

**Chemistry 100**  
**Introduction to General Chemistry**  
**Fall 2023**

<p><b>Instructor:</b> Prof. Manal Swairjo <b>Office hours:</b> Tues 2:15-3:15 pm in MSLC, Love Library room 328 Mon 6-7 pm on Zoom <a href="https://SDSU.zoom.us/j/81938454042">https://SDSU.zoom.us/j/81938454042</a></p> <p>Additional Zoom office hours during exam weeks will be announced on Canvas.</p>	<p><b>Lab Coordinator:</b> Prof. Clare. Office: CSL 313 <b>Assistant Coordinator:</b> Prof. Campbell</p> <p>For issues concerning OWL, email Prof Campbell at this address: <a href="mailto:cos-Chem100@sdsu.edu">cos-Chem100@sdsu.edu</a></p> <p>All other issues, including waitlisting, email Prof Clare at this address: <a href="mailto:lclare+chem100@sdsu.edu">lclare+chem100@sdsu.edu</a></p>
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Lecture Location & Time      ENS 280, MWF **1-1:50 pm**

Lab rooms:                      CSL 522 or 524 (5<sup>th</sup> floor Chemical Sciences Laboratory building)

Waitlist:                              Waitlist students should email the Chem 100 Lab Coordinator, Prof. Clare, [lclare+chem100@sdsu.edu](mailto:lclare+chem100@sdsu.edu) as soon as possible. Be sure to provide your name, Red ID and Lab Section you are attending. If you add after your lab class has already met, you must still contact Professor Clare to get caught up.

Dropping the course:              It is your responsibility to follow university policies regarding Cr/NC, drops, withdrawals, and incompletes. **Your last opportunity to add/drop or change grading basis is September 5 at 11:59 pm.**

Textbook (required):                Mark S. Cracolice, Edward I. Peters, Introductory Chemistry: An Active Learning Approach, 7<sup>th</sup> edition, ISBN 9780357363935 (access through your Cengage account).

Equitable Access:                    All required course material (except for lab manual) for this class is available in digital format by the first day of classes and are free up until **the drop date at 11:59 pm September 1<sup>st</sup>**. After this date, your SDSU student account will be charged a flat rate of \$22/unit. Please visit [Equitable Access](#) for additional information about pricing digital subscription duration, print add-ons, opting out and other frequently asked questions. Through Equitable Access you will have access to your textbook, the Cengage OWL Study System, and the purchase of lab manual. If you need to borrow a computer, contact SDSU Economic Crises Response Team for technology support at [sdsu.edu/ecrt](https://sdsu.edu/ecrt)

If you use Cengage materials in another course (such as Calculus) you can instead enroll in Cengage Unlimited. For \$124.99 per semester you get access to ALL Cengage eBooks and ALL online learning materials (OWLv2, MindTap, WebAssign, etc). To use Cengage Unlimited do this:  
1) Go to [www.shopaztecs.com/optout](http://www.shopaztecs.com/optout) and complete the form to opt out for each course BEFORE THE ADD/DROP DATE

2) When you're prompted for a code for your course choose Cengage Unlimited and purchase it. Cengage Unlimited will then be applied to your account. Remember to enroll in all courses using the same login email address!

Lab Manual (required): Chem 100 Lab Manual, Chemistry Dept. Printed by Hayden MacNeil, Fall 2022 – Spring 2023. The lab manual is available through the bookstore.

Lab Equipment: Safety glasses, flame resistant lab coat (blue) or lab apron (yellow). Do NOT purchase the white lab coat in the bookstore, it is not flame resistant. Nitrile gloves can be purchased at the SDSU bookstore or available at drugstores such as CVS and Walgreens. Matches or butane lighter.

Additional items (Required): Calculator (e.g., TI-30Xa or Casio fx-300ms plus): needs to be scientific but non-graphing and non-programmable. The recommended calculator for this course is the Casio fx-300ms-plus calculator. A computer and stable internet connection will be needed for OWL homework and exam review quizzes.

Modes of Instruction: Lectures, exams and lab sessions will be in-person. Attendance is required for lab sessions. Lab teaching assistants (TAs) will take attendance during the lab session. The learning management system (LMS) for both lecture and labs will be Canvas. In-class lecture will be recorded through Mediasite and embedded in Canvas.

