## **CHEM 100:** Preparation for General Chemistry – Summer Session 2025

## **COURSE INFORMATION**

**Instructor:** Laurie Clare (Lecturer)

## Lecture Time/Location

12:00 to 1:30 pm Mon, Tue, Wed & Thurs/Online - Zoom link will be given

## Lab Times/locations

Lab sessions are held on Mondays and Thursdays and meet in Chemical Sciences Laboratory (CSL) building on the 5<sup>th</sup> floor. Lab Section 2096 meets in CSL 522 from 9:00 am to 11:40 am. Lab section 2097 meets in CSL 522 from 2:00 pm to 4:40pm.

## **Modes of Instruction**

Class lectures, homework, pre-class reading assignments and lab assignment submissions are on-line. For lab work, students will conduct experiments and complete several worksheet assignment in-person in CSL-522. Lab attendance is **required.** Teaching assistants (TAs) will take attendance during the lab session.

Our learning management system (LMS) for both lecture and labs is Canvas <u>https://sdsu.instructure.com/courses/176935</u>

Exams are online and given during lecture hours. Students must open Zoom before starting an exam and exit Zoom only when finished with exam.

## Instructor's Office Hours

Instructure's online office hours will be Tuesdays and Wednesdays following class, from 1:30 - 2:30 pm and by appointment. Individual appointments can be arranged at other times by emailing Prof. Clare

TAs will also be available for online help hours, their schedules will be determined and announced during the first week.

## **Course Contacts**

Please include your full name, RedID, CHEM 100, and section number in your email.

Instructor: Prof. Laurie Clare

Email: lclare@sdsu.edu

Lab Coordinator: Prof. Laurie Clare

Email: <a href="mailto:lclare+chem100@sdsu.edu">lclare+chem100@sdsu.edu</a>

Contact Prof. Clare for all questions related to the *waitlist or labs*.

TA for morning 9:00 am lab: Samantha Kennedy, email: sgkennedy@sdsu.edu

TA for afternoon 2:00 pm lab: Jorge Carmona, email: jacarmona@sdsu.edu

When emailing, please allow 24 hours for a response. I will respond as soon as I can during business hours, but may not be checking email after hours, on weekends, or during holidays.

## Waitlist

Waitlist students should email CHEM 100 Lab Coordinator, Prof. Laurie Clare, <u>lclare+chem100@sdsu.edu</u>, as soon as possible. Please provide your name and ID number. Continue to go to lecture until you are added, you can ask to be added to the Canvas course. You cannot attend lab until you have been removed from the waitlist.

#### **Dropping the Course**

It is your responsibility to follow university policies regarding Cr/NC, drops, withdrawals, and incompletes.

The last time to add/drop or change grading basis is **July 1 at 11:59 pm**.

## **Technology Requirements**

A computer and stable internet connection will be needed for attending Zoom online lectures, completing Aktiv online homework and submitting prelab and post lab assignments. A computer/tablet/phone is needed for Top Hat online in-class participation and pre-class reading. A non-graphing scientific calculator will be required for exams.

If you need to borrow a computer, contact SDSU Economic Crisis Response Team for technology support at <u>sdsu.edu/ecrt</u>

# **DIVERSITY, EQUITY AND INCLUSION**

Science is a fundamentally human endeavor and benefits from the inclusion of numerous diverse voices and perspectives. It is important that everyone in this class feels welcome and able to participate fully. Therefore, discrimination or harassment in any form or for any reason is not tolerated. This course is designed with diversity, equity, and inclusion in mind and these principles should be reflected in all interactions between students, teaching assistants, instructional staff, and faculty. Please report any situations or behaviors that do not meet these standards so that we can address them and find a solution to make this a safe and supportive environment for everyone.

It is important that all students in this class feel welcome and have an equal opportunity to learn. Throughout the course we will incorporate real-world examples of chemistry and discuss the social and historical contexts in which chemistry developed as a scientific field. Students are encouraged to reflect on how chemistry impacts them and their communities while being respectful of the unique experiences of other students.

Suggestions about how to improve the value of diversity and inclusion in this course are encouraged and appreciated

## LAND ACKNOWLEDGMENT

For millennia, the Kumeyaay people have been a part of this land. This land has nourished, healed, protected and embraced them for many generations in a relationship of balance and harmony. As members of the San Diego State University community, we acknowledge this legacy. We promote this balance and harmony. We find inspiration from this land, the land of the Kumeyaay.

