

San José State University
Chemistry Department
Chem 030A, Introductory Chemistry, Spring 2023

Class Days/Time and Instructors:

Section #	Day/Time /Location	Instructor/Office	email	Office hours
1 (Lecture)	MW 4:30 -5:20 MD-101	Anh-Tuyet Tran DH 605	anh-tuyet.tran@sjsu.edu	MW 3:00 – 4:00 pm F Noon – 1:00 pm
Coordinator		Melody Esfandiari	melody.esfandiari@sjsu.edu	Available via email
2 (Lab)	Tu 7:30 – 10:20 DH 601	Shreeyukta Singh SCI 141	shreeyukta.singh@sjsu.edu	W 10:30 – 12:30 pm
3 (Lab)	Tu 10:30 – 1:20 DH 601	Frank Lee DH 504	frank.w.lee@sjsu.edu	M 1:30 – 3:00 pm
4 (Lab)	Tu 1:30 – 4:20 DH 601	Hee Kun Cho DH 504	heekun.cho@sjsu.edu	W 11:00 – 12:00 pm
5 (Lab)	W 7:30 – 10:20 DH 601	Shreeyukta Singh SCI 141	shreeyukta.singh@sjsu.edu	W 10:30 – 12:30 pm
6 (Lab)	W 10:30 – 1:20 DH 601	Luca Le DH 504	luca.le@sjsu.edu	M 12:00 – 1:00 pm
7 (Lab)	W 1:30 – 4:20 DH 601	Shreeyukta Singh SCI 141	shreeyukta.singh@sjsu.edu	W 10:30 – 12:30 pm
8 (Lab)	Th 7:30 – 10:20 DH 601	Shreeyukta Singh SCI 141	shreeyukta.singh@sjsu.edu	W 10:30 – 12:30 pm
9 (Lab)	Th 10:30 – 1:20 DH 601	Shreeyukta Singh SCI 141	shreeyukta.singh@sjsu.edu	W 10:30 – 12:30 pm
10 (Lab)	Th 1:30 – 4:20 DH 601	Luca Le DH 504	luca.le@sjsu.edu	M 12:00 – 1:00 pm
11 (Lab)	M 10:30 – 1:20 DH 601	Frank Lee DH 504	frank.w.lee@sjsu.edu	M 1:30 – 3:00 pm
12 (Lab)	M 1:30 – 4:20 DH 601	Hee Kun Cho DH 504	heekun.cho@sjsu.edu	W 11:00 – 12:00 pm

Course Web Page

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the [Canvas Learning Management System course login website](http://sjsu.instructure.com) at <http://sjsu.instructure.com>. You are responsible for regularly logging on Canvas to learn of the updates.

Course Description

This course meets the SJSU's Core General Education requirements for Physical Sciences for Non-science majors, and prepares students of science or undeclared majors for Chemistry 1A (recommended Chem 30A final course grade of "B" or better for success in Chem 1A).

Course Format

This course has a lab component, which complements the lecture. Lab meets once a week and lab attendance is mandatory.

GE/SJSU Studies Category: B1 and B3

GE Learning Outcomes (GELO)

All general education courses are required to address issues of diversity and assess student's written work.

1. Diversity: Issues of diversity shall be incorporated when addressing historical issues of physics and chemistry.
2. Writing: The minimum writing requirement is 1500 words for this course. Your writing will be assessed for grammar, clarity, conciseness, and coherence. Writing assignments will include an essay about a topic related to current events in chemistry, written lab reports, homework assignments and short answer questions on exams. The word count for this course will be distributed among two main projects: a term-paper and an independent project. Each student will individually write a research paper on a current scientific topic (1500 words). Also, each student will complete an independent project where they are assigned a particular solution to make. They will design a protocol and write up a procedure (500 words).

Course Learning Outcomes (CLO)

Physical Science (B1) Courses focus on: systems of classification, structure of matter, laws of thermodynamics, interaction of matter and energy, behavior of physical systems through time, physical processes of the natural environment.

Upon successful completion of this course, students will be able to:

CLO 1: Students will learn about solutions and how to prepare different solutions in the lab in units such as molarity and v/v%. They will learn how to define and test the pH and the conductivity of different solutions. At the end of the semester, Chem 30A students work on an independent project where they are given a solution with a particular concentration and are asked to write a proposal on how to prepare the given solution and write a procedure.

CLO 2: Students will be able to use common laboratory equipment safely and correctly and report measurements to the correct significant figures with proper units. Measuring and reporting numbers accurately is a key tool for scientists. Most of the laboratory experiments are designed to assess the student's ability to apply safety rules learned in lab to safely conduct lab operations and present the collected data accurately. Students will do the experiment either individually or with a lab partner.