Online Resources:

- Canvas: Canvas will be used in this course. Enrollment in Canvas is automatic if you are currently enrolled in this course. Canvas contains information such as the course syllabus, laboratory information, lecture videos, handouts, and other important course information.
- OWL Assignments (Homework and Exam Review Quizzes): Cengage OWL will be used extensively for online homework and quizzes. A link for Cengage OWL will be available on Canvas in the Chem 100 Important Information and Links module.

**USE CHROME AS YOUR BROWSER FOR THIS COURSE!!**

**OWL WEBSITE WILL NOT WORK PROPERLY WITH OTHER BROWSERS.**

Email Policy: Students are provided with an SDSU Gmail account, and this [SDSU email address](#) will be used for all communications. Per University Senate policy, students are responsible for checking their official university email once per day during the academic term. For more information, please see [Student Official Email Address Use Policy here](#)

All communication regarding this course should occur through official SDSU email accounts. The course instructor and lab coordinator will be available via email to answer questions or to schedule office hour appointments. Please allow at least 24 hours for a response, longer over weekends and holidays. To ensure a prompt response include CHEM 100 in the subject line of your emails and make sure to provide your full name and lab section. You will not receive a response from either the instructor or lab coordinator if you do not use your sdsu.edu address.

Use your SDSU Gmail account and your red ID to sign up for OWL. If you do not do so then your homework and quiz scores will NOT transfer from OWL to Canvas, and you will receive a zero score.

This course: Fulfills the GE Natural Sciences and Quantitative Reasoning requirement

Prerequisites: A working ability with high school level algebra.

Course enrollment: You must be enrolled in one laboratory section as well as lecture. It is crucial that you attend the first three laboratory periods. Failure to do so may result in your spot in the lab section being given to another student. Notify the laboratory coordinators ([lclare+chem100@sdsu.edu](mailto:lclare+chem100@sdsu.edu)) as soon as possible if you must miss a laboratory period in the first two weeks of the semester for a legitimate reason. You must be able to attend the laboratory section of CHEM 100 for which you are enrolled; otherwise, you must drop the course and attempt to waitlist a different section that you can attend. If you decide to drop the course, inform the laboratory coordinator by email as soon as possible so your place can be given to a waitlister.

Never attend a lab session that is not on your class schedule, the TA will not let you in.

Expected learning outcomes: Chemistry 100 is an introduction to general chemistry. By the end of this course a successful student will be able to:

- i) execute basic chemistry calculations such as unit conversions and stoichiometry.
- ii) explain the basic principles of atomic theory and chemical bonding.
- iii) quantitatively and qualitatively describe physical and chemical properties of matter.
- iv) illustrate the concept of dynamic equilibrium with acid-base chemistry.
- v) safely and confidently conduct protocols in a laboratory environment.
- vi) List a few examples of historical inequities in the field of chemistry.

**How to succeed in Chem 100:** Prepare to spend a considerable amount of time (approximately 12 hours per week) outside of class, reading, studying and working on OWL assignments. You will have an assignment to tend to every week. **If you know you do not do well in exams, you should not miss any OWL assignments. If you miss 5 OWL assignments or more (whether OWL Homework or OWL Exam Review Quiz), you have entered the F zone for the final course grade.** You are encouraged to apply the following approach:

- 1) Read the relevant chapter in the book prior to coming to class. Be OK with not understanding everything you read at that time. Things will become clearer during class, and you will feel more confident about asking questions.
- 2) Attend all the lectures, pay attention and do not distract yourself with note taking.
- 3) During class, the professor will frequently ask if you have questions or need to go over something again. Stop them and ask. All questions are excellent; the only dumb questions are the ones that are not asked.
- 4) If you miss a class, make sure you watch its recording on Canvas the same day. Do not postpone, otherwise it will be hard to understand what we cover in the next class.
- 5) Right after class, read the book again before doing the OWL homework. Try to tackle the homework problems related to what we covered in class on the same day.
- 6) Bring your questions with you to the Math, Science Learning Center (MSLC) to get help from your professor, a TA or a tutor (see below).
- 7) Repeat, until you are comfortable with the concepts and ready to show your mastery of them on the graded Exam Review Quiz on OWL.
- 8) After each exam, visit MSLC and figure out why you missed each problem. This will help you learn what to focus on for the next exam.

