# Chemistry 100 – Introduction to General Chemistry Spring 2022

### Instructor:

Professor: Dr.K. (David Kretchmar, PhD.) Lecture time and Room – 9:00 - 9:50 am MWF, AL 201 Office: Love Library Room 328 (MSLC –  $3^{rd}$  floor Love Library) Office Hours: MW 11:10 am - 12:40 pm, F  $\approx$  10-11 am <u>or by appointment on MWF</u>. Email: <u>dkretchmar@sdsu.edu</u>

### Waitlister's Website: http://www.chemistry.sdsu.edu/courses/CHEM100

*Waitlist students should email* <u>Lclare+chem100@sdsu.edu</u> *with your name and Red ID info ASAP to gain access to materials on Canvas.* In consultation with the coordinator, you should attend one lab section a week and keep track of which lab you attended. Use the chem 100 website to find information regarding resources for you to not miss any assignments.

You are 100% responsible for all assignments that are due and for keeping up with the work.

## Lab and Class Coordinator: Laurie Clare, M.S.

Office: CSL 313, for appointment, email: <u>Lclare+chem100@sdsu.edu</u>

For any questions regarding this class or associated labs, contact the coordinator. Please use your SDSU email address and include your red ID and section number in the email.

### Modes of Instruction, Lecture:

From Jan 19 until February 4, the first eight lecture classes will be held online. In-person lectures are scheduled to begin on Feb 7. Students must attend online lecture at 9:00 am - 9:50 am. Dr K's Zoom link will be available on Canvas. Keep in mind, the in-person start date could be postponed to a later date. When lecture resumes it will be held in AL 201 which is a large auditorium. In this setting, it is important to be considerate of other students in the room and not talk or make loud noises during lecture. All exams and the final are online.

# Modes of Instruction, Lab:

From Jan 19 until Feb 4, labs will be held online. Online lab sessions will start the second week of the semester (Jan 24 – Jan 28). Students must attend their scheduled lab section to receive lecture from their TA. TA Zoom links will be posted in Canvas Please note that Lab 2 is an online simulation. Students must purchase the lab manual then use the code on the inside cover to access Hayden-McNeil lab simulations. (Note: in case of an extension for online labs, we will continue using Hayden-McNeil online lab simulations. The coordinator will announce the schedule for these simulations)

Lab rooms for this semester are CSL 522, and 524. Attendance is **required for lab sessions (both online and in-person)**. Lab teaching assistants (TAs) will take attendance during their lab session.

Prerequisites: Strong working ability with high school level algebra.

**Textbook (Required):** Blei and Odian, *Introduction to General Chemistry 2<sup>nd</sup> edition*, SBN 9780738080710 (Use Immediate Access link available on Canvas)

**Immediate Access:** All the required course materials, except for the lab manual, are available in a digital format by the first day of classes and are free through the add/drop date of **February 1, 2022**. Your SDSU student account will then be charged a special reduced price for use of the materials for the remainder of the semester unless you opt-out of the content by 7:59 PM on the add/drop date **February 1, 2022**. Please visit: <u>www.shopaztecs.com/immediateaccess</u> for additional information about Immediate Access pricing, digital subscription duration, print add-ons, opting out and other frequently asked questions.

**Study aides (Optional):** Study Guide for General, Organic, and Biochemistry, Second Edition (2006) M.L. Gillette & W. Gloffke

**Lab Manual (Required):** Chem 100 Lab Manual, Chemistry Dept. Printed by Hayden MacNeil, Fall 2021 – Spring 2022. The lab manual is available through the SDSU bookstore.

<u>OWLv2 HW (Required)</u>: Cengage OWLv2 will be used extensively for online homework and quizzes. Chapter Problem Sets will serve as homework problems that allow unlimited attempts. Chapter Assessments serve as quizzes that allow 3 attempts. A link for Cengage OWLv2 will be available on Canvas in the Chem 100 Important Information and Links module. Your SDSU account will be charged \$25 for the use of OWLv2.

Lab Equipment (Required): Safety glasses, lab coat or lab apron and nitrile gloves.

<u>Additional items (Required):</u> Calculator (e.g., TI-30Xa or Casio fx-300ms plus): needs to be a scientific but non-graphing and non-programmable. The recommended calculator for this course is the Casio fx-300ms-plus calculator.