# **COURSE MATERIALS – REQUIRED**

## Day1Ready

All required materials (except for the lab manual) for this class are available in digital format by the first day of classes and are free up until **the drop date at 11:59 pm July 1**. After this date, your SDSU student account will be charged a flat rate of \$21.75/unit.

Please visit Day1Ready for additional information about pricing digital subscription duration, print add-ons, opting out, and other frequently asked questions. Through Day1Ready you will have access to the textbook, Aktiv online homework, Top Hat, the Labflow software for lab report submission and purchase of the physical lab manual.

You may also choose to opt out of Day1Ready and purchase your course materials yourself. To do so, visit <u>https://ezbooks.sdsu.edu/D1R</u> and sign in with your SDSU account. Course materials can be obtained through the bookstore or directly from the publishers for the prices listed below.

Top Hat Pro: \$33, Aktiv Chemistry: \$45, Labflow: \$77

## Textbook

Chemistry: Atoms First 2<sup>nd</sup> Edition (OpenStax Textbook).

You will have access through your Top Hat account and can also access freely online <u>https://openstax.org/details/books/chemistry-atoms-first-2e</u>. Note that your instructor may have edited the text, so the Top Hat version should be your primary reference.

## Lab Manual

<u>Chem 100L: Preparation for General Laboratory Manual</u>, Chemistry Dept. Printed by Catalyst Education, Fall 2024 – Spring 2025.

Physical copies will be distributed to all enrolled students during the first lab in Week 1.

Pre-lab assignments and post-lab reports will be submitted online using Labflow software. Instructions for using Labflow are posted in Canvas.

## Lab Equipment

Safety glasses, nitrile gloves (can be purchased at the SDSU bookstore or available at drugstores such as CVS and Walgreens), matches or butane lighter, and a flame-resistant lab coat (blue) or lab apron (yellow).

Do NOT purchase the white lab coat in the bookstore, it is not flame resistant.

## Lecture Engagement

Top Hat will be used for pre-class reading assignments and for in-class participation during the lecture period by engaging with the course material in real time with a smartphone, iPad/tablet, or laptop. Instructions for using Top Hat are posted in Canvas.

## **Online Homework**

Aktiv will be used for online homework each week and exam review problems before each exam. Instructions for using Aktiv are posted in Canvas. There are 12 Aktiv homework assignments, the lowest two scores will automatically be dropped.

## Additional Items

Calculator. The recommended calculator for this course is the Casio fx-300ms-plus, but you may use any non-graphing scientific calculator you prefer.

# STUDENT LEARNING OUTCOMES

## **Course Description**

Preparation for general chemistry. Emphasis on conceptual understanding of chemical principles, quantitative problem solving, and skills needed for success in general chemistry course and laboratory. Not open to students with credit in CHEM 200.

- This course fulfills the GE for Natural Sciences and Quantitative Reasoning.
- Course prerequisites: Strong working ability with high school level algebra.

Student Learning Outcomes (SLOs) are aligned with the Chemistry & Biochemistry Department <u>Curriculum Map</u> Degree Learning Outcomes (DLOs)

- 1. Describe, recognize, draw, and name important classes of atoms, functional groups, and molecules. (Nomenclature & Structure)
- 2. Describe the atomic and subatomic structure and properties of matter. (Atomic Structure)
- 3. Describe the origin and properties of chemical bonding and the influence on structure and properties of the molecules. (Molecular Structure)
- 4. Describe how the macromolecular properties of matter are determined by the molecular characteristics. (Molecules to Macro)
- 5. Predict the outcome of, and describe the mechanisms for, various chemical reactions. (Reactions)
- 6. Demonstrate the ability to quantify and interpret the reliability of measured physical and chemical properties of molecules and mixtures employing dimensional and appropriate statistical analysis. (Calculations)
- 7. Develop proficiency with modern instrumentation and techniques used in chemical laboratories (Lab Technique)
- 8. Recognize that the field of chemistry has historically centered knowledge from limited groups of people and identify contributions from more diverse scientists (Diversity, Equity, Inclusion)

## ESSENTIAL STUDENT INFORMATION

For essential information about student academic success, please see the <u>SDSU</u> <u>Student</u> <u>Academic Success Handbook</u>.