**Statement on Cheating and Plagiarism: DO NOT cheat!** Cheating is the actual or attempted practice

of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit. Such acts also include assisting another student to do so. The penalty for cheating and plagiarism is an F for the course and possible expulsion from the University. For more information on the University's policy regarding cheating and plagiarism, refer to the Schedule of Courses ('Legal Notices on Cheating and Plagiarism') or the University Catalog ('Policies and Regulations'). You will need to learn the material in this course and, more importantly, develop the problem-solving skills required of this course to be prepared for upper division coursework and eventually a career.

**CHEM 100 Student Help** will be available in the Math, Science Learning Center (MSLC) located on the third floor of Love Library in room LL328. The MSLC will have chemistry tutors and teaching assistants (TA). A schedule of chemistry tutors is available through <https://mslc.sdsu.edu/>. A schedule for TA help hours at the MSLC will be made available in Canvas at the beginning of the second week of the semester. It is highly recommended that you take advantage of those tutoring services, they are there to help you. Any student may attend any of the Chem tutoring hours or any TA help hour and you may attend as many as you like.

**Supplemental Instruction:** Supplemental Instruction (SI) Sessions, are free study sessions and will be offered each week, throughout the sixteen-week course. SI is open to all students enrolled in this course.

SI Sessions are facilitated by an SI Leader, a current student who just took the course and received a good grade and has been trained to lead active-learning-based group sessions where students can improve their understanding of course material, review and discuss important concepts, develop study strategies, and prepare for exams. Students who participate in SI Sessions typically earn higher final course and exam grades than students who do not participate, sometimes by a half to a full letter grade.

**Attend SI so you can get extra practice, meet other students in the course, and learn how to effectively study. To get the most out of SI, attend early and often.**

SI Program: [https://bit.ly/SDSU\\_SI](https://bit.ly/SDSU_SI)

Meet the SI Leaders: <https://studentsuccess.sdsu.edu/supplemental-instruction/leaders/chem100>

Session Calendar: <https://studentsuccess.sdsu.edu/supplemental-instruction/session-schedules>

**OWL Assignments (Homework and Exam Review Quizzes):** Before you begin, there will be two introductory OWL assignments at semester start: "Introductions to OWL" and "Math Review." These intro assignments are to help guide you into using the program and freshen up on basic math. Attempting to use OWL without understanding how the program works can lead to issues later. You will earn bonus points for these assignments, up to 1% of the final course grade.

**OWL Homework** will have hard deadlines and no individual extensions will be granted. There will be 11 homework assignments, and the one with the lowest score will be dropped when determining your course grade. They are denoted in OWL by the week in which they are due and the chapters they cover, e.g. "Week 2 Homework (Ch 1 & 2)."

- It is in your best interest to complete all problems in each homework to ensure that you are fully prepared for the exams.
- If you know that you do not do well in exams, you should not miss any assignments. If you miss 5 assignments or more, you have entered the F zone for the final course grade.
- Work on the problems several days before they are due, so you have time to go to the professor's office hours, or to go the MSLC for tutoring or find any Chem 100 TA at the MSLC to ask for help. Never wait until the last day to work on the homework; otherwise, you will be rushing through the

assignment instead of learning how to break down problems and theories to better equip yourself for the exams.

- It is highly recommended that you buy a composition book to work on the problem sets to keep good notes and to make your studying more efficient.
- Each homework may have a different point total in OWL. Your score will be based on the percent correct answers, to receive the max of 20 points per homework.
- Scores for homework will be uploaded from OWL to Canvas at the end of the semester. Errors occur due to incorrect RedID number, incorrect email address, multiple OWL accounts and/or your work is in the wrong section and is not recognized for a score.

**OWL Exam Review Quizzes** are to assess your learning of the material and help you prepare for the exams. They are denoted in OWL by the exam number for which the quiz helps you prepare and the book chapter the quiz covers. For example, "Exam 1 Review Quiz - Ch 1" is a quiz that helps you prepare for Exam 1 by reviewing concepts and solving problems from Chapter 1. There will be multiple such quizzes (corresponding to multiple chapters) with the same due date before each exam. You must do them all. Don't be alarmed by the fact that they are several quizzes for each exam, if you are prepared you will complete a quiz in a few minutes. You will have **unlimited attempts at each quiz**.

**OWL Assignments Due dates:** All homework will be due at 11:55 pm on Sunday on a mostly weekly basis. Exam Review Quizzes will be due at 8:00 am the morning of the exam. Check the schedule below for exact due dates. Announcements on Canvas will remind you to complete the work on time.

