CHEM 100 Syllabus — Summer 2021

Contact Information:

Email (for all needs): tcarlson+chem100@sdsu.edu

Instructor:

Professor: Theresa A. Carlson
Lecture: Online
Office Hours/Work Session (Zoom): 12:00 — 1:00 pm Monday thru Friday

Mode of Instruction:
Due to the Covid-19 pandemic all lectures and labs for this course will be conducted via Zoom and pre-recorded lectures. Attendance to the work sessions is highly encouraged, however the work session recordings will be made available via Canvas. The labs for CHEM 100 students will be online and attendance is **mandatory** for the entirety of the 2 hour and 40 minute lab session.

Textbook and Online Homework:
Introductory Chemistry: An Active Learning Approach Custom edition, Cracolice/ Peters 7th edition
OWLv2 *Combined with: OWL Online Problem Sets: http://www.cengage.com/owlv2/*

Lab Equipment:
Chem 100 Lab Manual & Hayden McNeil Simulation: courses.haydenmcneil.com

Calculator: 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:

- **Canvas:** Canvas will be used in this course. Enrollment in Canvas is automatic if you are currently enrolled in this course. Canvas will contain information such as the course syllabus, all the experiments, handouts, and other important course information.
- **OWL:** will be used extensively for online homework aka practice problems, Exam prep, and the location of your exams and final exam.
- **Lab Simulations (Hayden McNeil):** is to mimic hands on lab experiments you would have been doing if we had in person labs. There will be calculations, safety questions, and topic questions to help you understand what you are doing in the experiments. **You will have two attempts for the assignment.**

USE CHROME!!!

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: bit.ly/SIatSDSU
Meet the SI Leaders: caa.sdsu.edu/supplemental-instruction/leaders

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

Enrolled students: *It is absolutely crucial that you attend the first three laboratory periods.* Failure to do so may result in your spot in the laboratory section being given to another student. Notify the laboratory coordinator (tcarlson+chem100@sdsu.edu before the first week of class) if you must miss a laboratory period in the first week 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.

Waitlist: If you are attempting to waitlist CHEM 100, you should attend every possible lab section, discussion, and lecture that will fit into your schedule. And keep track of which discussion and lab you attended. Remember, you are 100% responsible for all assignments that are due and to keep up with the work. ***Waitlist students who are attempting to register for the course should email:*** **tcarlson+chem100@sdsu.edu** ***with their name and RedID info ASAP.***

General Student Learning Outcomes:
Upon successful completion of the class the student should be able to:

1. Solve a wide variety of problems using dimensional analysis.
2. Use proper conventions with regard to significant figures.
3. Apply the basic terms of science and chemistry.
4. Write the correct chemical formula from a name and the correct IUPAC name from a formula for simple inorganic compounds.
5. Relate the position of an element on the periodic table to the electronic structure of that atom at its ion.
6. Diagram Lewis Dot structures for atoms, simple inorganic ions, and simple compounds.
7. Prepare three dimensional drawings showing polarity of molecules by applying VSEPR theory.
8. Solve a wide range of stoichiometry problems involving percent yield, limiting reagents, and impure reactants.
9. Use both the Arrhenius and Brønsted concepts in describing acid-base behavior.
10. Compute pH and pOH of a solution from its hydrogen or hydroxide ion molarity.
11. Write conventional, total, and net ionic equations for reactions in aqueous solutions.
12. Inventory ion and molecular concentrations in aqueous solutions.
13. Use standard laboratory equipment such as milligram balances, volumetric glassware, pipets and burets.
14. Observe a change and determine if it involves a physical change, a chemical change, or both.

OWL Assignments:

Before you begin there will be several Intro OWL Assignments. These Intro Assignments are to help guide you into using the program. **If you do not see the assignments click on Show All Assignments.** Attempting to use OWL without understanding how the program works can lead to issues later on. Please take notes while you are doing these Intro assignments since the topics will be covered later.

◆**Math Review (OWL)** is to help refresh your memory and your knowledge on basic math skills and algebra skills you need in this course. These points will be included in the Chapter 3 OWL Problem Set point total.

◆**Exam Preps (OWL)** The exam prep is for you to assess which portions of the chapter you did not understand and gives you the opportunity to keep practicing so you can master the material before the exam. The Exam Prep questions are similar (not identical) to what you will see on the actual exams. Do not wait until the last minute to complete the prep. **You will have two attempts for each of the exam preps.**

◆**Chapter Problem Set (OWL)** policies:

- There will be a chapter problem set from each of the 20 chapters covered in the text. Work on the problems several days before it's due so you have time to go to the help room/discussion board 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.
- Full points can be obtained for each chapter's problem set by scoring above 85% on the problems for that chapter.
    - A score 74% = (74% ÷ 85%)×10 = 8.7 points
- It is in your best interest to complete all the problem sets to ensure that you are fully prepared for the exams.
- The adjusted points will be calculated **throughout the semester. Please watch your email for important announcements regarding the uploads.** Errors occur due to incorrect RedID, multiple OWL accounts, and/or your work is in the wrong section.