- SDSU provides disability-related accommodations via Student Disability Services (sds@sdsu.edu | sds.sdsu.edu/). Please allow 10-14 business days for SDS to process your SDS application. SDS students are responsible for following Testing Accommodations Center (TAC) guidelines in making appointments for exams. Exams will be available at TAC only during class lecture times.
- Religious Holidays: Please notify the lab coordinator within the first week of class of any planned absences from exams, quizzes, or labs due to religious holidays so that we can arrange some reasonable accommodation.
- Students are provided with an SDSU Gmail account, and this SDSU email address will be used for all communications. Per <u>University Senate policy</u>, students are responsible for checking their official university email regularly.

- All communication regarding this course should occur through official SDSU email accounts, not through Canvas. The course instructor and coordinators will be available via email to answer questions or to schedule meetings. Please allow at least 24 hours for a response, longer over weekends and holidays. To ensure a prompt response include CHEM 100, Summer session in the subject line and make sure to provide your full name and lab section. You will not receive a response if you do not use your sdsu.edu address.
- Class rosters are provided to the instructor with the student's legal name. Please let me know if you would prefer an alternate name and/or gender pronouns.
- This course involves the use and handling of hazardous materials. Before conducting any experiments, you must complete the following 3 requirements:

(1) Training and Objective pages and the Safety Training Acknowledgement Survey in the Hazardous Materials and Hazardous Equipment in Instructional Courses Module, of our Canvas course. This module is located above Week 1 Module in the Canvas Course

(2) Safety Review Quiz in the Week 1 Module (found in the Labflow Introduction)

(3) An in-person safety quiz during the Week 1 lab session.

- You must be enrolled in one laboratory section as well as lecture. You must attend the laboratory section in CHEM 100 for which you are enrolled. Never attend a lab session that is not on your class schedule, the TA will not let you in.
- Academic honesty: 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. Any use of generative AI (like ChatGPT or Gemini) not approved by the instructor constitutes misuse and is violation of course policy on academic dishonesty and be subject to discipline under the terms of the <u>SDSU</u> <u>Student Code of Conduct</u> and will be reported to the Center for Student Rights and Responsibilities. It is important to do your own work as 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.

# COURSE DESIGN: MAJOR ASSIGNMENTS AND ASSESSMENTS

## Lecture Assignments (Aktiv Homework and Exam Reviews)

**Aktiv Homework** has hard deadlines, and no individual extensions will be granted. There are 12 homework assignments and are denoted in Aktiv by the week and by the chapters they cover, e.g. "Week 1 Aktiv HW (Ch 1)." Consult the class schedule for all due dates. The **two lowest scores will be dropped** for whatever reason. This includes and is intended for when you are sick.

- It is in your best interest to complete all problems in each homework to ensure that you are fully prepared for the exams.
- Work on the problems several days before they are due so that you have time to go to the professor Clare's office hours or your Chem 100 TA's office hours 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 prepare for the exams.
- It is highly recommended that you buy a notebook to write out your work on the problem sets to keep good notes and to make your studying more efficient.
- You will have multiple attempts for each HW problem. Your score will be based on the percent correct answers, with a max of 15 points per homework.
- Scores will be transferred from Aktiv to Canvas throughout the semester

Aktiv Exam Review Quizzes (30 points each) are to assess your understanding of material and help you prepare for exams. They are denoted in Aktiv as Exam Review Quiz and will be labeled by the exam and chapter material covered. For example, "Exam 1 Review Quiz (Ch1, 2.1 - 2.3, 3 & 11.2)" will help you prepare for Exam 1 by reviewing concepts and solving problems from all chapters covered on the exam. These quizzes are found in the homework section on Aktiv. You will have **unlimited attempts**, and your grade will be based on the final number of correct answers you have.

**Aktiv Assignments Due dates:** All HW will be due at 11:55 pm on Sunday on a mostly weekly basis. Exam Reviews will be due at 11:30 am the morning of the exam. Check the schedule for exact due dates. Announcements on Canvas will remind you of deadlines.

For problems with Aktiv registration and other technical difficulties contact the Aktiv tech support via email (support@aktiv.com) or through their support site aktiv.com/support.