For OWL registration and other technical difficulties contact the [OWL Virtual Office](#) or contact Prof Campbell, [cos-Chem100@sdsu.edu](mailto:cos-Chem100@sdsu.edu)

**Exams:** There are 3 mid-term exams. All mid-term exams are cumulative but will focus mainly on content within the assigned chapters. Each exam is worth 100 points. Check the class schedule below for exact exam days and log them in your calendar. All exams are held in the classroom and are to be taken in person. Use of cell phones, computers, or any other electronic device other than a non-graphing and non-programmable calculator is strictly forbidden during exam. **You must bring a non-graphing and non-programmable calculator to the exam. No such calculators will be provided if you forget yours. No exceptions. Bring your Red ID to each exam to be checked by a proctor.**

**Final Exam:** The final exam is cumulative, i.e. it will cover all chapters of the course and must be taken in person. Final exam is worth 100 points. The final exam will be given on Friday Dec 15 from 1 pm to 3 pm. Use of cell phones, computers, or any other electronic device other than a non-graphing and non-programmable calculator is strictly forbidden during exam. **You must bring a non-graphing and non-programmable calculator to the final exam. No such calculators will be provided if you forget yours. No exceptions. Bring your Red ID to the exam to be checked by a proctor.**

**Make-up Exams:** There will be no make-up exams, except in the case of appropriately documented medical absences. In the event you miss an exam or know that you will be missing an exam, contact the coordinator by email, ([lclare+chem100@sdsu.edu](mailto:lclare+chem100@sdsu.edu)) as soon as possible. Without verifiable medical documentation you will not be allowed to make up an exam. If there is an emergency in your immediate family, contact the lab coordinator as soon as possible. Be prepared to provide proof of the emergency. If you are an SDSU athlete, you must submit your schedule of competition during the first two weeks of semester so that arrangements around exam conflicts can be made.

The use of any disallowed materials/references or communication with anyone other than the

instructors and coordinator during an exam will be considered dishonest academic conduct. The instructors and coordinator reserve the right to make exceptions to this policy at their discretion.

**Lab Assignments** (Haydn McNeil): Chemistry is an experimental science. As such, its principles are best illustrated in the laboratory setting. As a student in this course, you will have the opportunity to learn many basic principles of chemistry in a modern, well-equipped laboratory environment. Learn the name of your laboratory teaching assistant (TA) and your lab section number. You will need to include this information on your lab assignments and exams.

- When conducting experiments, all persons present in a chemistry laboratory must wear approved eye protection, BLUE flame-resistant lab coat (white lab coats sold in bookstore are not flame-resistant) or flame-resistant yellow apron. Long pants or skirts that fall below mid-calf must be worn, and shoulders must be covered. Long hair must be confined securely. Anyone not in compliance will be asked to leave and will not be allowed to return until properly attired. Do not wear shorts or tank tops to any lab session. In addition, closed toe/heel shoes are mandatory for every lab session. This includes lab sessions when completing worksheets only. Store a pair of shoes in your locker if you think you will forget to wear proper shoes. No food or drink at any time is allowed.
- If you have forgotten your safety glasses then you must either borrow a pair from a friend, buy new ones at the SDSU Bookstore, or go home and take a zero on that lab.
- Lab work for Chem 100 must be performed in CSL 522, 524, 525 and 528 during the lab hours for which the student is registered. Do Not attend any other lab session other than the lab you are registered for, or you will receive a zero score for that lab.
- Because of logistical constraints, you will not be allowed to make up missed lab experiments; however, your lowest lab report score will be dropped when determining your course grade. Use this free pass wisely. No matter the reason for missing a lab, the lowest lab score is dropped. If your second missed lab is due to medical issues, contact the lab coordinator; be prepared to show proof. If you are under mandated quarantine because of being sick with COVID, contact the lab coordinator ([lclare+chem100@sdsu.edu](mailto:lclare+chem100@sdsu.edu)) and accommodations will be made. Be prepared to provide proof from the SDSU HealthConnect. This will be a one-time accommodation.
- Lab reports are due at the end of the lab period. All reports consist of completed pages for each experiment out of your lab manual. **Late reports will receive no credit.** No credit will be given for a lab report if the experiment was not actually done by that student.
- The lab report consists of recording data into pages, calculations and answering questions in the lab manual. Where computations are involved, numerical set-ups known as sample calculations must be shown. The final answer must include units and the correct number of significant figures. Reports must be legible. If your TA cannot read your writing, point will be taken off.
- Two Chem 100 students will be checking into a locker and sharing the locker. Both will be responsible for the equipment in it. At the end of the semester or if you drop the class, you need to check out of your locker. If you fail to check out by the scheduled date, there will be a \$25 fee.
- There are 20 lab participation points available. These will be assigned at the discretion of the lab TA at the end of the semester. Arriving on time prepared for laboratory, adhering to lab safety protocols, and helping with clean-up will ensure that you receive these points.

