San José State University
Chemistry Department
Chem 030A, Introductory Chemistry, Fall 2021

Class Days/Time and Instructors:

Section	Day & Time	Instructor	email	Office hours
1 (Lecture)	MW 4:30 -5:20	Anh-Tuyet Tran	anh-tuyet.tran@sjsu.edu	MW 3:00 – 4:00 pm F Noon – 1:00 pm
Coordinator		Melody Esfandiari	melody.esfandiari@sjsu.edu	F 12:30 – 2 pm
2 (Lab)	Tu 7:30 – 10:20	Hee Kun Cho	heekun.cho@sjsu.edu	F 11:00 - noon
3 (Lab)	Tu 10:30 – 1:20	Frank Lee	frank.w.lee@sjsu.edu	T 1:30 – 3: pm
4 (Lab)	Tu 1:30 – 4:20	Pauline Huynh	pauline.huynh@sjsu.edu	W 4:20 – 5:20 pm
5 (Lab)	W 7:30 – 10:20	Keely White	keely.white@sjsu.edu	M 3:30 – 5:00 pm
6 (Lab)	W 10:30 – 1:20	Kevin Khai Ngoc Nguyen	kevin.k.nguyen02@sjsu.edu	W 5:00 – 6:00 pm
7 (Lab)	W 1:30 – 4:20	Pauline Huynh	pauline.huynh@sjsu.edu	W 4:20 – 5:20 pm
8 (Lab)	Th 7:30 – 10:20	Ryan Nhan	ryan.nhan@sjsu.edu	W, Th 11:00 - Noon
10 (Lab)	Th 1:30 – 4:20	Ryan Nhan	ryan.nhan@sjsu.edu	W, Th 11:00 - Noon
11 (Lab)	F 7:30 – 10:20	Keely White	keely.white@sjsu.edu	M 3:30 – 5:00 pm
12 (Lab)	F 10:30 – 1:20	Su Hu	su.hu@sjsu.edu	Th 5:00 – 6:00 pm
13 (Lab)	M 10:30 – 1:20	Frank Lee	frank.w.lee@sjsu.edu	T 1:30 – 3: pm
15 (Lab)	Th 10:30 – 1:30	Hee Kun Cho	heekun.cho@sjsu.edu	F 11:00 - noon
16 (Lab)	M 1:30 – 4:20	Kevin Khai Ngoc Nguyen	kevin.k.nguyen02@sjsu.edu	W 5:00 – 6:00 pm
17 (Lab)	Th 1:30 – 4:20	Su Hu	su.hu@sjsu.edu	Th 5:00 – 6:00 pm
18 (Lab)	W 10:30 – 1:30	Neomi Millan	neomi.millan@sjsu.edu	MW 2:00 – 3:00 pm
19 (Lab)	Th 10:30 – 1:30	Neomi Millan	neomi.millan@sjsu.edu	MW 2:00 – 3:00 pm

Course Web Page

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the *Canvas Leaning Management System course login website* *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 is an online course that has a lab component, which complements the lecture. All course activities will take place in our course Canvas site, using the following tools: Zoom, Inbox, Discussion Board, Calendar, and Announcements. Note: Please access Canvas using Chrome for optimal functionality.

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.

Required Materials

Textbook (Recommended)

General, Organic, and Biological Chemistry: Structure of Life, 4th edition, by Karen Timberlake.
- If you plan to take Chem 30A only and will not continue onto Chem 30B, you may purchase the customized textbook, which has only chapters related to Chem 30A, to reduce the cost of textbook. Customized textbook ISBN: **9781269768702**
- However, if you plan to take Chem 30B, it is recommended that you purchase the full version, which has all the chapters: Non-customized textbook ISBN: **9780321750891**
-For labs, we will be using Labster's simulations. The school has paid for your subscription so you would not have to pay for it out of pocket! This software has already been integrated into Canvas, so there is nothing extra you need to do.