## Lecture Engagement (Top Hat)

Regular engagement with course material is important for your success. A maximum of 125 Lecture Engagement points can be earned, and you will have approximately 160 points available to you throughout the semester. You can choose your preferred way to earn points. Points can be earned by correctly answering any combination of questions embedded in the online textbook within Top Hat or questions posed in Top Hat in real-time during lecture. All questions will have due dates and cannot be completed for points after those due dates but will be available for you to review after the due date. Top Hat points will be visible within Top Hat and transferred to Canvas at the end of the semester (max 125 points).

Instructions and a link for accessing Top Hat will be provided on Canvas. Should you require assistance with Top Hat at any time please contact their Support Team via email (<u>support@tophat.com</u>), the in-app support button, or by calling 1-888-663-5491.

## <u>Exams</u>

There will be three online midterm exams. All exams will be given during lecture while students are in attendance through Zoom.

Exams are cumulative but will primarily focus on the assigned chapters. Each midterm exam is worth 80 points and will last 60 minutes. Exams will begin promptly at the scheduled time and end within the allotted time frame. For each exam students are to have a copy of the periodic table, one copy of the exam sheet and one page (front and back) of student notes for the exam. Students will be asked to write out calculations for preselected problems. Once the exam has been submitted, a link to upload your work and student's notes will become available. You must write clearly and upload your written work with your one page (front and back) of students notes within one half-hour of finishing the exam or you will receive a zero score.

## Final Exam

The final exam is cumulative, covering all course topics and is worth 130 points. It will be given online through Canvas while students are in attendance through Zoom, **Thursday, August 14, from 12:00 pm to 2:00 pm**.

## Makeup Exam Policy

Makeup exams will only be considered in the case of a health emergency. You must contact the instructor before the exam begins – no exceptions. Student must provide documentation that proves a health emergency. All documentation must specify the date of your emergency along with the treating doctor's phone number for verification. A doctor's appointment is not considered an emergency. Without formal documentation, you will not be allowed to make up an exam.

## Exams for SDSU Athletes

If you are an NCAA athlete at SDSU, you must submit your competition schedule to Professor Clare within the first week of the summer session. Only then can we arrange accommodations for potential exam conflicts. No accommodations are provided for club athletes.

## Lab Assignments

Chemistry is an experimental science. As such, its principles are best illustrated in the laboratory setting. You will learn many basic principles of chemistry in a modern, well-equipped laboratory environment. Learn the <u>name</u> of your laboratory teaching assistant (TA) and your <u>lab section</u> <u>number</u>.

- Lab attendance is **mandatory** and students who miss more than 4 of the labs or fail to submit more than 4 pre- or post- lab assignments will not receive a passing grade in this course, regardless of how many points were earned on other 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 is allowed on the benchtop, on the floor or outside a backpack in the cubby at any time. Put all capped drinks and food inside backpack, close backpack and store inside cubby or below dry

erase board.

- If you have forgotten your safety glasses then you must either borrow a pair from a friend, buy new ones at the bookstore, or go home and take a zero on that lab.
- Lab work for CHEM 100 must be performed in the lab section you are registered for during your scheduled lab hours. **Do not** attend any lab session other than the lab you are registered for, or you will receive a zero for that lab.
- There are 10 lab participation points. Students will be issued 10 points at the outset of the semester. Points will be deducted throughout the semester at the discretion of the lab TA. Points will be deducted for:
  - being late (up to 20 minutes late. After 20 minutes you will not be allowed into the lab),
  - improperly disposing of chemicals (this includes pouring hazardous waste into a full hazardous waste container)
  - o not wearing safety glasses.
- Two, CHEM 100 students will be checking into and sharing a 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.

# Using Labflow to complete and submit lab assignments

Labflow is an online platform for which you will be completing one online safety quiz. For the rest of the summer session, both pre-lab and post-lab assignments will be uploaded through Labflow to be graded.

## **Pre-lab Assignments**

Before each lab you will complete at 3-point assignment in Labflow to check your understanding of the upcoming topic. You will receive 4 attempts for each assignment before the due date to earn full credit. You will have one week in which to read through and complete the pre-lab before the assignment is due

## Post-lab Assignments

Post-lab assignments are worth 12 points each and are due within 24 hours of your lab ending. You will be asked to scan and upload to the Labflow platform, designated pages from your lab manual for each experiment. This will also include any post-lab data, calculations, and/or question responses. **Be sure to press the submit button to submit your assignment or you will lose 50% credit**. No credit will be given for a post-lab assignment report if the experiment was not actually done by that student. Each report is due 24 hours after the class end time. This means for morning labs, you must submit your post-lab assignment before 12:00 pm the next day. For the afternoon lab, you must submit your lab assignment before 5:00 pm, the next day. If you miss the due date time your score will be reduced by 50%.