**Grading:** Your letter grade will be determined by your individual points total for the course. There will be no curving of the course grades. Below is a tentative grade range breakdown for each letter grade. The instructor reserves the right to modify this grade scale prior to assigning final letter grades.

CHEM 100 Grading Scheme						
Item	Submission	How many	Value (each)	Total	Percentage of final grade	
Homework	OWL	Best 10/11	20	200	20%	
Exam Review Quizzes	OWL	4 (one before each exam)	50	200	20%	
Midterm Exams	In class	3	100	300	30%	
Final Exam	In class	1	100	100	10%	
Lab safety training	Submit work to TA	1	15	15	1.5%	
Lab Assignments	Submit work to TA	Best 11/12	15	165	16.5%	
Lab Participation/conduct	Canvas	1	20	20	2%	
				<b>Total</b>	<b>1000</b>	<b>100.0%</b>

**BONUS Points: If you do the Week 1 OWL assignments “Intro: Getting Started” and “Math Review” you get 10 bonus points = 1% of final grade. Yay!**

Score	Grade
≥ 93.33	A
90 to < 93.33	A-
86.66 to < 90	B+
83.33 to < 86.66	B
80 to < 83.33	B-
76.66 to < 80	C+
73.33 to < 76.66	C
70 to < 73.33	C-
66.66 to < 70	D+
60 to < 66.66	D
< 60	F

Week	Date	Lect #	Lecture Schedule	Weekly Lab Schedule	OWL Assignments Due Dates
1	Aug 21, 2023	1	Introductions, syllabus. Chapter 1 (6 sections) Scientific method	No Lab for Week 1.	<b>Must complete Safety Quiz and Safety Survey – BEFORE Sep 11.</b>  Week 1 OWL Bonus (Intro to OWL & Math Review) available till semester end, but suggested due date Sept 3 <sup>rd</sup> 11:55pm
	Aug 23, 2023	2	Chapter 1		
	Aug 25, 2023	3	Chapter 2 (11 sections) Matter and Energy/ substances & mixtures Separation of mixtures.		
2	Aug 28, 2023	4	Chapter 2	No Lab for Week 2.	Week 2 OWL Homework (Ch 1, 2), due Sunday 9/03/2023 11:55pm  <b>Sept 1<sup>st</sup> - Last day to add/drop classes. Ends at 11:59pm</b>
	Aug 30, 2023	5	Chapter 5 (9 sections) Atomic Theory/subatomic particles/isotopes		
	Sept 1, 2023	6	Chapter 5		
3	Sept 4, 2023 Labor Day		<b>No class</b>	No Monday Lab. Tuesday – Friday labs: Lab 3 - Periodic Table Worksheet. Worksheet due at end of session	Week 3 OWL Homework (Ch 5), due Sunday 9/10/2023 11:55pm
	Sept 6, 2023	7	Chapter 6 (11 sections) Nomenclature <b>6.1-6.8:</b> Writing names and formulas of elements, ions, compounds.		
	Sept 8, 2023	8	Chapter 6		
4	Sept 11, 2023	9	Chapter 6 <b>6.9-6.11:</b> Nomenclature of oxoacids & acid anions.	Lab Check-in Introduction to Lab and Lab Safety with Safety Quiz.  Lab 2 – Mass and Density Lab. Results & Calcs, Questions due at the end of lab session	Week 4 OWL Homework (Ch 6 & 8), due Sunday, 9/17/2023 11:55pm
	Sept 13, 2023	10	Chapter 8 (12 sections) Chemical Reactions (combination, decomposition, single replacement, double replacement reactions).		
	Sept 15, 2023	11	Chapter 8 Balancing chemical equations.		
5	Sept 18, 2023	12	Chapter 9 <b>9.1, 9.3:</b> Solutions of ionic compounds. <b>Skip 9.2</b> <b>9.4:</b> Strong & weak acids.	Lab 4 - Chemical Nomenclature. Worksheet due at the end of lab session	<b>Exam 1 Review Quiz (Ch 1, 2, 5, 6, 8), due Friday 9/22/2023 8:00am</b>
	Sept 20, 2023		<b>In-class Review</b>		