Digital tools

- This is an online course. You will need a laptop or desktop computer with a camera and a reliable access to internet. While the Canvas app for phones can be used for course communication and some basic

tasks, you must have access to a computer for completing most coursework. Please note that iPad, iPhone, or Tablets are incapable of running the assigned virtual lab experiments in this course. Chromebooks should have a minimum 4GB SDRAM and processor speed minimum dual-core 2 GHz CPU. More details are in Resources section.

- You should get into the habit of shutting down and restarting your computer/device at least once a week, even once a day, to optimize performance.

Grading Information

Your course grade will be determined according to the following:

Two in-class lecture exams	30%
Take-home Quizzes	10%
Term Paper	5%
Lab*	30%
Comprehensive Final Exam	25%

**Laboratory works account for 30% of total course grade and it includes the following: 20% 'Labster's simulations and 10% 'workday' worksheets.*

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 and a final exam. Each exam is cumulative, so material 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 (100 points each): Exam 1: Monday, Oct. 11th and **Exam 2: Monday, Nov. 22nd**.

Final Examination (200 points): Friday Dec. 10th, 2:45 – 5:00 pm. 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.

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 Final Exam will cover everything discussed in class. In every exam you will need to show your photo ID cards to the proctor.

Online Exam Policies (read carefully). If you violate our honor code, you will be reported to the Office of Student Conduct and receive an F for the course

- The exams will be conducted on Canvas during our regular class time.
- You can NOT use online resources, and you are NOT permitted to message or talk anyone while taking this exam.
- You need to be on Zoom while taking the exam, and your camera needs to be oriented so that the exam proctor can see both your hands. One easy way to accomplish this is by logging into Zoom on your phone. The purpose is to minimize cheating. We trust you but it's not fair to everyone if someone decides to cheat. This will also allow you to ask questions.
- If you are not logged into Zoom and the exam proctor cannot see you while taking the exam, your score will be zero.
- Again, please adjust your camera so the exam proctor can see both your hands. The best way to accomplish this is to have a side view.
- The Zoom link will be posted on your lab Canvas prior to each exam, and the exam will be recorded.

Lab Canvas Quizzes (50 points)

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 (30 points)

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 Oct. 9th. 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 **Oct. 29th**. You will submit your paper to turnitin.com via your Chem 30A Lab Canvas. Papers not submitted to turnitin.com via 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:

In addition to the Lecture section, you must also attend and complete the work in your lab section. Lab will include a combination of synchronous and asynchronous sessions:

a) All Laboratory experiments will be on Canvas. You will have about 9 lab simulations (each lab is 100 points). You are expected to complete the assigned Labster virtual experiments on Canvas. You can work on these lab simulations at your own pace and time, but make sure you complete them prior to the due date. Late submission will not be accepted. **Do not miss the due dates! You can find the lab simulations on Canvas, under Assignments.**

b) There will be 7 mandatory Zoom meetings for the lab portion of the course; you will meet during your regular lab time. Zoom links will be provided by your lab instructor. The intent of these Zoom sessions is to get you ready for the exams. Lab instructors will provide review worksheets and practice exams and answer questions. We call this "*workday*," and you MUST attend. You will earn 20 points for attending

and participating. Not only these are easy points to get, but also help you prepare for the exams. Worksheets for the workdays will be provided by your lab instructor.

Laboratory works account for 30% of total course grade and it includes the following: 20% 'Labster' simulations and 10% 'workday' worksheets.

Please remember that attendance for all workdays is mandatory. Lab instructors will provide Zoom link for these four Zoom sessions. To pass this course, all lab works must be completed. Do not miss labs!!