## Labflow Token Economy

We are introducing the Labflow Token Economy Plan for the summer session. This plan allows students to earn tokens then spend tokens on post-lab due date extensions. Tokens can be earned by completing the Labflow Safety Quiz and/or scoring 95% and above for each pre-lab assignment.

Tokens can also be earned in lab if the TA acknowledges that you have gone above and beyond in helping to keep the lab clean and/or alert the TA of an overflowing hazardous container. The number of due date extension shall not exceed three extensions. The token economy will make no provisions for missing labs, only for submitting late work without penalty.

## Lab Absences

Because of logistical constraints, you will not be allowed to make up missed lab experiments. This means that you will not be allowed to come to lab at a different time to make up for a missed lab session. However, your lowest pre- and post-lab assignment score will be dropped when determining your course grade. Use this free pass wisely, as the first missed lab—regardless of the reason—will automatically count as your dropped score. This includes and is intended for when you are sick. If you are sick, obtain a doctor's note that specifies the days excused and the treating doctor's phone number.

If you miss a second lab, you must contact the lab coordinator (<u>lclare+chem100@sdsu.edu</u>) to request an excusal. For this second missed lab to be excused, you must have formal documentation for ALL missed labs. Examples of formal documentation include doctor's notes, notes from student health or your doctor, a funeral program, or a police report, only if you were sick for the first absence. The documentation must include the specific dates you were unable to attend school and provide a phone number for verification. A doctor's appointment is not considered an emergency.

If you test positive for COVID, send your results to SDSU. Following a positive test result the student will be contacted by a COVID Assessment and Response team member to help navigate through the illness. If student is asymptomatic, you may attend classes and wear a mask. Students with COVID-19 are permitted to return to school and work as long as they are fever-free for 24 hours without the use of fever reducing medication.

If you are feeling unwell do not go to class but attend a doctor's appointment and obtain a doctor's note. For more information, go to the link to the <u>Center for Students Rights and Responsibilities</u>.

Student Health Services offers COVID-19 testing Monday-Friday.

# COURSE SUPPORT: FREE RESOURCES

It is <u>highly</u> recommend that you take advantage of the free resources provided by SDSU. Instructors help hours are online and are after lecture on Tuesdays and Wednesdays. Your lab TA will schedule two hours per week for office/help room hours. There are STEM tutors available to help you through the Math Science Learning Center (MSLC). Students are encouraged to make appointments for Chem tutoring.

## The Mathematics and Science Learning Center (MSLC)

Instructor and teaching assistant (TA) office (help room) hours for this course will be held online. A schedule will be made available during the first week of summer session. Students are also encouraged to make use of MSLC's free STEM tutoring. Virtual tutoring at MSLC is available Sunday through Friday by appointment only. For a full list of courses tutored and the most recent schedule of TA and tutor help hours, please visit the MSLC website: <a href="https://mslc.sdsu.edu/">https://mslc.sdsu.edu/</a>.

The MSLC is supported by your student success fee. We strongly encourage you to use this wonderful, free resource. Some students believe that they shouldn't need to ask for help, but research has shown that **the average grade for students who use the MSLC is almost one full grade higher than those who don't seek support**.

## Supplemental Instruction (SI) (Not Available during Summer Session)

SI Sessions are free study sessions and will be offered each week, throughout the 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: <u>https://bit.ly/SDSU\_SI</u>
- Meet the SI Leaders: <u>https://studentsuccess.sdsu.edu/supplemental-instruction/leaders/chem100</u>
- Calendar: <u>https://studentsuccess.sdsu.edu/supplemental-instruction/session-schedules</u>

# **GRADING POLICIES**

Your letter grade will be determined by your individual points total for the course. There will be no curving of the course grades. This is a tentative grade range breakdown for each letter grade. The instructor reserves the right to universally modify

this grade scale prior to assigning final letter grades. Earning the respective percentage in the course listed here will result in the grade noted. It is possible that the percentages may be lowered, but they will not be raised for a given letter grade.