CLO3: Students will be exposed to ways in which science influences and is influenced by complex societies, including political and moral issues. Lectures probe students to draw conclusions and see how some complex science subjects are connected to politics and influence how policies and regulations are shaped. The student will demonstrate their understanding by writing a term-paper that each student will work on individually. They will select a current chemistry topic (from a given list) to research and write a paper. These topics require students to have a better understanding of their surrounding and the role of science in their everyday life and community.

Textbook (Recommended)

General, Organic, and Biological Chemistry: Structure of Life, 4th edition or newer, by Karen Timberlake.

Lab Manual (Required): *Chemistry 30A customized Lab Manual*, ISBN: **9781269767873**

Note this manual is a custom version available **only** at the SJSU Bookstore. Every student must have a lab manual. You cannot share one because you will be turning in pages from your manual for credit.

Course Requirements and Assignments

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction,

preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practice. Other course structures will have equivalent workload expectations as described in the syllabus.

Grading Information

Your course grade will be determined according to the following:

Two in-class lecture exams	30%
Lab Canvas Quizzes	10%
Term Paper	5%
Lab Work	30%
Comprehensive Final Exam	25%

Your grades for all the assignments and exams will be posted on your Lab Canvas. You have only 9 days from the day an exam grade is posted to ask for a regrade. We will not do regrades after nine days have passed.

A letter grade will be assigned according to the following percentage range:

A+ = 100 - 97.0%	A = 96.9 - 93.0%	A- = 92.9 - 90.0%
B+ = 89.9 - 87.0%	B = 86.9 - 83.0%	B- = 82.9 - 80.0%
C+ = 79.9 - 77.0%	C = 76.9 - 73.0%	C- = 72.9 - 70.0%
D+ = 69.9 - 67.0%	D = 66.9 - 63.0%	D- = 62.9 - 60.0%
F = 59.9 - 0%		

Missing three labs or more will result in an F for the FULL COURSE, irrelevant of how well you are doing in lecture. Do not miss labs!!

Exams:

There will be two midterms (100 points each) and a final exam (200 points). Each exam is cumulative, so materials covered on a previous exam may be needed for subsequent exams.

All exams are required and will count towards your grade. You must strictly follow the instructions given in the exams. Make-up exams will NOT be generally given. Accommodations will be made ONLY for VERIFIED illnesses or VERIFIED legitimate emergencies. For other circumstances, please consult with me AT LEAST THREE WEEKS AHEAD of the exam date.

Two Midterms (30%): Exam 1: Monday, March 13th and Exam 2: Monday, May 1st.

Final Examination (25%): Wednesday May 17st, 2:45 – 5:00 pm.

All exams are closed book, closed notes, and will focus on the (1) key concepts, (2) lecture notes, (3) lab experiments, (4) quizzes, and (5) additional recommended text problems. The 2-hour Final Exam (200 points) covers everything discussed in class and is a comprehensive multiple-choice exam. You must strictly follow the instructions given in the exam so it can be graded properly. Please bring a photo ID card, as well as a #2 pencil and a non-programmable calculator. Scantron, handouts and scratch paper will be provided.

The final exam is mandatory and cannot be missed. Failure to take the final exam will result in a failing grade. **PLEASE PLAN AHEAD FOR YOUR FINAL EXAM. CHECK YOUR SCHEDULE AND MAKE SURE THAT OTHER EXAMS, WORK SCHEDULE, ETC., DO NOT OVERLAP.**

Lab Canvas Quizzes (10%)

Several quizzes will be given. No make-ups for missed quizzes. Lab Canvas quizzes must be submitted on assigned due dates, or they will not be accepted. The quizzes will be posted on your Chem 30A Lab Canvas account, and you will need to finish them online before the due dates. Once you submit your quiz on Canvas, you cannot access it again. So, please make sure you save or print a hard copy of the quiz for your reference. They help you prepare for the exams. More information will be given in lecture or lab meetings before the due dates.

