14-day grace period is available to ensure immediate access at the start of the course.

To Purchase Access for Aktiv Chemistry:

1. **Visit the Website:** Go to aktiv.com/login and create a new account or log in if you're a returning user.
2. **Verify Your Email:** Check your inbox for a verification email and confirm your account.
3. **Join the Course:** On your account page, click "Join Course" and enter the course code (available on Canvas).
4. **Activate Your Course:** Use the payment grace period to explore the course, then click "Activate Now" to purchase access online or redeem a code from the bookstore.
5. **Download the App:** Get the Aktiv Learning app from the App Store or Google Play Store and log in with your credentials.
6. **Start Learning:** Begin completing the activities assigned by your instructor.

For help, contact Aktiv support at support@aktiv.com or call **646-798-5323** during business hours.

The goal of online homework is to give you practice with the material. While you may consult resources for guidance, copying answers from external sources, such as solution-sharing platforms (e.g., Chegg) or AI tools (e.g., ChatGPT), is a violation of academic integrity which is an expellable offence and will leave you unprepared for exams. Cheating not only undermines your learning but can also leave you unprepared for quizzes, exams, and future coursework.

Homework assignments are an essential part of your grade and are designed to reinforce material covered in class. Homework assignments are listed in the course schedule, and selected problems will be graded for credit. Each set of chapter assignments is due on the exam date for those chapters. For example, homework for chapters 1–3 is due as a packet on the day of Exam 1. Late submissions are heavily penalized.

If you have concerns about accessing or using Aktiv Chemistry, or if you encounter challenges with the material, please contact me for assistance. My goal is to help you succeed while maintaining fairness and integrity for all students.

- F. **Illustration project:** As part of this course, students will complete an infographic assignment designed to enhance their understanding of key chemistry concepts while developing skills in scientific communication. Each student will create a visually engaging and scientifically accurate infographic on a specific topic related to the course material. The assignment will require students to conduct research, synthesize information, and present three real-world applications of their chosen topic in a clear and compelling format. Infographics must include appropriate visuals, concise explanations, and proper citations in ACS format. In addition to submitting their work, students will deliver a 5-minute in-class presentation to explain their infographic to their peers. This assignment emphasizes creativity, critical thinking, and the ability to communicate complex ideas to a broader audience. Detailed instructions, including deadlines and assessment criteria, will be provided in class.

Makeup and Replacement Exam Policy

Makeup exams are not offered except under extreme or specific circumstances. Personal travel, work obligations, weddings, graduations, traffic issues, or other unforeseen conflicts are not valid reasons for rescheduling or missing an exam. Protected students are encouraged to reach out to the DRC/Title IX office for assistance. This policy ensures fairness to all students by maintaining consistent expectations and avoiding disruptions to the course schedule.

If you miss an exam due to sudden illness or an emergency, the percentage earned on the final exam may replace one missed exam. This option is available only once and is intended for situations where the reason for missing the exam is beyond your control. Any additional missed exams will result in a score of zero.

If you have a pre-scheduled conflict due to a college-sanctioned event, you may arrange to take an alternate exam before the scheduled date by providing official documentation from a college representative and finalizing arrangements at least three days in advance. Alternate exams must be taken in person and are not available after the scheduled date.

Reviewing Exams

Completed exams will not be handed back. However, you may review your graded exams during office hours or by scheduling an appointment. This ensures transparency while maintaining the integrity of exam materials.

Final Grade Policy

At the end of the semester, I will review all submitted work a second time to ensure students receive as many points as possible for their efforts. However, once you complete your final exam, no additional work will be accepted, regardless of the reason or excuse. Please refrain from contacting me about adjusting your final grade, as grades are determined by your performance in exceeding the necessary points - not by simply getting close to the threshold.

Throughout the semester, you had the opportunity to earn up to 50 points (5%) in extra credit. If you did not take advantage of this, it is now too late to make up the difference. If you believe you have been graded unfairly, you are welcome to file a formal grade grievance through the appropriate channels.