| Percentage       | Letter Grade |  |
|------------------|--------------|--|
| ≥ 93.33          | A            |  |
| 90 to < 93.33    | A-           |  |
| 86.66 to < 90    | B+           |  |
| 83.33 to < 86.66 | В            |  |
| 80 to < 83.33    | B-           |  |
| 76.66 to < 80    | C+           |  |
| 73.33 to < 76.66 | С            |  |
| 70 to < 73.33    | C-           |  |
| 66.66 to < 70    | D+           |  |
| 60 to < 66.66    | D            |  |
| < 60             | F            |  |

| Item                 | Submission               | Number         | Value | Total | % of grade |
|----------------------|--------------------------|----------------|-------|-------|------------|
| Discussion           | Canvas                   | 12             | 5     | 60    | 6.0%       |
| Weekly Homework      | Aktiv                    | Best 10 of 12  | 15    | 150   | 15.0%      |
| Exam Reviews         | Aktiv                    | 3              | 30    | 90    | 9.0%       |
| Midterm Exams        | Canvas (online)          | 3              | 80    | 240   | 24.0%      |
| Final Exam           | Canvas (online)          | 1              | 130   | 130   | 13.0%      |
| Scavenger Hunt       | Canvas                   | 1              | 10    | 10    | 1.0%       |
| Lecture Engagement   | Top Hat                  | TBD (variable) | TBD   | 125   | 12.5%      |
| Lab Safety Training  | Canvas, Labflow & Lab TA | 1              | 20    | 20    | 2.0%       |
| Pre-Lab Assignments  | Labflow                  | Best 11 of 12  | 3     | 33    | 3.3%       |
| Post-Lab Assignments | Labflow                  | Best 11 of 12  | 12    | 132   | 13.2%      |
| Lab Participation    | Canvas                   | 1              | 10    | 10    | 1.0%       |
|                      |                          |                | Total | 1000  | 100.0%     |

| Summary of Exam Topics and Dates |   |                                  |  |  |
|----------------------------------|---|----------------------------------|--|--|
|                                  | Topic:  | Exam Dates and Times             |  |  |
| Exam 1                           | Chapters 1, 2, 3 & 11.2                             | 12:05 pm – 1:05 pm, Thurs July 3 |  |  |
| Exam 2                           | Chapters 4, 5 & 10                                  | 12:05 pm – 1:05 pm, Mon, July 21 |  |  |
| Exam 3                           | Chapters 2.4, 6, & 7                                | 12:05 pm – 1:05 pm, Wed, Aug 6   |  |  |
| Final Exam                       | All Covered Chapters & Topics<br>(Ch 1 – 10 & 11.2) | 12:00 pm — 2:00 pm Thurs, Aug 14 |  |  |

All dates and time are Pacific. This syllabus and schedule are subject to change. I will make any changes clear with announcements in class and on the Canvas website using Announcements. It is your responsibility to check your Canvas Announcement.