### Online Resources:

- <u>Canvas</u>: 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.
- <u>OWLv2 Assignments</u>: Cengage OWLv2 will be used extensively for online Chapter Problem Set and Chapter Assessment aka chapter homework and quizzes. A link for Cengage OWLv2 will be available on Canvas in the Chem 100 Important Information and Links module.
- Lab Simulations (Hayden McNeil): During the first days of mandatory online instruction, lab simulations will be used. Access to these simulations will be available using a code on the inside cover of your CHEM 100 Lab Manual via the online link, courses.haydenmcneil.com.

- If the mandatory online period is extended, you will receive further instruction on which lab simulations to access. Upon return to Face-to-face instruction, we will use the experiments and worksheets in the lab manual and all work will be submitted to the lab TA before leaving the lab.
- All online lab worksheets will be uploaded to Canvas as a pdf file. Use your phone to take a photo or scan the document. Make sure that the file uploaded to Canvas is a pdf file.

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

# Enrolled students: <u>It is important that you attend all of your laboratory sessions including</u> <u>online lab sessions.</u>

You must 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 (<u>Lclare+chem100@sdsu.edu</u>) as soon as possible so your place can be given to a waitlisted student. If you attend a lab session for which you are not enrolled after the drop/add date, you will receive a zero on that week's lab assignment.

**COVID-19 Policy for Spring 2022:** Effective Fall 2021, students who register for face-to-face classes are expected to attend as indicated in the course schedule. Faculty teaching face-to-face courses will not be required to create a new, alternative on-line class as an accommodation for any student. (This is applicable after we pivot back to face-to-face)

Students with medical conditions that would present a COVID-related risk in a face-to-face instructional setting should contact the Student Ability Success Center (<u>https://sdsu.edu/sasc</u>) to begin the process of getting support. Students who do not adhere to the <u>Covid19 Student Policies</u> or the directives of their faculty will be directed to leave the classroom and will be referred to the Center for Student Rights and Responsibilities.

Do not come to campus if you do not feel well. Remain home and monitor your symptoms and seek medical attention as needed.

# 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 <u>Healtheconnect</u>. If you opt for exemption, you must provide COVID-19 test results every 5-7 days. Plan accordingly, missing lab because of non-clearance is not a valid excuse and will result in zero scores. For more information use the following link: <u>https://sacd.sdsu.edu/student-health-services/covid-19</u>

Contact the lab coordinator if you will be absent from a lab session. If students need assistance purchasing facial coverings, please contact the <u>Economic Crisis Response</u> <u>Team</u>.

**Dropping the course:** It is your responsibility to follow university policies regarding Cr/NC, drops, withdrawals, and incompletes. Your last opportunity to withdraw from the course without a grade appearing on your report card is **February 1, at 7:59 p.m**.

**Email Policy:** Students are provided with an SDSU Gmail account, and this <u>SDSU email</u> <u>address</u> 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<u>Student Official Email Address Use Policy here</u>. Scroll to the bottom of the page

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.

**Preferred Names & Pronouns:** Any student who wishes to be addressed by a name other than what is presented in Canvas is encouraged to contact <u>Lclare+chem100@sdsu.edu</u> with the name you wish to use. Similarly, if you have preferred pronouns that you wish to be addressed by please contact the coordinator. The coordinator will communicate your desires to the TAs and all instructional staff will gladly honor your request.

## The Mathematics and Statistics Learning Center (MSLC):

Instructor and TA Office Hours for this courses will be held in the MSLC (<u>https://mlc.sdsu.edu/chemistry-ta/</u>). Students are also encouraged to make use of MSLC for free drop-in STEM tutoring for other courses. The MSLC is available Sunday through Friday.

Following SDSU guidelines, all visits to the MSLC will be virtual through Feb 6. To join virtual help room hours go to <u>https://mlc.sdsu.edu/</u>  $\rightarrow$  Click on "Enter Virtual MSLC here!"  $\rightarrow$  Fill out and submit the form.

Starting Feb 7, options for in-person help will be available in the MSLC space in the Love Library, Room 328.

For a full list of courses tutored and the most recent schedule of virtual and face to face help room hours, please visit the MSLC website: <u>https://mlc.sdsu.edu/</u>.