If you are reading this at the start of the semester, I wish you all the best as you embark on this journey. Commit to staying on top of your work, and take advantage of every opportunity to succeed.

If you are reading this at the end of the semester, I have truly enjoyed having you in this class and wish you all the best in your future endeavors.

Either way thank you for being part of this course, and I hope you carry forward the knowledge and skills you've gained here into your life and career.

Letter of Recommendation Policy

If you would like me to write a letter of recommendation, please visit elementsulfur.com and navigate to the "Request Help" section. Click on "Request Recommendation Letter" and follow the instructions provided on the site. Please ensure that you submit all required information and allow at least two weeks for completion if I agree to write your letter. Submissions that do not follow the outlined process or lack adequate preparation may not be considered.

Use of elementsulfur.com

Throughout this course, you are encouraged to utilize my personal website elementsulfur.com as a key resource for chemistry-related materials and support. A majority of the content posted on Canvas will also be available to you here, including teaching aids, practice problems, tutorials, and additional tools to help you succeed in this class.

If you have questions about CSN's ACS student chapter, you can also find information and updates on the site. For assistance with coursework, accessing resources, or submitting special requests such as a letter of recommendation, please use the "Request Help" section. Be sure to explore the available materials regularly, as they are designed to complement your learning experience.

Extra Credit in CHEM 122

In CHEM 122, extra credit opportunities are here to support your learning and help you succeed. These activities are designed to encourage curiosity, active engagement, and thoughtful reflection on the material we cover in class. Think of them as a chance to deepen your understanding, connect with your peers, and explore the real-world impact of chemistry. While not required, these opportunities can make a meaningful difference in your journey through this course. We're here to help you every step of the way - so take advantage of these moments to grow and shine!

1. Attendance and Participation in Class

- Regular attendance and active participation in class discussions and activities can earn you extra credit.
- Participation is assessed based on engagement, asking thoughtful questions, and contributing to group discussions.
 - Points: Up to 10 points for consistent attendance and active participation throughout the semester.

2. Join and actively participate in the CSN ACS Student Chapter.

- Online Participation: Post chemistry-related questions, comments, or resources on the ACS Discord server: <https://discord.gg/4S49EexNRU>.
- In-Person Events: Attend in-person ACS chapter meetings or events.
 - Points: 5 points signing up and initial post and 3 points per in-person event attended (up to 9 points).

3. Extra Credit Quizzes on Aktiv Chemistry

- Complete designated extra credit quizzes in Aktiv Chemistry in addition to required homework assignments.
- These quizzes will be available periodically throughout the semester.
 - Points: Up to 3 points per quiz.

4. In-Class Surveys and Activities

- Participate in occasional surveys or activities conducted during class sessions.
- Full credit awarded for thoughtful and complete responses.
 - Points: 2 points per survey/activity.

5. Reflection Statements

- Reflect on your learning experiences and how they connect to real-world applications of chemistry in your career.
- Choose one of the following prompts for your reflection:
 - What's something you learned in class, and how might it apply to your life?
 - Share a question you still have about a recent topic and your understanding of it.
 - What did you find most challenging about a topic we covered?
 - What did you like most/least about a specific class or concept?
- Reflections should be 150–200 words and submitted within one week of the related class or topic.
 - Points: Up to 5 points per reflection.

6. Extra Credit Questions on Exams

- Earn additional points by answering optional extra credit questions on exams beyond the required 24 questions.
- These questions will be marked clearly as extra credit and are designed to challenge your understanding of the material.
 - Points: Variable, up to 5 points per exam.

Important Notes

Maximum Points: You may earn no more than 50 extra credit points during the semester.

Deadlines: All extra credit activities must be completed and submitted by their respective due dates. Please see assignments in Canvas or on Elementsulfur.com. No late submissions will be accepted.

Grading: Extra credit points are added directly to your total points in the course but cannot exceed the maximum points for the semester.