Term paper (5%)

Instructions on the term paper will be posted in Canvas. Please read and research on a topic of your choice. Your lab instructor will let you sign up for a chosen topic during week of **March 6th - 10th**. The essay must be typed in double-spaced lines, 4 to 6 pages in length. Further details will be provided in lecture and/or lab. The due date of your essay will be **11:59 pm on April 21st**. You will submit your paper to your Chem 30A Lab Canvas. Papers not submitted to Canvas will have a 5-point deduction. You may submit your essay any time before the due date, but the latest would be that due date. Canvas will reject the papers submitted after the due date. Please plan ahead, as late papers will not be accepted

Laboratory work (30%): In addition to the Lecture section, you must also attend and complete the work in your lab section. Lab sections meet once a week for 2 hours and 50 minutes in DH 601. To pass this course, all lab works must be completed and all lab reports must be submitted to your laboratory instructor. Please do not schedule appointments during your laboratory period. **Missing three labs or more will result in an F for the FULL COURSE, irrelevant of how well you are doing in lecture. Do not miss labs!!** Missed laboratory periods may only be made up with **permission of your laboratory instructor**, and **only during the week for that particular experiment**. To make-up a lab, you must obtain a signed pink make-up slip. This slip must be signed by your lab instructor or by Dr. Esfandiari (Lab Coordinator). Since there are many lab sections and students, it would be difficult to keep track of your records if you do not attend your scheduled lab. So, lab switching is greatly discouraged and may be done only in the case you have a compelling excuse (a medical emergency with appropriate documentation). **ALSO, ALL STUDENTS MUST RECEIVE SAFETY INSTRUCTIONS AND PASS THE SAFETY QUIZ.**

PLEASE note:

- 1) **Extra credit work will NOT be provided at the end of the semester for students who are doing poorly. You need to perform well in your tests, lab assignments, and quizzes.**
- 2) **Bonus points will be given throughout the tests/quizzes. In addition, non-mandatory work such as Lecture Quizzes on Canvas Lecture course shell will be converted into 3 additional extra credit points toward your exams. This can amount to as much as an extra 5% of the final grade. At the end of the semester, a letter grade will be assigned to you using the scale above without providing additional bonus.**

Incompletes: An incomplete will only be given under the following circumstances: (1) you have completed at least two-thirds of the course work with a grade of C or better, and/or (2) the reason that you cannot complete the course is due to an extreme emergency with appropriate documentation.

Students who wish to receive an incomplete and have not fulfilled the above requirements will receive a grade appropriate to their totals. If you decide to quit the class without taking the final exam, you will receive a WU grade, equivalent to an F with the option to repeat the class. Consult with your advisor and/or refer to SJSU Course Catalog for specific details.

Classroom Protocol

Attendance: Regular attendance to lecture is essential for your success in this course. Please remember that skipping lecture of one class to study for another class is not an acceptable excuse. As you sign up for your course load, you are responsible for fulfilling the obligations that come with that course load. You are expected

to read each chapter in the textbook and/or preview the lecture PowerPoint files posted on Canvas BEFORE the instructor begins to lecture on that material. Also you should read and plan for each lab experiment BEFORE coming to lab.

Please visit the instructors during office hours if you are having trouble with any of the concepts covered in lecture. It is recommended and encouraged that the office hours of any instructor involved in Chem 30A (Dr. Tran, Dr. Esfandiari, or any lab instructors) be used for individual help.

University Policies on Academic Integrity

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>". Make sure to review these policies and resources.

Statement on Safe and Respectful Community:

We hope that the classroom and/or laboratory will serve as an environment that will promote learning and the development of new ideas, as well as be a safe and respectful community. Behavior that interferes with the normal academic function in a classroom or lab is unacceptable. Students exhibiting this behavior will be asked to leave the class. Examples of such behavior include

- a) Persistent interruptions or using disrespectful adjectives in response to the comments of others.
- b) The use of obscene or profane language.
- c) Yelling at classmates and/or faculty.
- d) Persistent and disruptive late arrival to or early departure from class without permission.
- e) Physical threats, harassing behavior, or personal insults (even when stated in a joking manner).
- f) Use of personal electronic devices such as pagers, cell phones, PDAs in class, unless it is part of the instructional activity.

The university has a brochure on student conduct that you can view at <http://www.sjsu.edu/studentconduct/docs/ENGLISH%20Brochure.pdf>

Resources for Help

- 1) Dr. Tran and Dr. Esfandiari (Lecture and Lab). Please feel free to send a message in Canvas or email us if you have any questions or concerns about the course.
- 2) All Lab instructors (Lab predominantly, although some can also provide excellent help for lecture)
- 3) Tutoring Services:
 - *Peer Connections* – Workshops held by the following SI Leaders: Liana Annable, Gabriel Evans, and Avantika Nair. Besides, Peer Connections also offer small group, individual, and drop-in tutoring for a number of undergraduate courses, consultation with mentors is available on a drop-in or by appointment basis. Visit Peer Connections website at <http://peerconnections.sjsu.edu> for more information.
 - COSAC – The College of Science Advising Center is located on the second Floor of Duncan Hall, DH 213. They have peer advisors and tutors. Check their schedule at <https://www.sjsu.edu/cosac/tutoring/>
 - King Library Late-Night Tutoring Services. Please check their schedules at: <https://libguides.sjsu.edu/sttc/late-night-tutoring> or <https://library.sjsu.edu>