It is <u>highly</u> recommended that you take advantage of the tutoring services as well getting help from any of the Chem 100 TAs. These are opportunities to ask tutors and/or teaching assistants questions that arise during your studies. Any student may attend any of the Chem tutoring hours or any TA help hour and you may attend as many as you like. Take advantage of these services, they are there to help you. The weekly schedule for TA hours will be available on Canvas at the end of the first week. Again, I urge you to take advantage of these free tutorials, discussions of lecture/lab material, and homework help.

## General Student 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.

This course fulfills the GE Natural Sciences and Quantitative Reasoning requirement.

To be successful in this course, you will need to spend a considerable amount of time (estimated at approximately 12 hours per week) outside of class on reading, studying, and homework. Each chapter should be read prior to coming to lectures. Rereading the text after attending lecture will help in understanding the material and reinforcing lecture topics. Homework problems are best completed as they are being presented and discussed in work sessions with your instructor or office hours. Do not put off study and homework assignments until the night before the exam or you will fail. Attendance at labs is a must unless you are seriously ill.

### Supplemental Instruction (SI):

Free study sessions designed to keep you up-to-date with the course. SI Sessions are open to all students, and you can attend as many sessions as you want throughout the semester. Participation is completely voluntary, and the instructor does not know who participates.

SI Sessions are led by an SI Leader, a *current student* who has recently successfully completed the course. 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.

Why Attend SI?

- Keep up with the class material
- Study with other students in live time (don't study alone!)
- Meet other students from the class
- Improve your grade

### CHECK OUT THE SI CALENDAR: bit.ly/chem100sicalendar

- SI Program: <u>bit.ly/SlatSDSU</u>
- Meet the SI Leaders: <u>https://caa.sdsu.edu/supplemental-instruction/leaders/chem100</u>

### To get the most out of SI, attend early and often.

### (OWLv2) Assignments:

Before you begin the first graded assignment, there will be several Introductions to OWLv2 Assignments. These Intro Assignments are to help guide you into using the program. Attempting to use OWLv2 without understanding how the program works can lead to issues later. Please take notes while you are doing these Intro assignments since the topics will be covered later. **Chapter Assessments (OWLv2)** are hard deadlines and extensions will not be granted. **You will have two attempts at the chapter assessment**. The Chapter Assessments questions are to assess your learning of that Chapter and to help prepare you for the exam. Do not wait until the last minute to complete the prep. Note that Chapters 3,4,and 9 have two sets of Assessments identified as Assessment #a and Assessment #b

**Chapter Problem Sets (OWLv2)** have the same hard deadlines and no extensions will be granted There will be a chapter problem set from each of the 10 chapters covered in the text. Chapters 3,4 and 9 have two chapter sets denoted as Chapter #a and Chapter #b. Work on the problems several days before it's due so you have time to go to the MSLC for tutoring or find any Chem 100 TA at the MSLC and ask for more help. Never wait until the last day to work on the problem set; otherwise, you will be rushing through the assignment and instead of learning how to break down problems and theories to better equip you for the exams.

- **Each chapter** will have different point total. Your score will be based on the percent correct to receive the **max of 10 points.**
- It is in your best interest to complete all problems in the Chapter Problem sets to ensure that you are fully prepared for the exams.
- Scores for Chapter Problem Sets and Chapter Assessment scores will be uploaded with Exam scores. Please watch your email for important announcements regarding the uploads. Errors occur due to incorrect RedID number, incorrect email address, multiple OWLv2 accounts and/or your work is in the wrong section and is not recognized for a score.

**OWL Assignment Due dates**: Chapter Assessments and Chapter Problem sets will be due at 11:55 pm on a weekly basis. Check the schedule for due dates, you will find that for the most part, homework is due on Saturdays and Assessments are due on Sundays. On a few occasions homework and Assessments are due just before an exam. Check the schedule to be sure. Announcements will be made to help you complete the work on time.

Note: I highly recommend you buy a composition book to work on the problem sets to keep good notes and to make your studying more efficient.

