

San José State University
Chemistry Department
Chem 030A, Intro Chem., Section 01 (40114), Fall 2019

Course and Contact Information

Instructor:	Anh-Tuyet Tran, Ph.D.
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Office Hours:	M 10:00 – 11:00 am, W 3:00 – 4:00 pm, and F noon – 1:00 pm
Class Days/Time:	Monday and Wednesday 4:30 – 5:20 pm
Classroom:	Morris Daley Auditorium (MD-101)
GE/SJSU Studies Category:	B1-B3

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 also prepares 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 lecture. Lab meets once a week; lab attendance is mandatory.

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.

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:

1. CLO 1: Use the methods of science and knowledge derived from current scientific inquiry in physical science to question existing explanations. Course activities that will meet this requirement are all of the laboratory experiments that begin with a question or statement relating to the purpose/objective of the lab and questions at the end of the lab to probe your understanding of your data and the relationship to the concepts studied. In addition, there will be class discussions of how scientific discoveries such as the atom and renewable energy resources were derived from scientific inquiry.
2. CLO 2: Demonstrate ways in which science influences and is influenced by complex societies, including political and moral issues. The influence of science will be addressed in lectures where these relationships can be made, such as in medicine and healthcare, environmental issues or the technological advances used to discover the structure of the atom. You will also have the opportunity to write one essay on a topic to be determined later in the course.
3. CLO 3: Use the methods of science, in which quantitative, analytical reasoning techniques are used. Many of the labs and concepts require the use of quantitative and analytical reasoning techniques. For example, most of the labs require students to make observations, take measurements and use equations involving measured variables. In terms of reactions you will discover how balanced equations symbolically represent atoms and particles and a connection will be made to what you observe macroscopically.

Required Texts/Readings

Textbook

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 text book ISBN: **9780321750891**

Other required materials

- Lab Manual: *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.

- Class Notes: *Chem 30A Lecture Booklet*. It can be purchased from Chem. Club in DH 20 (located in the basement of Duncan Hall). Be prepared to pay CASH ONLY.

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 practica. Other course structures will have equivalent workload expectations as described in the syllabus.

Grading Information

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. Handouts and scratch paper will be distributed. You must strictly follow the instructions given in the exams in order for your exams to be graded properly. 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 the instructor AT LEAST THREE WEEKS AHEAD of the exam date.

Two Midterms (100 points each): Exam 1: Monday, Oct. 7th and Exam 2: Wednesday, Nov. 13th. Closed book, closed notes. Exams will focus on the (1) key concepts, (2) lecture notes, (3) lab experiments, (4) quizzes, and (5) additional recommended text problems.

Final Examination (150 points): Monday, Dec. 16th, 2:45 pm - 5:00 pm.

The final exam is mandatory and cannot be missed. Failure to take the final exam will result in a failing grade. It will be comprehensive multiple-choice questions and cover everything discussed in class. You will need to bring photo ID cards, as well as #2 pencils and non-programmable calculators. **PLAN AHEAD FOR YOUR FINAL EXAM. CHECK YOUR SCHEDULE AND MAKE SURE THAT OTHER EXAMS, WORK SCHEDULE, ETC., DO NOT OVERLAP.**

Take-Home Quizzes (50 points)

Several take-home quizzes will be given. No make-ups for missed quizzes. Take-home 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 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 by the 7th week of the semester. 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 is your lab day during the **week of Nov. 18th - 23rd**. 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 the night before the due date. Turnitin.com via Canvas will reject the papers submitted by the morning of the due date. Please plan ahead, as late papers will not be accepted!

Laboratory work (200 points): 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. The Chemistry 30A Laboratory Greensheet will be on Canvas and in Chem 30A Lecture Booklet. 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 A SAFETY QUIZ.**

The lab point break-down is as follows:

A) Safety quiz (10 points): this will be given during the first or second lab period and you must pass it to remain in Chem 30A course.

B) Lab reports/worksheets (160 points): You will have about 8 lab reports (20 points per lab report). To be prepared for the laboratory, read the experiment before coming to your laboratory session. In most experiments, you will have the option to work individually or in small groups. All lab work and reports must be completed and submitted to your lab instructor at the end of the lab session. Generally, no late lab reports will be accepted.

C) Independent lab report (20 points): You will design and write up a protocol to prepare the solution at a specific concentration. The concentrations will be assigned by your lab instructor, prior to the due date. More information will be provided in lab and lecture meetings. This report must be turned in to your lab instructor at the **beginning of your last lab meeting.**

D) Subjective laboratory evaluation (10 points). See lab syllabus for more details.