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 (OWL):** All exams are cumulative and will be given during a 24 hour period to complete, and as such 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 instructor *as soon as possible*. The use of any disallowed materials/references or communication with anyone other than the instructor during an exam will be considered dishonest academic conduct. The instructor reserves the right to make exceptions to this policy at their discretion.

Other Assignments:

◆**Lab Safety Quiz (Canvas)** The lab safety quiz must be completed with a grade of 60% or higher before you work on the experiments. If you fail to achieve a 60% or higher on the online quiz, the instructor will give you another attempt of the quiz. Once you pass the lab safety quiz you will be allowed to start the experiments. **Note: The second quiz will not replace your original lab safety quiz grade.**

◆**Lab Simulations (Haydn McNeil)** is to help you prepare yourself for the experiment you will be doing. There will be calculations, safety questions, and topic questions to help you understand what you are doing in the experiments. **You will have two attempts.**

◆**Lab Experimental Reports (Canvas):** will need to be submitted to **Turnitin in Canvas** for you to receive a grade for your experimental report. Failure to send your lab report before your lab report is due will be an automatic zero. **Lab reports that are plagiarized will be an automatic zero and will be reported**. *Make sure you turn in the proper lab report into the correct Turnitin folder. Failure to do so will result in a point penalty at the discretion of the lab coordinator.* ***If you have issues with submitting your experimental report, email* tcarlson+chem100@sdsu.edu *and your lab TA with a PDF file of the report BEFORE the deadline.***

◆**Lecture Participation & Discussion (Canvas):** In every lecture chapter there are embedded quiz questions that you will need to attempt. These questions are to test if you understood the material in the lecture. For 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 3 times in the discussion forum to receive full credit; either by answering another students question or ask a question for other students or the instructor.

Note: Your individual grades for each course component will be posted on Canvas. You're grades, that have been completed from OWL, will be posted the 3 days after your exam dates. Your lab simulations will be posted 3 – 4 days after the simulation is due. You will have the weekend to check your grades and to email your instructor of any issues with your OWL grades or Simulation grades, aka 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.

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 instructors reserve the right to universally modify this grade scale prior to assigning final letter grades.

Letter	Percentage	Letter	Percentage
A	> 90%	**C+**	73-75%
A-	85-90%	**C**	70-73%
B+	83-85%	**C-**	65-70%
B	80-83%	**D**	60-65%
B-	75-80%	**F**	<60%

Earning the respective percentage in the course listed above will result in the grade notated. The instructor reserves the right to reduce the percentage required for any letter grade.

Note: Please check your grade frequently, especially after each exam. Email tcarlson+chem100@sdsu.edu if you think there is a calculation mistake. At the end of the semester, when grades are finalized, email only if there is a calculation mistake.

CHEM 100 Grade Scheme					
Item	**Submission**	**Quantity**	**Value (each)**	**Total**	**Percentage**
Lab Simulation	**Hayden McNeil**	Best 12 ouf 13	10	120	7.5%
Lab Safety Quiz	**Canvas**	1	10	10	0.6%
Chapter Problem Set	**OWL**	20	10	200	12.5%
Exam Prep	**OWL**	20	15	300	18.8%
Exams	**OWL**	4	150	600	37.5%
Experiment Reports	**Canvas/ TurnItIn**	Best 11 of 12	20	220	13.8%
Plagiarism Quiz	**Canvas**	1	5	5	0.3%
Lecture Participation & Discussion of the Lecture	**Canvas**	20 Chapter Lecture Videos & Weekly discussion board	5 pts for the Chapter Lecture Videos & 5 pts for Weekly Discussion + 5 pts for Intro Discussion	145	9.1%
			Total	**1600**	**100.0%**