# Exams, Lab Sessions and Lab Participation

**Exams (Canvas):** There are 4 mid-term exams. All exams are cumulative but will focus mainly on content within the assigned chapters. There will be a 24-hour period (referred to as "window of availability") in which you have 90 minutes to complete each exam. The window of availability will start at 3:00 pm Pacific Time, Friday and end 3:00 pm Pacific Time Saturday, on dates noted in the course schedule. You will not come to class to take the exam, but make sure your computer is operational and that you have good Wi-Fi in order to complete the exam. No exam retakes will be allowed for technical issues. 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, as soon as possible.

# Without verifiable medical documentation, you will not be allowed to make up an exam.

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 assessment will be considered dishonest academic conduct. The instructors and coordinator reserve the right to make exceptions to this policy at their discretion. If you need to borrow a computer, contact SDSU Economic Crises Response Team for technology support at <u>sdsu.edu/ecrt</u>

**Final Exam (Canvas):** The final will cover all 10 chapters of the course and will be taken on Canvas. The final will be given on May 9, from 8:00 am to 10:00 am. There will be no make-up, except in the case of appropriately documented medical absences. In the event you miss the final exam or know that you will be missing the final, contact the coordinator by email, <u>Lclare+chem100@sdsu.edu</u>, *as soon as possible*. The use of any disallowed materials/references or communication with anyone other than the instructor/coordinator during an exam will be considered dishonest academic conduct. The instructor/coordinator reserves the right to make exceptions to this policy at their discretion

Lab Assignments (In-person using Hayden-McNeil Lab Manual): 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 <u>name</u> of your laboratory teaching assistant (TA) and your <u>lab section number</u>. 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, flame resistant (blue) lab coat or flameresistant yellow apron, pants or skirts (with no holes) that end below mid-calf
  and closed-toe shoes. 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.
- 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 or 524 during the lab hours for which you as a student is registered. Do Not attend any other lab session other than the lab section you are registered for, or you will receive a zero score for that lab assignment.
- Because of logistical constraints, you will not be allowed to make up missed lab experiments; however, your two lowest lab report scores will be dropped when determining your course grade. Use these free passes wisely.
- 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 work 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.
- You and a partner will be checking into a locker, and you 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 fee of \$25.
- There are 10 lab participation points available. One point is awarded completing the Hazardous Material and Hazardous Equipment Training Quiz. The balance of points will be assigned at the discretion of the lab TA at the end of the semester. Arriving on time, being prepared for the lab assignment and helping with clean-up will ensure that you receive the maximum number of points.

**Lecture Participation (Canvas)**: Every week there will be a discussion forum for you to ask classmates questions, answer classmates' questions, or ask me questions on topics from the lecture. For each week, you must post a minimum of 3 times in the discussion forum to receive full credit; either by answering another student's question or ask a question for other students or the instructor to answer.

# <u>Grading:</u>

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 universally modify this grade scale prior to assigning final letter grades.

| Letter | Percentage | Letter | Percentage |
|--------|------------|--------|------------|
| Α      | ≥ 90%      | D      | ≥ 60%      |
| В      | ≥ 80%      | F      | < 59.9%    |
| С      | ≥ 70%      |        |            |

Earning the respective percentage in the course listed above 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.

**Note:** Your individual grades for each course component will be posted on Canvas. You will have 7 days to check your grades and to email the coordinator of any issues with your grades, such as, they are not showing up. Failure to do so will result in the grades being left as a zero. There will be several announcements reminding you to check your grades. Grades should appear in Canvas within 7 days after submission and you will have 7 days **after** to check your grade.

Your grade will be based on the following:

| CHEM 100 Grading Scheme |                      |            |                 |       |            |
|-------------------------|----------------------|------------|-----------------|-------|------------|
| Item                    | Submission           | Quantity   | Value<br>(each) | Total | Percentage |
| Exams                   | Canvas               | 4          | 100             | 400   | 40.0       |
| Final Exam              | Canvas               | 1          | 150             | 150   | 15.0       |
| Chapter Problem<br>Sets | OWLv2                | Best 10/12 | 10              | 100   | 10.0       |
| Chapter<br>Assessments  | OWLv2                | Best 10/12 | 10              | 100   | 10.0       |
| Lab Assignments         | Submit work<br>to TA | Best 11/13 | 15              | 165   | 16.5       |
| Lab Participation       | Canvas               | 1          | 10              | 10    | 1.0        |
| Lecture Discussion      | Canvas               | TBD        | TBD             | 75    | 7.5        |
|                         |                      |            | Total           | 1000  | 100.0%     |

**STATEMENT ON CHEATING AND PLAGIARISM:** 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. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it includes any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work. 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.