Chem 122 Spring 2025 Course Outline

Week	Date	Chapter & Sections	Page numbers	Activities	
1	January 20	Campus Closed. Observed Holiday.	-	Online homework #1 Chapters 14 – 15 open.	
	January 22	Introduction Review Syllabus, Grading & Project	-		
2	January 27	Chapter 14 - Kinetics	568 - 580		
	January 29	Chapter 14 - Kinetics	581 - 607		
3	February 3	Chapter 15 – Chemical Equilibrium	622 - 636		
	February 5	Chapter 15 – Chemical Equilibrium	637 - 653		
4	February 10	<i>Test 1 - Review</i>	568 - 653		
	February 12	Examination 1 – covers Chapters 14 & 15.			Online homework # 1 Chapters 14 & 15 due on February 12th
5	February 17	Campus Closed. Observed Holiday.	-		Online homework # 2 Chapters 16 & 17 open.
	February 19	Chapter 16 – Acid Base Equilibria	664 - 678		
6	February 24	Chapter 16 – Acid Base Equilibria	679 - 690		
	February 26	Chapter 16 – Acid Base Equilibria	691 - 707		
7	March 3	Chapter 17 – Aqueous Equilibria	716 - 730		
	March 5	Chapter 17 – Aqueous Equilibria	731 - 755		
8	March 10	<i>Test 2 - Review</i>	664 - 755		
	March 12	Examination 2 – covers Chapters 16 & 17.		Online homework # 2 Chapters 16 & 17 due on March 12th	
Spring Break March 17 th to 23 rd					
9	March 24	Chapter 18 – Chemistry of Envir.	766 - 784	Online homework # 3 Chapters 18 – 20 open.	
	March 26	Chapter 18 – Chemistry of Envir.	787 - 798		
10	March 31	Chapter 19 - Thermodynamics	806 - 821		
	April 2	Chapter 19 - Thermodynamics	822 - 835		
11	April 7	Chapter 20 - Electrochemistry	848 - 866		
	April 9	Chapter 20 - Electrochemistry	867 - 888		
12	April 14	<i>Test 3 - Review</i>	766 - 888		
	April 16	Examination 3 – covers Chapters 18 thru 20.			Online homework # 3 Chapters 18 – 20 due on April 16
13	April 21	Chapter 21 – Nuclear Chemistry	900 - 933	Online homework # 4 Chapters 21 & 24 open. Infographic material is due May 1 st .	
	April 23	Chapter 24 – Chemistry of Life	1030 - 1047		
14	April 28	Chapter 24 – Chemistry of Life	1048 - 1057		
	April 30	Chapter 24 – Chemistry of Life	1058 - 1071		
15	May 5	<i>Test 4 - Review</i>	900-933, 1030-1071		
	May 7	Examination 4 – covers Chapters 21 & 24.		Online homework # 4 Chapters 21 & 24 due. on May 8	
16	May 12	You will present Illustration project presentations. You should have already submitted your work. Please follow instruction for this project on Canvas, www.chemistrynow.org			
	May 14	Final ACS Exam covers chapters 14 – 21, 24			

← Class is optional

← Activities due or completed

CSN Required Information

The following information is required by the institution not by me. You are responsible for reviewing this material.

1. CSN Academic Integrity Policy

Taking the words, work, or presenting the ideas of others, including those generated by artificial intelligence, as your own not only limits your academic research skills, it also violates the CSN's Student Academic Integrity Policy. Cheating on exams or other coursework also violates the CSN Student Academic Integrity Policy. You can find more information about CSN's Academic Integrity Policy at

https://www.csn.edu/csnmedia/documents/policies-and-procedures/2017_academic-integrity-policy_2_0.pdf.

The minimum penalty for such offenses in this course is to fail the assignment. Failing the course will also be considered as an option. Infractions of the CSN Student Academic Integrity Policy may lead to suspensions, expulsion, transcript notations or other sanctions.