COURSE OVERVIEW				
Module	**Dates:**	**Lecture Schedule**	**Lab Schedule Monday**	**Lab Schedule Thursday**
Module 1	**June 21 — June 25**	Welcome to Chem 100 Chapter 01 Chapter 02 Chapter 05 Chapter 06	Experiment: Introduction & Lab Safety Quiz SIM: Intro to Lab Simulation **DUE: Wednesday, June 23rd at 11:59 PM**	Experiment: Chemical Nomenclature SIM: Lab Skills **DUE: Sunday June 27th at 11:59 PM**
Module 2	**June 28 — July 02**	Chapter 08 Chapter 19.4 and 19.5 Chapter 09	Experiment: Chemical Reactions SIM: Chemical Reaction Types and their Equations **DUE: Wednesday, June 30th at 11:59 PM**	Experiment: Separating of an Unknown Mixture SIM: Separating a Mixture of Compounds **DUE: Wednesday, July 7th at 11:59 PM**

	Exam 1: Tuesday, July 6th of Week 3 it will be posted for 24 hours. On Chapters 2, 5, 6, 8, 9, and 19.4 & 19.5.			
Module 3	**July 05 — July 9**	Chapter 11 Chapter 12 **Skip 12.9** Chapter 13 **Skip 13.7**	**NONE**	Experiment: Valence-Shell Electron-Pair Repulsion Theory (VSEPR) **Note: You will need to buy marshmallows, jelly beans, and toothpicks** SIM: Identifying Unknown Substances from Characteristic Properties **DUE: Sunday, July 11th at 11:59 PM**
Module 4	**July 12 — July 16**	Chapter 03 Chapter 07	Experiment: Significant Figures, Scientific Notation, and Algebra SIM: Flame Test **DUE: Wednesday, July 14th at 11:59 PM**	Experiment: Mass & Density SIM: Molar Mass of Magnesium **DUE: Sunday, July 18th at 11:59 PM**
	Exam 2: Tuesday, July 20th of Week 5 it will be on Chapters 11, 12, 13, 03, and 07.			
Module 5	**July 19 — July 23**	Chapter 10 **Skip 10.5-10.7 & 10.9 - 10.10** Chapter 04 Chapter 14 **Skip 14.7 & 14.9**	Experiment: Identification of an Unknown Metal Carbonate SIM: Decomposition of Malachite **DUE: Wednesday, July 21st at 11:59 PM**	Experiment: Determining the Empirical Formula of Magnesium Oxide SIM: Boyle's Law **DUE: Sunday, July 25th at 11:59 PM**
Module 6	**July 26 — July 30**	Chapter 15 **Skip 15.7** Chapter 16 **Skip 16.8-16.9 and 16.14-16.15**	Experiment: Determining the Specific Heat Capacity of a Metal by Calorimetry SIM: Charles's Law **DUE: Wednesday, July 28th at 11:59 PM**	Experiment: Acid-Base Titration Day 1 SIM: Avogadro's Law **DUE: Sunday, August 01st at 11:59 PM**

	Exam 3: Tuesday, August 3th Week 7 on Chapters 10, 04, 14, 15, and 16			
Module 7	**August 02 — August 06**	Chapter 17 **Skip 17.8** Chapter 18 **Skip 18.10-18.13** **Note: 18.12 Only buffers will be taught**	Experiment: Acid- Base Titration Day 2 SIM: Temperature Dependence of Salt Solubility **DUE: Wednesday, August 04th at 11:59 PM**	Experiment: Thinking Like a Chemist: The Scientific Method SIM: pH Indicators **DUE: Sunday, August 08th at 11:59 PM**
Module 8	**August 9 — August 13**	Chapter 20	**Final Exam Review in Lab**	**Final Exam Review in Lab**
	Final Exam: Friday, August 13th Week 8 on All Chapters			

Exam Schedule	
	Date
Exam 1	Tuesday, July 06th 12:00 am - Wednesday, July 07th 12:00 am
Exam 2	Tuesday, July 20th 12:00 am - Wednesday, July 21st 12:00 am
Exam 3	Tuesday, August 03rd 12:00 am - Wednesday, August 04th 12:00 am
Final Exam	Friday, August 13th 12:00 am - Saturday, August 14th at 12:00 am

Online Assignment Policy:

The deadlines for the online assignments, including pre-labs, homework, and other assignments 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, OWL 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 the **OWL** system **please contact Cengage technical support staff directly by phone and email.** For **Hayden McNeil** system **please contact them** 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.

Attendance Policy:

For Exams: Attendance for all exams is required, including the lab practical exam. There will be no makeup exams outside of extenuating circumstances (*e.g. illness during the 24 hr exam period*). It is your responsibility to ensure that you will be available for online exams with proper internet accessibility and bandwidth.

Excused absences for exams will only be awarded in the case of a legitimate reasons (illness, scheduled academic/athletic events, court appearances, etc.) as determined by the instructor and will require support documentation. **Only under exceptional circumstances, as determined by the instructor, will a makeup exam be granted for the final exam.**

For lectures: Regular Office Hour/ Work Session attendance is **strongly recommended**. If you do have to miss class, you should go over the posted lecture slides and recorded lectures that can be found on Canvas.