### **CLASS SCHEDULE**

| Week | Date              | Lecture Schedule                          | Weekly Lab Schedule   | Comments and<br>Homework Due Dates   |
|------|-------------------|---|---|--|
| 1    | January 17, 2022  |   |   |  |
|      | January 19, 2022  | Intro./Chapter 1                          | Labs begin Jan 24.<br>(2 <sup>nd</sup> Week)  |  |
|      | January 21, 2022  | Chapter 1                                 |   |  |
| 2    | January 24, 2022  | Chapter 1                                 | Lab 1 - Significant Figures,<br>Scientific Notation, &                                      | OWL Chapter 1 Problem sets due<br>at 11:55 pm, Sat, Jan 29 <sup>th</sup>   |
|      | January 26, 2022  | Chapter 1                                 | Algebra Worksheet<br>(Upload completed worksheet as a                                       |  |
|      | January 28, 2022  | Chapter 2                                 | pdf file before beginning of next lab<br>session)   | OWL Chapter 1 Assessment due<br>at 11:55 pm Sunday Jan 30th  |
|      | January 31, 2022  | Chapter 2                                 | Must Complete Safety quiz<br>before 11:59 pm Feb 6  | Feb 1- Last day to add/drop classes. Ends at 7:59 pm   |
| 3    | February 2, 2022  | Chapter 2                                 | Lab 2 - Density Lab<br>Simulation   | OWL Chapter 2 Problem sets due<br>at 11:55 pm, Sat. Feb 5  |
|      | February 4, 2022  | Chapter 2                                 | (Results & Calcs, Questions due at<br>the end of lab session, upload pdf<br>file to Canvas) | OWL Chapter 2 Assessments due<br>at 11:55 pm Sun. Feb 6  |
|      | February 7, 2022  | Chapter 3                                 | Lab Check-in<br>Lab 3 -Periodic Table<br>Worksheet<br>(Wksht due at end of session)         |  |
| 4    | February 9, 2022  | Chapter 3                                 |   | Window of availability for exam begins at 3pm Friday until 3pm   |
|      | February 11, 2022 | Review for Exam1<br>(Chapters 1 & 2)      |   | Saturday   |
|      | February 14, 2022 | Chapter 3                                 | Lab 4 - Chemical<br>Nomenclature<br>(Worksheet due at the end of                            | OWL Chapter 3a Problem sets  |
| 55   | February 16, 2022 | Chapter 3                                 |   | due at 11:55 pm, Sat Feb 19<br>OWL Chapter 3a Assessment   |
|      | February 18, 2022 | Chapter 3                                 | session)  | due at 11:55 pm Sun, Feb 20  |
|      | February 21, 2022 | Chapter 3                                 | Lab 5- Valence-Shell<br>Electron-Pair Repulsion<br>Theory (VSEPR)                           | OWL Chapter 3b Problem sets due at 11:55 pm Sat., Feb 26   |
| 6    | February 23, 2022 | Chapter 6                                 |   | OWL Chapter 3b Assessment  |
|      | February 25, 2022 | Chapter 6                                 | (Worksheet due at the end of lab session)   | due at 11:55 pm, Sun., Feb 27  |
|      | February 28, 2022 | Chapter 6                                 | Lab 6 -Separation of an   | OWL Chapter 6 Problem sets due<br>at 11:55 pm, Tue, March 1st  |
| 7    | March 2, 2022     | Chapter 4                                 | Unknown Mixture   | OWL Chapter 6 Assessments due<br>at 11:55 pm, Wed, Mar. 2nd<br>Window of availability for exam<br>begins at 3pm Friday until 3pm<br>Saturday |
|      | March 4, 2022     | Review for Exam 2<br>Exam 2 (Chap. 3 & 6) | (Results & Q's due at end of<br>lab session)  |  |
|      | March 7, 2022     | Chapter 4                                 | Lab 7- Determining the  |  |
| 8    | March 9, 2022     | Chapter 4                                 | Specific Heat Capacity of a<br>Metal by Calorimetry   | OWL Chapter 4a Problem sets due at 11:55 pm Sat, March 12  |
|      | March 11, 2022    | Chapter 4                                 | (Results & Calcs, Q's & graph<br>due at the end of lab session)                             | OWL Chapter 4a Assessment<br>due at 11:55 pm, Sun, March13   |