2. CSN Americans with Disabilities Act (ADA) Statement and current Disability Resource Center (DRC) Contact Information

The College of Southern Nevada is committed to making physical facilities and instructional programs accessible to students with disabilities. If you have a disability that may have some impact on your work in this class and for which you may require accommodations, please visit the Disability Resource Center (DRC) so that such accommodations can be considered. All discussions will remain confidential. The DRC has offices on all three campuses. These serve as the focal point for coordination of services for students with disabilities. If you have a physical, emotional, or mental disability that "substantially limits one or more major life activities (including walking, seeing, hearing, speaking, breathing, learning and working)," and will require accommodation in this class, please contact the DRC.

- West Charleston 702-651- 5644, or email at WCDRCStaff@csn.edu
- North Las Vegas 702-651-4045, or email at CYDRCStaff@csn.edu
- Henderson 702-651-3795, or email at HCDRCStaff@csn.edu.

For Deaf and Hard of Hearing Services contact the DRC using 702-651-4448, or email at Deaf.HH.Services@csn.edu.

Any student who receives an accommodation letter from the DRC, please meet with me to discuss the provisions of those accommodations as soon as possible.

3. Reference to Students' Rights and Responsibilities Pertaining to CSN Policies and Services

When you choose to become a student at CSN, you accept the rights and responsibilities of membership in CSN's academic and social community. You can find policies covering students such as the Student Conduct, Students' Right to Know, Students' Academic Integrity, and Disruptive and Abusive Student in the following locations:

- Catalog and Student Handbook: <https://www.csn.edu/catalog> in the Policies and Procedures section.
- CSN Website: <https://www.csn.edu/policies-procedures> under the heading "Student Policies.

4. CSN Libraries Support

CSN Libraries provides support for students completing assignments that require research and the use of information. Librarians are available to students for one-on-one assistance locating and citing quality information either online <https://library.csn.edu/ask/> or at one of our campus libraries. Find more information on our website <https://library.csn.edu>

5. Safety Procedures

Approved classroom safety procedures are posted in each classroom and are to be followed. Students are to familiarize themselves with the nearest exit to use during fire alarm exercises. Do NOT use the elevators during these drills. Students will take ALL personal belongings with them when exiting the building. No student will be allowed back into the facility until the all clear is given.

6. Instructor's Policy on Objectionable Materials

Instructors have the responsibility to set and maintain standards of classroom behavior appropriate to the discipline and method of instruction. No objectionable materials or language will be used during this class. This includes all possible modes of the class: online and in person. The instructor will make the final determination regarding any objectionable materials or language. Students may not engage in activity the instructor deems disruptive or counterproductive to the goals of the class. Instructors have the right to remove offending students from class.

7. Academic Advising

Academic Advisors help students assess academic strengths and limitations, learn academic success strategies, explore careers, declare a major, navigate the educational system, access campus and community resources, and connect to campus life. Contact Information:

- Charleston Campus: Building D – Student Services Area: 702–651–5670
- North Las Vegas Campus: Student Services Area: 702–651–4049,
- Henderson Campus: Building B – Room 120: 702–651–3165.

<https://www.csn.edu/advising>

8. Canvas Computer Instructions & Technology Help Desk

Telephone Support for Distance Education students having problems logging into a course, using course web site tools, or other technical problems can be found by contacting the CSN Technology Help Desk locally at 702–651–4357, or via 1-800–630–7563 toll-free, 24 hours/day, 7 days/week. The Canvas Student Quick Start Guide be found at <http://guides.instructure.com/m/8470>.

9. Centers for Academic Success

Centers for Academic Success (CAS) provides quality DROP-IN academic assistance to all students enrolled in for-credit courses at CSN. Tutors are available for most general education courses and some historically challenging courses. Academic learning support includes assistance with learning strategies, Canvas, Brainfuse online tutoring, Microsoft Office, reading, writing, oral presentations, math, and science. CAS tutors also provide support to study groups and assistance for placement test preparation. CAS is open Monday through Sunday to be more accessible to all students. Hours for all locations are Monday – Thursday 9:00 am to 6:00 pm and Friday – Sunday 11:00 am to 4:00 pm.