| Week | Date          | Lecture Topic (TopHat)                                    | Lab Material<br>(Labflow)   | Homework &<br>Other Due<br>Dates  |
|------|---------------|---|---|---|
|      | June 23, 2025 | Introduction/ Chapter 1                                   | Monday Lab:   | Scavenger Hunt<br>(Canvas) due  |
|      | lune 24, 2025 | Chapter 1   | Lab Check-in &  | June26 at 11:25   |
| 1    | June 25, 2025 | Chapter 1/2   |   | 11:55 pm, June 26   |
| •    | June 26, 2025 | Chapter 2 (skip 2.4)/3                                    | Thursday lab  | Math Readiness  |
|      | ,             |   | Lab 1 – Use of<br>Volumetric Equipment<br>Due June 27                   | Diagnostic (Aktiv) due<br>June 29 at 11:55 pm   |
|      |               |   |   | Aktiv HW (Ch 1<br>and Ch 2) due June<br>29 at 11:55 pm  |
|      |               |   |   | Top Hat Pre-class<br>Reading Chpt 1, 2,<br>3, & 11.2  |
|      |               |   |   | Questions due @<br>11:30 am July 3  |
|      | June 30, 2025 | Chapter 3   |   | The last day to   |
|      | July 1, 2025  | Chapter 3   | June 30 Monday  | add/drop this   |
|      | July 2, 2025  | Chapter 3 & 11.2  | Graphing in Excel   | class is July 1   |
|      | July 3, 2025  | <b>Exam 1 Chapters (1, 2, 3 &amp;</b><br>11 2)/ Chapter 4 | due July 1  | at 11.55 pm.  |
| 2    |               |   | No Thursday lab   | Aktiv HW (Ch 3<br>and 11.2) due July 2<br>at 11:55 pm<br>Exam Review Quiz<br>1 due July 3, at<br>11:30 am |
|      | July 7, 2025  | Chapter 4   |   |   |
|      | July 8, 2025  | Chapter 4   | July 7 Monday lab:  | Aktiv HW (Ch 4.1-   |
|      | July 9, 2025  | Chapter 5   | Lab 3 Atomic Spectra  | 4.3) due July 13 at   |
|      | July 10, 2025 | Chapter 5   | due July 8  | 11.55 pm  |
| 3    |               |   | July 10 Thurs Lab:<br>Lab 4 Nomenclature<br>Worksheet due July 11       | Top Hat Pre-class<br>Reading Chpt 4, 5,<br>& 10 Questions<br>due @ 11:30 am<br>July 21                    |
|      | July 14, 2025 | Chapter 10  | July 14 Mon Lab:  |   |
|      | July 15, 2025 | Chapter 10  | Lab 5 VSEPR   | Aktiv HW (Ch 10)  |
|      | July 16, 2025 | Chapter 10/2.4  | VVorksheet -Due July  | pm  |
|      | July 17, 2025 | Chapter 6.1& 6.2  | 15  |   |
| 4    |               |   | July 17 Thurs Lab: Lab<br>6 Intermolecular<br>Forces Due July 18        |   |
|      | July 21, 2025 | Exam 2 chapters 4, 5 & 10                                 | , -   | Exam 2 Review   |
|      | July 22, 2025 | Chapter 6.1 & 6.2   | No Monday Lab   | Quiz due July 21,<br>at 11:30 am  |
| 5    | July 23 2025  | Chapter 6.3 & 6.4   |   | at 11.30 dill   |
|      | July 24, 2025 | Chapter 7   | July 24 Thurs Lab:<br>Lab 7 Unknown<br>Metal Carbonate - Due<br>July 25 | Aktiv HW (Ch 6.1 &<br>6.2, Ch 6.3 & 6.4)<br>due July 27 at 11:55<br>pm                                    |

| 6 | July 28, 2025<br>July 29, 2025<br>July 30, 2025<br>July 31, 2025 | Chapter 7<br>Chapter 7<br>Chapter 7<br>Chapter 8 | July 28 Monday Lab:<br>Lab 8 Empirical<br>Formula of<br>Magnesium Oxide -<br>Due July 29<br>July 31Thurs Lab: Lab    | Aktiv HW (Ch 7)<br>due August 3 at<br>11:55 pm  |
|---|--|--|--|---|
|   |  |  | Insoluble Salts<br>Magnesium Oxide –<br>Due Aug 1  |   |
|   | August 4, 2025   | Chapter 8  |  | Aktiv HW (Ch 8)   |
|   | August 5, 2025   | Chapter 8  | August 4, Monday   | 11:55 pm.   |
| 7 | August 6, 2025   | Chapter 9  | Reactant – Due Aug 5   | Exam 3 Poviow   |
|   | August 7, 2023   | Chapter 3  | August 7, Thurs Lab:<br>Lab 11, Determination<br>of the Molar Volume of<br>a Gas and the Gas<br>Constant – Due Aug 8 | Quiz due August 6,<br>at 11:30 am<br>Top Hat Pre-class<br>Reading Chpt 2.4,<br>6, & 7 Questions<br>due @ 11:30 am<br>August 6 |
|   | August 11, 2025  | Chapter 9  | August 11, Monday  | Aktiv HW (Ch 9)<br>due August 13 at   |
| 8 | August 12, 2025  | Chapter 9<br>Review                              | Heat Capacity and Lab  | 11:55 pm.   |
|   | August 14, 2025  | Final  | Check-Out.<br>Lab is Due Aug 12  | Top Hat Pre-class<br>Reading Chpt 2.4,<br>5, & 10 Questions<br>due @ 11:30 am<br>August 14                                    |

On-line Final is August 14 from 12:00 to 2:00pm