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 Lecture Canvas website and in-class activities 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

- I expect you to check our course Canvas site, at least twice a week, Monday through Friday. I will communicate with the whole class and with you individually using Inbox.
- I am limited or unavailable on weekends, unless for any urgent matters. If you have questions or concerns about the course, feel free to email me. Please expect 24 hours turn-around time.
- You must obtain permission in advance to record and/or download any course materials. Such permission allows the recordings to be used for your private study purposes only. You will not be permitted to share any class materials with someone who isn't enrolled in the class or without permission. The recordings are protected by instructor's copyright.
- You should try your best to attend class during our regular class time (Lecture: Mondays and Wednesdays 4:30pm – 5:20pm, and your lab section) using the ZOOM meeting platform. You will get one extra credit point for presence in each of the lecture meetings. You are expected to read each chapter in the textbook and/or preview the lecture PowerPoint files or the video lectures posted

on Canvas BEFORE attending the 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 class. It is recommended and encouraged that the office hours of any instructor involved in Chem 30A (Dr. Tran, Dr. Esfandiari, and all lab instructors) be used for individual help.
- I understand that factors beyond your control can interfere with your ability to participate. Please let me know if any issues arise, so we can figure out a plan to make sure you succeed in the course.
- As this is a three-unit course with a lab component, you should plan to spend 4-6 hours a week interfacing with the instructors and/or classmates in our class meetings. Other modes of interface time might be attending the instructors' office hours and/or the SI workshops.
- You should plan to spend at least 6-9 hours a week reviewing the class materials, completing homework assignments and quizzes. Success in this course is based on the expectation that you 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.
- Online science courses require that you acquire important skills such as self-discipline, time management, computer knowledge, and excellent math and language skills. Assessments of math and writing skills are particularly important in science courses to determine if you can handle the course requirements. It is also important to assess online skills. One of the good tools to determine readiness for an online course is the Online Learning Questionnaire: http://tutorials.istudy.psu.edu/learningonline/learningonline2.html

Zoom Classroom Etiquette

- For each class session, you should do your best to open simultaneously Zoom and Canvas (split screen on your computer). We will use both online platforms during our class sessions.
- Try to log online to our class meeting from a quiet, distraction-free environment. We have little time together; let's try to maximize it!
- Keep your Audio on mute until you want to speak. We must work together to limit background noise.
- Enable Video so we can see each other as much like in a face-to-face classroom as possible. Especially in exam time, it is required that you take the exam on Canvas while logging in Zoom from a second device with the camera ON.
- Use the Chat box (on the bottom of the Zoom window) to make a point or ask a question. Remember that Chat is public, and may be recorded, and archived.
- Have a plan for taking notes (paper and pencil, digital notepad, Word/Pages doc). Please note that recordings of our Zoom class sessions will not be saved and posted – unless an incident happens and needs to be documented. So, you should try to capture your thoughts and questions in the moment.

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

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 at http://www.sjsu.edu/gup/syllabusinfo/". Make sure to review these policies and resources.

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 and office hours held by the following SI Leaders: Daniela Sanchez, Hanna Bittar, and Liana Annable. 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/
- CHHS – The Student Success Center nested in the College of Health and Human Sciences offers peer tutoring services. It is located at MacQuarrie Hall (MH) room 533 - phone: 408-924-2910, and Health Building (HB) room 105 - phone: 408-924-8601. Please visit their website https://www.sjsu.edu/chhs/students/student-success-center
- King Library Late-Night Tutoring Services. Please check the link: 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.

5) *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.

6) Student Health Center: 408-924-6122 or https://www.sjsu.edu/studenthealth/

6) *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.

7) *Career Center*: http://www.sjsu.edu/careercenter/

8) *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.

9) For technical support, please contact eCampus: https://www.sjsu.edu/ecampus/ , (408) 924-2337

10) Student Computer Services Loans: Please note that your computer meets the following requirements. 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

- **Processor:** Dual core 2 GHz or higher
- **Memory:** 4 GB or more
- **Graphic card:** Intel HD 3000 / GeForce 6800 GT / Radeon X700 or higher
- **OS:** Latest version of Windows (64-bit) or Mac OS or ChromeOS
- **Supported browsers:** Latest version of Firefox and Chrome
- A **stable** internet Connection

Requirements for Chromebook: Look especially for the amount of memory (**minimum 4GB SDRAM**) and processor speed (**minimum dual-core 2 GHz CPU**).