You may visit www.csn.edu/centers-academic-success for more details about online and in-person services. You may also contact us at one of our offices:

- Charleston Centers 702–651–5732
- North Las Vegas Learning Commons 702–651–4232
- Henderson Learning Commons 702–651–3125

In addition to general academic success centers, there are math and science resource centers located on all three campuses. They operate on a drop-in, first come, first served basis where you get 20 minutes with a tutor. They are able to help with any of the math content in this course. You can even schedule study sessions with a study group in the centers. Tutor availability may be limited so be sure to check the schedule to ensure a chemistry tutor will be present.

<https://www.csn.edu/math-and-science-resource-center>

10. Counseling and Psychological Services (CAPS)

The Counseling and Psychological Services (CAPS) offers short-term, problem-focused counseling to CSN students who may feel overwhelmed by the responsibilities of college, work, family, and relationships. Clinicians are available to help students cope with stresses and personal issues that may interfere with their ability to perform in school. The service is provided confidentially and free to currently enrolled students. To schedule an appointment, please call CAPS at

- West Charleston 702–651–5518
- North Las Vegas 702–651–4099
- Henderson 702 –651–3099

11. TRIO Student Support Services

One stop shop for first-generation college, financial aid-eligible and disabled students offering tutoring, academic advising, career exploration, college-transfer assistance, and development of college success strategies. Contact information: North Las Vegas Campus: Building E Room 109: 702–651–4441 or <https://www.csn.edu/trio>.

12. Reference to CSN Libraries Support

CSN Libraries provides support for students completing assignments that require research and the use of information. Librarians are available to students for one-on-one assistance locating and citing quality information either online <https://library.csn.edu/ask/> or at one of our campus libraries. Find more information on our website <https://library.csn.edu/> Links to an external site.

13. Public Health Directives (COVID-19)

Students must follow all active CSN public health directives while enrolled in this class, such as properly worn face coverings when required in classrooms as well as inside campus buildings. CSN public health directives are found at <https://www.csn.edu/wellness>. Students who do not comply with these directives will be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the CSN Student Conduct Code https://www.csn.edu/sites/default/files/documents/student_conduct_code_policy_1.pdf Links to an external site. , including being dropped from the course.

14. Sex-Based Harassment and Discrimination

CSN is committed to creating a safe and open learning environment for all students. In accordance with Title IX of the Education Amendments of 1972, CSN prohibits unlawful sex-based harassment against any participant in its education programs or activities. Sexual-based harassment includes quid pro quo (this for that) harassment, a hostile environment, and criminal sexual violence (including sexual assault, dating/domestic violence, and stalking.) This prohibition applies to CSN students, employees, and visitors. Incidents of sex-based harassment or discrimination should be reported to CSN's Title IX Coordinator, Dr. Armen Asherian, at titleixcoordinator@csn.edu, or 702-651-7481 or University Police Department at 702-895-3669 to report a crime.

15. Pregnant Students

CSN prohibits discrimination based on sex in education programs and activities. This prohibition on discrimination extends to pregnancy and related conditions—including childbirth, lactation, false pregnancy, termination of pregnancy, and recovery therefrom—as well as to parental and family status. If you are pregnant or have a pregnancy-related condition, and you are in need of accommodation because of your pregnancy or pregnancy-related condition, you must contact Dr. Armen Asherian, Title IX Coordinator, at titleixcoordinator@csn.edu or 702-651-7481, or the Disability Resource Center at 702-651-5644 for West Charleston, 702-651-3795 for Henderson, and 702-651-4045 for North Las Vegas to explore reasonable accommodation.

16. AI Usage

Use of generative AI tools is strictly prohibited for all assignments, exams, and projects in this course unless explicitly permitted by the instructor for specific tasks. All other work must be completed independently, without AI assistance at any stage, from initial planning to final submission. Suspected unauthorized use of generative AI will be investigated as a violation of CSN's Academic Integrity policy under the definition of 'cheating,' specifically 'receiving aid not permitted by the instructor.' Potential consequences may include a warning, grade reduction, course failure, or academic probation, depending on the severity of the violation.