	Sept 22, 2023 Fri		<b>Exam 1 (Chapters 1, 2, 5, 6, 8)</b>		
6	Sept 25, 2023	13	Chapter 9 <b>9.5:</b> Conventional, total & net ionic equations. <b>9.6:</b> single replacement reactions, oxidation-reduction reactions. <b>Ch 19.4, 19.5:</b> Red/ox agents	Lab 6 - Separation of an Unknown Mixture. Results & Calcs, Questions due at the end of lab session.	Week 6 OWL Homework (Ch 9, 19.4, 19.5), due Sunday 10/01/2023 11:55pm
	Sept 27, 2023	14	Chapter 9 <b>9.8, 9.9, 9.11:</b> double replacement precipitation rxns, molecule formation rxns, undissolved reactants. <b>Skip 9.7, 9.10</b>		
	Sept 29, 2023	15	Chapter 11 (8 sections) Bohr model & how to write electronic configuration		
7	Oct 2, 2023	16	Chapter 11 Valence electrons, Lewis structures and trends in size and ionization energy	Lab 11 - Chemical Reactions Worksheet. Worksheet due at the end of lab session.	Week 7 OWL Homework (Ch 11 & 12), due Sunday 10/08/2023 11:55pm
	Oct 4, 2023	17	Chapter 11 Chemical families		
	Oct 6, 2023	18	Chapter 12 (10 sections) <b>Skip 12.9</b> Ionic/ covalent bonds Polar/nonpolar bonds		
8	Oct 9, 2023	19	Chapter 13 (8 sections) <b>Skip 13.5 &amp; 13.7</b> Lewis structures/VSEPR theory	Lab 5 - Valence-Shell Electron-Pair Repulsion Theory (VSEPR). Worksheet with Results & Q's due at end of lab session.	Week 8 OWL Homework (Ch 13), due Sunday 10/15/2023 11:55pm
	Oct 11, 2023	20	Chapter 13		
	Oct 13, 2023	21	Chapter 3 (13 sections) Metric system/ scientific notation/significant figures		
9	Oct 16, 2023	22	Chapter 3	Lab 9 - Identification of an Unknown Metal Carbonate. Results and Q's due at end of lab session.	Exam 2 Review Quiz (Ch 9, 11, 12, 13, 19.4, 19.5), due Friday 10/20/2023 8:00am
	Oct 18, 2023		<b>In-class Review</b>		
	Oct 20, 2023 Fri		<b>Exam 2 (Chapters 9, 11, 12, 13, 19.4, 19.5)</b>		
10	Oct 23, 2023	23	Chapter 7 $N_A$ / what is a mole? Gram-mole conversions	Lab 1 - Significant Figures, Scientific Notation, & Algebra Worksheets. Worksheets due at end of session.	Week 10 OWL Homework (Ch 3, 7), due Sunday 10/29/2023 11:55pm
	Oct 25, 2023	24	Chapter 7		
	Oct 27, 2023	25	Chapter 10 (6 sections) <b>Skip 10.5-10.7 &amp; 10.9 - 10.10</b>		