- 4) *SJSU CARES* provides a wide range of services to students having food and housing insecurity. Check for more information at: <https://www.sjsu.edu/sjsucares/>
- 5) *ASPIRE* – Student Services Center – Services are limited to low income, first generation college students or students with disabilities.
- 6) *SJSU Writing Center* – The SJSU Writing Center is located in Clark Hall, Suite 126. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the Writing Center website at <http://www.sjsu.edu/writingcenter>.
- 7) Student Health Center: 408-924-6122 or <https://www.sjsu.edu/studenthealth/>
- 8) *Counseling Services* - Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit Counseling Services website at <http://www.sjsu.edu/counseling>.
- 9) *Career Center*: <http://www.sjsu.edu/careercenter/>
- 10) *Accessible Education Center*. If you feel that you are unable to keep up with the class even though you have all the prerequisites; if you are spending ample time studying yet you never have time to finish exams and quizzes and/or if this class, for some reason, is testing your abilities to learn, you might consider paying a visit to the Accessible Education Center, ADM 110. They might be able to test you to determine whether you have a learning disability. <https://one.sjsu.edu/task/all/accessible-education-center>
- 11) For technical support, please contact eCampus: <https://www.sjsu.edu/ecampus/> , (408) 924-2337
- 12) Student Computer Services Loans: If you need to check out a laptop computer for your studies, please visit this site: <https://library.sjsu.edu/student-computing-services/student-computing-services>

We hope that you will find this course to be an intellectually stimulating and a pleasant learning experience. Best wishes to your SUCCESS in Chemistry!

Tentative Course Schedule (may be subject to change)

Week	Lecture Schedule	Lab Schedule	Due assignments
1/23-1/27	Introduction Wednesday 1/25/23	No lab	
1/30-2/03	Chapter 1	<i>Workday*</i> : Attendance and Safety Discussion	
2/06-2/10	Chapter 1,2	<i>Workday*</i> : Safety Quiz & Significant Figures and Conversion Worksheet	
2/13-2/17	Chapter 2	Check in & Exp: Density and Specific Gravity (page 31)	Quiz 1 (due on 2/19)
2/20-2/24	Chapter 3	Exp: Atoms and Elements (page 53)	
2/27-3/03	Chapter 3	Exp: Electron Configuration and Periodic Properties (page 63)	Quiz 2 (due on 3/05)
3/06-3/10	Chapter 5	<i>Workday</i> : Exam I review, term-paper discussion and sign up for topics	
3/13-3/17	Exam I (Ch. 1-3) Monday 3/13/23 Chapter 5 & Sections 10.1 - 10.3	Exp: Compounds and their Bonds-part 1 (page 73)	
3/20-3/24	Chapter 5,6	Exp: Compounds and their Bonds-part 2	Quiz 3 (due on 3/26)
3/27-3/31	No class/lab	Spring Break	
4/03-4/07	Chapter 6	Exp: chemical reactions and quantities (page 87)	
4/10-4/14	Chapter 8	Exp: Moles and Chemical Formulas (page 97)	Quiz 4 (due on 4/16)
4/17-4/21	Chapter 8,9	Exp: Acid/Base Titration (page 129)	Term-paper**
4/24-4/28	Chapter 9, 10	<i>Workday</i> : Exam II review, independent project discussion and assigning concentrations	Quiz 5 (due on 4/28)
5/01-5/05	Exam II (Ch. 5-6 & Sec. 8.3, 10.1 – 10.3) Monday 5/01/23	Exp: Acids, Bases, pH and Buffers (page 119)	
5/08-5/12	Chapter 10	Lab check out & <i>Workday</i> : Final exam review	Independent Report*** Quiz 6 (due on 5/14)
5/15-5/19	Review	No lab	
5/17	Final Exam: Wednesday 5/17/23, 2:45 – 5:00 pm (All chapters covered)		

* *Workdays* are mandatory meetings, and you will meet during your regular lab period. You MUST attend. You will earn points for attending and participating.

**Term-paper must be submitted on lab Canvas by April 21, 11:59 pm.

*** Independent Lab Report must be submitted on lab Canvas by May 12, 11:59 pm.

Note: Lab reports and worksheets will be due at the end of your lab each week, unless otherwise announced by your lab instructor. You must attend every lab and workday and turn in all the reports.