| Week | Date           | Lecture Schedule                      | Weekly Lab Schedule  | Comments and<br>Homework Due Dates   |  |
|------|----------------|---------------------------------------|--|--|--|
| 9    | March 14, 2022 | Chapter 4                             | Lab 10 -Determining the  |  |  |
|      | March 16, 2022 | Chapter 4                             | Empirical Formula of<br>Magnesium Oxide  | OWL Chapter 4b Problem sets<br>due at 11:55 pm Sat., March 19  |  |
|      | March 18, 2022 | No Class or Labs<br>NCAA Tournament   | (Results & Calcs, Q's due at the end of lab session)                           | OWL Chapter 4b Assessment<br>due at 11:55 pm Sun, March 20   |  |
| 10   | March 21, 2022 | Chapter 5                             | Lab 8 -Determination of the  | OWL Chapter 5 Problem sets due<br>at 11:55 pm Sat., March 26   |  |
|      | March 23, 2022 | Chapter 5                             | Molar Volume of a Gas and the Gas Constant                                     |  |  |
|      | March 25, 2022 | Chapter 5                             | (Data answer sheet and Calcs due at end of lab session)                        | OWL Chapter 5 Assessment due<br>at 11:55 pm Sun, March 27  |  |
|      | March 28, 2022 | Spring Break                          |  |  |  |
| 11   | March 30, 2022 | Spring Break                          | Spring Break   | Spring Break   |  |
|      | April 1, 2022  | Spring Break                          |  |  |  |
|      | April 4, 2022  | Chapter 7                             | Lab 9-Identification of an   | Window of availability for Exam 3<br>begins at 3pm Friday until 3pm<br>Saturday  |  |
| 12   | April 6, 2022  | Chapter 7                             | Unknown Metal Carbonate  |  |  |
|      | April 8, 2022  | Exam 3 Review<br>Exam 3 (Chap. 4 & 5) | (Results and Q's due at end of lab session)                                    |  |  |
| 13   | April 11, 2022 | Chapter 7                             | Lab 11- Chemical Reactions<br>Worksheet  | OWL Chapter 7&8 Problem sets due at 11:55 pm Sat., April 16  |  |
|      | April 13, 2022 | Chapter 8                             | (Worksheet due at end of lab   | OWL Chapter 7&8 Assessment<br>due at 11:55 pm Sun., April 17   |  |
|      | April 15, 2022 | Chapter 8                             | session)   |  |  |
|      | April 18, 2022 | Chapter 9                             | Lab 12- Acid-Base Titration<br>Part 1 Only                                     | OWL Chapter 9a Problem sets  |  |
| 14   | April 20, 2022 | Chapter 9                             | (First page – Results and Calcs  | due at 11:55 pm., Sat April 23   |  |
|      | April 22, 2022 | Chapter 9                             | for base stnd & pictures due at<br>the end of lab session)                     | OWL Chapter 9a Assessment<br>due at 11:55 pm Sun., April 24  |  |
|      | April 25, 2022 | Chapter 9                             | Lab 12 -Acid-Base Titration  | OWL Chapter 9b Problem sets due at 11:55 pm., Wed April 27   |  |
| 15   | April 27, 2022 | Chapter 9                             |  | OWL Chapter 9b Assessment<br>due at 11:55 pm Thurs., April 28<br>Window of availability for Exam 4<br>begins at 3pm Friday until 3pm<br>Saturday |  |
|      | April 29, 2022 | Exam 4 Review<br>Exam 4 (Chap. 7-9)   | (Data and acid concentration<br>due at end of lab session)<br>Locker Check-out |  |  |
|      | May 2, 2022    | Chapter 10                            |  | OWL Ch 10 Problem sets due at<br>11:55 pm Wed., May 4  |  |
| 16   | May 4, 2022    | Chapter 10                            | Last Week of Classes   | OWL Ch 10 Chapter 10<br>Assessment due at 11:55 pm<br>Thursday, May 5  |  |

| Exam & Final Exam Dates |                   |   |  |
|-------------------------|-------------------|---|--|
|                         | TOPIC:            | Date: (Window of Availability)            |  |
| Exam 1                  | Chapters 1 & 2    | 3:00 pm February 11 - 3:00 pm February 12 |  |
| Exam 2                  | Chapters 3 & 6    | 3:00 pm March 4 - 3:00 pm March 5         |  |
| Exam 3                  | Chapters 4 & 5    | 3:00 pm April 8 - 3:00 pm April 9         |  |
| Exam 4                  | Chapters 7, 8 & 9 | 9 3:00 pm April 29 - 3:00 pm April 30     |  |
| Final Exam              | Chapters 1 - 10   | May 9, 8:00 am - 10:00 am                 |  |