			Stoichiometry/		
11	Oct 30, 2023	26	Chapter 10	Lab 8 - Determination of the Molar Volume of a Gas and the Gas Constant. Data, answer sheet and Calcs due at end of lab session.	Week 11 OWL Homework (Ch 10, 4 & 14), due Sunday 11/5/2023 11:55pm
	Nov 1, 2023	27	Chapter 4 Gas laws		
	Nov 3, 2023	28	Chapter 14 <b>Skip 14.7 &amp; 14.9</b> Ideal gas law		
12	Nov 6, 2023	29	Chapter 15 <b>Skip 15.7</b> Intermolecular forces	No labs this week	Week 12 OWL Homework (Ch 15), due Sunday 11/12/2023 11:55pm
	Nov 8, 2023	30	Chapter 15 Specific heat		
	Nov 10, 2023 Veterans Day		<b>No class</b>		
13	Nov 13, 2023	31	Chapter 16 <b>Skip 16.8-16.9 &amp; 16.13-16.15</b> Solutes & solutions. Percent concentration, molarity, dilutions.	Lab 7 - Determining the Specific Heat Capacity of a Metal by Calorimetry. Results & Calcs, Q's & graph due at the end of lab session.	Exam 3 Review Quiz (Ch 3, 7, 10, 4, 14, 15), due Fri 11/17/2023 8:00am
	Nov 15, 2023		<b>In-class Review</b>		
	Nov 17, 2023 Fri		<b>Exam 3</b> <b>(Chapters 3, 7, 10, 4, 14, 15)</b>		
14	Nov 20, 2023	32	Chapter 16 Normality, equivalents & equivalent mass.	Monday lab only: Lab - 3 Constructing a Periodic Table Worksheet Tuesday – Friday labs: No lab	Week 14 OWL Homework (Ch 16), due Sunday 11/26/2023 11:55pm
	Nov 22, 2023 No classes		<b>No class</b>		
	Nov 24, 2023 Thanksgiving		<b>No class</b>		
15	Nov 27, 2023	33	Chapter 17 <b>Skip 17.4 &amp; 17.8</b> Conjugate acid/base	Lab 12 - Acid-Base Titrations Part 1 Only (First page). Results and calcs for base stds & pictures due at the end of lab session.	Week 15 OWL Homework (Ch 17 & 18), due Sunday 12/03/2023 11:55pm
	Nov 29, 2023	34	Chapter 17 pH, pOH		
	Dec 1, 2023	35	Chapter 18 <b>Skip 18.10-18.13</b> <b>Note: 18.12 only buffers covered.</b> Chemical Equilibrium, Molecular Collision		
16	Dec 4, 2023	36	Chapter 18	Lab 12 - Acid-Base Titrations Part 2. Data and acid concentration due at end of lab session.	Exam 4 Review Quiz (Ch 16, 17, 18), due Monday 12/11/2023 8:00am
	Dec 6, 2023		<b>In-class Review</b>		
	Dec 8, 2023		<b>In-class Review</b>		

				Locker check-out.	
17	<b>Dec 11, 2023 Last Day of Class</b>		<b>In-class Review</b>		
	<b>Dec 13, 2023</b>		<b>No class</b>		
	<b>Dec 15, 2023 1-3 pm Fri in ENS 280</b>		<b>Comprehensive Final Exam (includes all course material including chapters 16-18)</b>		

**Students With Disabilities** - At San Diego State we have excellent resources for all our students. If you are a student with a disability and believe you need special accommodations for this class, it is your responsibility to contact the [Student Ability Success Center](#) or call (619) 594-6473 to schedule an appointment. Do this as soon as possible to avoid any delay in the receipt of your accommodations. Please note that testing accommodations based on disability are not retroactive and cannot be provided by the instructor without the student first obtaining an accommodation letter from SASC. Please also be aware that SASC has deadlines for submitting forms, if you do not meet their deadlines, no further accommodation will be offered.

**Religious observances:** Notify lab coordinator within the first two weeks of class of any planned absences from exams or labs due to religious observances so that we can arrange some reasonable accommodation.

**Changes to the syllabus:** This syllabus and schedule are subject to change in the event of extenuating circumstances. We will do our best to make these clear with announcements in class and on the Canvas website. Please pay attention to announcements made in class and lab. It is your responsibility to check on announcements made in your absence.

This syllabus and the following schedule are subject to change if the instructor deems it necessary.

**Finding Help on Campus:**

Need help finding help -- an advisor, tutoring, counselling, or emergency economic assistance?

The [SDSU Student Success Help Desk](#) is here for you. Student assistants are available via Zoom Monday through Friday, 9:00 AM to 4:30 PM to help you find the office or service that can best assist with your particular questions or concerns.

Suggested: Consider adding a link to your college's Student Success Center or your department's tutoring center or supplementary instruction activities.