Determination of Grades

Your course grade will be determined as follows:

Two in-class lecture exams (100 points each)	200
Comprehensive in-class final exam	150
Take-home quizzes	50
Lab work	200
Term paper	30
	<u>Total: 630 points</u>

All your grades, including the lecture exams and canvas quizzes will be posted on your canvas lab section. You have only nine days from the day of your exam review to ask for a regrade. No regrades will be done after nine days have passed.

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!!

Letter grades for the full course are based on the following percentage range:

above 97.0 %	A+	79.9 - 77.0 %	B-	56.9 - 53.0 %	D
96.9 - 93.0 %	A	76.9 - 72.0 %	C+	52.9 - 50.0 %	D-
92.9 - 89.0 %	A-	71.9 - 65.0 %	C	Below 50.0%	F
88.9 - 85.0 %	B+	64.9 - 61.0 %	C-		
84.9 - 80.0 %	B	60.9 - 57.0 %	D+		

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 reports and quizzes.**

- 2) **Bonus points will be given throughout the tests/quizzes. In addition, non-mandatory work such as Lecture Quizzes on the 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 I decide letter grades 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. Make sure that you know your lab instructor's office hours. They will be announced in the first lab meetings. Write this information into your lab manual or somewhere easily accessible to you.

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

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)
- 2) Lab instructors (Lab predominantly, although some can also provide excellent help for lecture)
- 3) *Peer Connections* – Workshops and office hours held by the two SI Leaders: Phuoc Nguyen and Priya Dhillon. 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.
- 4) *COSAC* – The College of Science Advising Center is located in the second Floor of Duncan Hall, DH 213. They have peer advisors and tutors. Check their schedule.
- 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) *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>.
- 8) Private tutors – Cost \$\$\$. You might find ads in SAACS and in the hallways where Chemistry courses are taught (basement of Duncan Hall, DH 20) or you can post your ad in that room.
- 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.

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

Date	Lecture Schedule	Lab Schedule EXPERIMENT NAME (PAGE #)	Due assignments
8/21-8/23	Intro	No lab	
8/26-8/30	Chapter 1	Attendance and safety discussion	
9/2-9/6	Chapter 1,2	Check in and safety quiz* (practice sig fig and conversion)	
9/9-9/13	Chapter 2	Exp: Density and Specific Gravity (p. 31)	Quiz 1 (due on 9/15)
9/16-9/20	Chapter 3	Exp: Atoms and Elements (p. 53)	
9/23-9/27	Chapter 3	Exp: Electron Configuration and Periodic Properties (p. 63)	Quiz 2 (due on 9/29)
9/30-10/4	Chapter 5	Work day: Exam I review, Term-paper discussion and Sign up for topics	
10/7-10/11	Exam I (Ch. 1-3) Monday 10/7/19 Chapter 5 & Sections 10.1 - 10.3	Exp: Compounds and their Bonds-part 1 (p. 73)	
10/14-10/18	Chapter 5,6	Exp: Compounds and their Bonds-part 2	
10/21-10/25	Chapter 6	Exp: chemical reactions and quantities (p. 87)	Quiz 3 (due on 10/27)
10/28-11/1	Chapter 6,8	Work day: exam II review, independent project discussion and assigning concentrations	
11/4-11/8	Chapter 8	Exp: Moles and Chemical Formulas (p. 97)	Quiz 4 (due on 11/10)
11/11-11/15	Exam II (Ch. 5-6 & Sec. 8.3, 10.1 – 10.3) Wednesday 11/13/19	Exp: Acid/Base Titration (p. 129)**	
11/18-11/23	Chapter 9	Exp: Acids, Bases, pH and Buffers (p. 119)	Term-paper*** Quiz 5 (due on 11/24)
11/25-11/29	Chapter 10	No labs (except Monday labs)	
12/2-12/6	Chapter 10	Lab check out	Independent Report**** Quiz 6 (due on 12/8)
12/9-12/13	Last week of class Final Exam: Monday 12/16, 2:45 – 5:00 pm, MD-101 (All chapters covered)		

*Mon Sept 2nd - Labor Day, campus is closed, so Monday labs will check in and take the safety quiz the following Monday (Sept 9th), on the same day that they are doing the Density Experiment.

**Mon Nov 11th - Veterans Day, campus is closed, so Monday labs will perform the Acid/Base Titration lab on Monday, Nov 25th. More information will be given.

***Term-paper must be turned in to your lab instructor at the beginning of your lab during the week of Nov 18th.

**** Independent Lab Report must be turned in to your lab instructor at the beginning of your lab during the week of Dec 2nd.