# Spring 2022 Schedule:

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

# Final is on Monday, May 9, from 8:00 to 10:00 am online using Canvas Final is comprehensive and will include material from Chapter 10

## **Online Assignment Policy:**

The deadlines for the online assignments (Chapter Problem Sets, Chapter Assessments, Canvas Discussion Forum) are hard deadlines and extensions will not be granted. All assignments will be scheduled with sufficient time to allow you to complete the assignment in advance of the "last minute". *Consequently, you are solely responsible for any failures to complete the assignment by the scheduled time.* Problems such as lack of internet service, OWLv2 site problems, or dogs eating WiFi antennas will not be acceptable reasons for not completing the assignments. *You are encouraged to complete the assignments well before the deadlines to avoid potential technological obstacles.* 

In the case of an extended system-wide failure the instructors will be notified by the site operator and steps will be taken to accommodate any problems that arise.

For all technical difficulties or errors that arise with theOWv2 systems **please contact the lab coordinator or OWLv2 technical support staff directly and by phone or email.** The instructors and TAs will be unable to help you resolve anything but the most basic (is it plugged in?) technical problems. For **Hayden McNeil** system **please contact support** as well. The instructors, lab coordinator, and TAs will be unable to help you resolve anything but the most basic (is it plugged in?) technical problems. For technical support contact the <u>Library Computing Hub</u>

# Accommodations (SASC):

SDSU via the <u>Student Ability Success Center</u> (SASC) provides accommodations for students with documented disabilities or medical conditions covered under the Americans with Disabilities Act (ADA). In keeping with current public health guidance, I cannot provide arrangements to students without an ADA-qualified disability or medical condition.

If you are a student with a disability and are in need of accommodations for this class, please contact the Student Ability Success Center at sascinfo@sdsu.edu (or go to

sdsu.edu/sasc) as soon as possible. Please know accommodations are not retroactive, and I cannot provide accommodations based upon disability until I have received an accommodation letter from the Student Ability Success Center. SASC registration and accommodation approvals may take up to 10-14 business days, so please plan accordingly.

# Additional practice problems:

One of the most common requests by students is more practice problems. The following problems from the "Exercises" section at the back of each chapter in your textbook are recommended to help with your mastery of the material prior to exams. It is recommended that you work on these in groups, identify concepts that are giving you trouble, and then bring your questions with you to office hours. Answer keys for practice problems from each chapter will be posted to the Canvas site and answers to odd problems are also in the book.

- Ch. Additional practice problems
- 1. 1-14, 18-24, 26, 29, 31,33, 36, 38, 47-48, 54-56, 58, 60, 68
- 2. 1-4, 9-10, 12-15, 17, 19-28, 33-42, 52-58
- 3. 5-12, 15, 18, 19, 23-36, 42, 44, 46, 55, 57
- 4. 1, 4-19, 22, 25, 27, 31-35, 40-42, 47
- 5. 2, 8, 12-18, 21, 22, 25-30, 34, 36-38, 48, 49
- 6. 1-2, 6-7, 11-12, 15-17, 20-24, 33, 35, 37, 39-43, 45-46, 48, 52-54, 59
- 7. 2-4, 6, 10, 14-27, 29, 31, 34-36, 38, 49, 51-52, 55, 59-61
- 8. 1-5, 9-11, 14-20, 23, 26-28, 31, 33
- 9. 1-6, 8, 11-13, 15-21, 27, 28, 35, 36, 45, 51-54, 68, 72
- 10. 1-8, 15, 17, 18, 43, 44, 49, 50