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

Tentative Course Schedule (Changes would be announced in class at least one week ahead)

Date	Lecture Schedule	Lab Schedule and Due Dates	Due assignments
8/23-8/27	Intro Chapter 1	No lab	
8/30-9/3	Chapter 1&2	***Workday 1***: Intro, Attendance, Sig Fig Worksheet	
9/6-9/10	Chapter 2	*Lab 1*: Lab Safety (***Labster***)	Lab 1 (due on 9/10)
9/13-9/17	Chapter 2&3	*Lab 2*: Chemistry Safety (***Labster***)	Lab 2 (due on 9/17) *Quiz 1* (due on 9/19)
9/20-9/24	Chapter 3	***Workday 2***: Conversion and Energy Worksheet	
9/27-10/1	Chapter 3&5	*Lab 3:* Periodic Table of Elements: Get the table organized in time! **(*Labster*)**	Lab 3 (due on 10/01)
10/4-10/8	Chapter 5	***Workday 3***: Exam I Review Session	*Quiz 2* (due on 10/08)
10/9-10/15	**Exam I** (Ch. 1-3) **Monday 10/11/21** Chapter 5 & Sections 10.1 - 10.3	***Workday 4***: Term-paper discussion and topics sign up	
10/18-10/22	Chapter 5,6	*Lab 4:* Atomic Structure: Assess the possibility of life on other planets **(*Labster*)**	Lab 4 (due on 10/22)
10/25-10/29	Chapter 6	*Lab 5:* Ionic and Covalent Bonds (***Labster***) **Term-paper** must be submitted on Canvas by October 29th, 11:59 pm.	Lab 5 (due on 10/29) *Quiz 3* (due on 10/31)
11/1-11/5	Chapter 6,8	***Workday 5***: Chemical Reactions Worksheet	
11/8-11/12	Chapter 8	*Lab 6:* Stoichiometric Calculations (***Labster***)	Lab 6 (due on 11/12) *Quiz 4* (due on 11/14)
11/15-11/19	Chapter 9	***Workday 6***: Exam II Review Session	
11/22-11/26	**Exam II** (Ch. 5-6 & Sec. 8.1 – 8.3, 10.1 – 10.3) **Monday 11/22/21**	*Lab 7:* Solution Preparation: From salt to solution (***Labster***) *Lab 8:* Titration: Neutralize an acid lake contamination (***Labster***)	Lab 7 (due on 11/26) Lab 8 (due on 11/26) *Quiz 5* (due on 11/28)
11/29-12/3	Chapter 10	***Workday 7***: Practice Exam Review Session *Lab 9:* Acids and Bases (Principles): Avoid falling in a lake of acid! (*Labster*)	Lab 9 (due on 12/3)
12/6-12/10	Chapter 10	**Monday, 12/6 is the last day of classes**	*Quiz 6* (due on 12/6)
	Final Exam: Friday December 10th, 2:45 pm – 5:00 pm (All chapters covered)		

*Term-paper must be submitted on Canvas by October 29th, 11:59 pm.

Lab will include a combination of synchronous and asynchronous sessions:

1) All Laboratory experiments ***(Labster)*** will be on Canvas. You can work on these lab simulations at your own pace and time, but make sure you complete them prior to the due date. Late submission will not be accepted. Do not miss the due dates! You can find the lab simulations on Canvas, under Assignments.

2) ***Workdays*** are mandatory Zoom meetings, and you will meet during your regular lab period. Zoom links and worksheets will be provided by your lab instructor. You MUST attend. You will earn points for attending and participating.