For lab: Attendance in **all** laboratory meetings is **REQUIRED.** All lab work, during the semester, must be done in the scheduled period. If you are late by 10 minutes, for your lab period, the TA will deduct 5 points from your grade; after 20 minutes you will no longer receive credit for the lab period. Under no circumstances will students be allowed to make up lab experiments. ***Note: If you miss one lab the lab will be the dropped assignment. If you have an excused absence that extends beyond one week please email the lab coordinator ASAP.***

Test accommodations: If you are a student with a disability and are in need of accommodations for this class, please contact 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 Student Ability Success Center. SASC registration and accommodation approvals may take up to 10-14 business days, so please plan accordingly.

Policy on Cheating/Plagiarism: There is a zero tolerance policy regarding plagiarism in this course. Any instances of cheating or plagiarism identified by the TA, lab coordinator, or the instructors, will result in a meeting between the instructor and student(s) following which the instance and documentation of plagiarism will be reported to the Academic Senate as well as the student ***receiving a grade of F for the course.*** It is your responsibility to know what constitutes cheating and plagiarism. For example, turning in a lab report for a lab that you have not performed, or the results of a lab that you had completed in a prior semester (self-plagiarism), both constitute cheating and plagiarism and will be reported - *all students must perform their own analyses in the labs.*

Preferred Names & Pronouns: Any student who wishes to be addressed by a name other than what is presented in Blackboard is encouraged to contact the professor via email with the name you wish to use in this course. Similarly, if you have preferred pronouns that you wish to be addressed by please contact your professor. The professor will communicate your desires to the TAs and all instructional staff will gladly honor your request.

Email: 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.

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.

- CAL Student Success Center: https://cal.sdsu.edu/student-resources/student-success
- College of Education Student Success Center: https://education.sdsu.edu/oss
- Center for Student Success in Engineering: https://csse.sdsu.edu/
- CoS Student Success Center: https://cossuccess.sdsu.edu/
- FSB Student Success Center: https://business.sdsu.edu/undergrad/advising
- HHS Adivisors: https://chhs.sdsu.edu/student-resources/advising/
- IVC Student Success and Retention: https://ivcampus.sdsu.edu/student_affairs/retention
- PSFA Advisors: https://psfa.sdsu.edu/resources/student_advisors

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 or sdsutalks.sdsu.edu.

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 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 (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.

Help control the covid-19 pandemic: Addressing the COVID-19 pandemic is a shared responsibility. Each of us has a role to play in keeping our learning environments and campus as safe as possible. To that effect, it is critical students are aware that SDSU policy requires the wearing of face coverings by faculty, staff, and students on campus except if you are alone in a private office or eating outside while maintaining physical distancing of at least 6 feet. All individuals on campus must also practice physical distancing, stay home if ill, care for common work spaces if you use them, and report if you receive a positive COVID-19 test. Instructions for caring for instructional spaces will be posted in each lab, clinic, or classroom; supplies will be available. Individuals are required to provide their own facial coverings. If students need assistance purchasing facial coverings, please contact the Economic Crisis Response Team.

Land Acknowledgement: 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.

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.

'eyay e'haan My heart is good.

ASSUME THIS CLASS WILL REQUIRE A MINIMUM OF 25+ HOURS OF YOUR TIME PER WEEK TO COMPLETE.

Chemistry 100 is a demanding, 4-unit course which requires an enormous amount of time and your commitment to work hard! (Please do NOT take this course unless you are prepared to commit the necessary time and hard work.) It is advisable that you make Chemistry 100 the focus of your semester and that you do NOT overburden yourself with an unmanageable course load while taking this course. YOUR success is our success. and we want you to succeed in this course. YOUR success requires a large time commitment and hard work - please do NOT take this course unless you are willing to allow sufficient time to study, attend ALL lectures, and attend ALL labs with preparation in advance. You will enjoy your semester in Chemistry 100 - and you will benefit in the sciences so much more from all that you learn - if you allow yourself the time necessary to work hard and succeed. PLEASE ALLOW ADEQUATE TIME IF YOU TAKE THIS COURSE!

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

Break Down of Hours for this Course (1 units = 2 outside hours)					
	Number of Units	**Hours Spent Per Unit in Class**	**Hours Spent per Unit after Class**	**Summer Speed**	**Total Hours a Week**
Lecture	3	1	6	X 2	18
Lab	1	3	2	X 2	10
	Total Amount of Hours Per Week for the Course:				**28**