# 10 Steps to Chem 100 success:

- 1. Read the relevant chapter in the book BEFORE attending/watching the lecture that covers that chapter. The material may not be clear at that time, but you will have an idea of where the material is headed and that will help you understand concepts.
- 2. Attend every lecture, take notes, and try to solve problems as they are presented. This means you must have a calculator. Do not write down the material and think "I will do it later", there is no substitute for trying it at that moment, figuring out what you have problems with, and ASKING A QUESTION! (All questions are excellent, the only dumb questions are the ones that stay in your mouth.)
- 3. Read the book again.
- 4. As soon as possible, **after** lecture, try **the associated** HW problems (Chapter problem set). Get help as needed **long** before an exam. Try all HW problems, even ones not assigned for credit, like the ones suggested at the end of each chapter, answers to all book chapter problems are posted in the book.
- 5. Do all the worksheets. Not a "few", do not just "try" them, DO them, and get help as needed.
- 6. Read the book again (and again). Read other Intro to Chem books.
- Do the Chapter Assessments pretend they are real, no notes, no help. <u>Do the chapter</u> <u>assessments as soon as you can</u> - this allows you to ask about topics you are having trouble with.
- 8. Do NOT allow yourself to fall behind. If you think "I will catch up later" you are lying to yourself.

- 9. Review everything that you have done HW, worksheets, problems during lecture, lab worksheets, and the textbook. We draw exam questions from multiple sources.
- 10. After each exam, look at the posted answers and figure out why you missed each problem. This will help you learn what to focus on for the next exam.

# Finding Help on Campus:

Need help finding help -- an advisor, tutoring, counselling, or emergency economic assistance? The <u>SDSU Student Success Help Desk</u> 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: <a href="https://cal.sdsu.edu/student-resources/student-success">https://cal.sdsu.edu/student-resources/student-success</a>
- College of Education Student Success Center: <a href="https://education.sdsu.edu/oss">https://education.sdsu.edu/oss</a>
- Center for Student Success in Engineering: <u>https://csse.sdsu.edu/</u>
- CoS Student Success Center: <u>https://cossuccess.sdsu.edu/</u>
- FSB Student Success Center: <u>https://business.sdsu.edu/undergrad/advising</u>
- HHS Adivisors: <u>https://chhs.sdsu.edu/student-resources/advising/</u>
- IVC Student Success and Retention: <u>https://ivcampus.sdsu.edu/student\_affairs/retention</u>
- PSFA Advisors: <u>https://psfa.sdsu.edu/resources/student\_advisors</u>
- Math & Stats Learning Center: <u>https://mlc.sdsu.edu/</u>

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. For more information regarding your university rights and options as a survivor of sexual misconduct or sexual violence, please visit titleix.sdsu.edu.

The <u>Family Educational Rights and Privacy Act</u> (FERPA) mandates the protection of student information, including contact information, grades, and graded assignments. I will not post grades or leave graded assignments in public places. Students will be notified at the time of an assignment if copies of student work will be retained beyond the end of the semester or used as examples for future students or the wider public.

## Medical Related Absence

Contact the lab coordinator in the event you miss a class or lab due to an illness, injury, or emergency. Remember, two lab scores are dropped but if you miss more than two labs due to an illness, you must provide medical documentation of your sickness or emergency.

If you miss a class or lab due to being quarantined because of a positive COVID-19 result, you must request a class excuse letter. Send an email to vpsafrontdesk@sdsu.edu to notify the university. Student Affairs and Campus Diversity will initiate the process for absent letters to be sent to course instructors, Assistant Deans, and the Provost. Medical documentation may be required prior to the letter being issued.

<u>Student Health Services</u> (SHS) does not provide medical excuses for short-term absences due to illness or injury. When a medical-related absence persists beyond five days, SHS will work with students to provide appropriate documentation.

When a student is hospitalized or has a serious, ongoing illness or injury, SHS will, at the student's request and with the student's consent, communicate with the student's instructors via the Vice President for Student Affairs and Campus Diversity and may communicate with the student's Assistant Dean and/or the <u>Student Ability Success Center</u>.

## 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 <u>sdsu.edu/ecrt</u> 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 (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.

### **Religious Observances**

According to the University Policy File, students should notify instructors of planned absences for religious observances by the end of the second week of classes. Contact the coordinator: <u>Lclare+chem100@sdsu.edu</u>

# 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 Kumeyaay.