- CAL Student Success Center: <https://cal.sdsu.edu/academics/student-success>
- College of Education Student Success Center: <https://education.sdsu.edu/oss>
- Center for Student Success in Engineering: <https://csse.sdsu.edu/advising/advising>
- CoS Student Success Center: <https://cossuccess.sdsu.edu/>
- FSB Student Success Center: <https://business.sdsu.edu/undergrad/advising>
- HHS Advisors: <https://chhs.sdsu.edu/academics/advising>
- IVC Student Success and Retention: <https://imperialvalley.sdsu.edu/about/departments/student-affairs/retention>
- PSFA Advisors: [https://psfa.sdsu.edu/resources/student\\_advisors](https://psfa.sdsu.edu/resources/student_advisors)
- Math & Science Learning Center: <https://mslc.sdsu.edu/>

**Preferred Names & Pronouns:** Any student who wishes to be addressed by a name other than what is presented in Canvas is encouraged to contact the instructor or lab coordinator via email with the name you wish to use. Similarly, if you have preferred pronouns that you wish to be addressed by please contact your instructor or lab coordinator. We will communicate your desires to the TAs and all

instructional staff will gladly honor your request.

**Sexual violence / Title IX mandated reporting:** As an instructor, one of my responsibilities is to help create a safe learning environment on our campus. I am a mandated reporter in my role as an SDSU employee. It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep the information you share private to the greatest extent possible. However, I am required to share information regarding sexual violence on SDSU's campus with the Title IX coordinator, Jessica Rentto 619-594-6017. She (or her designee) will contact you to let you know about accommodations and support services at SDSU and possibilities for holding accountable the person who harmed you. Know that you will not be forced to share information you do not wish to disclose, and your level of involvement will be your choice. If you do not want the Title IX Officer notified, instead of disclosing this information to your instructor, you can speak confidentially with the following people on campus and in the community. They can connect you with support services and discuss options for pursuing a University or criminal investigation. Sexual Violence Victim Advocate 619-594-0210 or Counseling and Psychological Services 619-594-5220, [psycserv@sdsu.edu](mailto:psycserv@sdsu.edu). For more information regarding your university rights and options as a survivor of sexual misconduct or sexual violence, please visit [titleix.sdsu.edu](http://titleix.sdsu.edu) or [sdsutalks.sdsu.edu](http://sdsutalks.sdsu.edu).

### **COVID-19 Protocols**

Vaccination and testing protocols set by the CSU and SDSU will be enforced. Make sure to upload proof of your COVID-19 booster shot to [Healthconnect](http://Healthconnect). For more information use the following link: <https://sacd.sdsu.edu/student-health-services/covid-19>. If you experience COVID symptoms seek immediate testing at Student Health Services or pick-up a rapid test at one of the on campus vending machines

### **SDSU Economic Crisis Response Team:**

If you or a friend are experiencing food or housing insecurity, technology concerns, or any unforeseen financial crisis, it is easy to get help! Visit <https://sacd.sdsu.edu/ecrt> for more information or to submit a request for assistance. SDSU's Economic Crisis Response Team (ECRT) aims to bridge the gap in resources for students experiencing immediate food, housing, or unforeseen financial crises that impacts student success. Using a holistic approach to well-being, ECRT supports students through crisis by leveraging a campus-wide collaboration that utilizes on and off-campus partnerships and provides direct referrals based on each student's unique circumstances. ECRT empowers students to identify and access long term, sustainable solutions in an effort to successfully graduate from SDSU. Within 24 to 72 hours of submitting a referral, students are contacted by the ECRT Coordinator and are quickly connected to the appropriate resources and services.

For students who need assistance accessing technology for their classes, visit our ECRT website <https://sacd.sdsu.edu/ecrt> to be connected with the SDSU library's technology checkout program. The technology checkout program is available to both SDSU and Imperial Valley students.

### **Land Acknowledgement:**

We stand upon a land that carries the footsteps of millennia of Kumeyaay people. They are a people whose traditional lifeways intertwine with a worldview of earth and sky in a community of living beings. This land is part of a relationship that has nourished, healed, protected and embraced the Kumeyaay people to the present day. It is part of a world view founded in the harmony of the cycles of the sky and balance in the forces of life. For the Kumeyaay, red and black represent the balance of those forces that provide for harmony within our bodies as well as the world around us.

As students, faculty, staff and alumni of San Diego State University we acknowledge this legacy from the Kumeyaay. We promote this balance in life as we pursue our goals of knowledge and

understanding. We find inspiration in the Kumeyaay spirit to open our minds and hearts. It is the legacy of the red and black. It is the land of the Kumeya.  
'eyay e'haan - My heart is good.