

**San José State University**  
**Chemistry Department**  
**Chem 030B, Intro Chem., Section 01, Spring 2023**

**Class Days/Time/Location and Instructors:**

Section #	Day/Time/Location	Instructor/Office	email	Office hours
1 (Lecture)	MW 8:00 -8:50 SCI 164	Anh-Tuyet Tran DH 605	anh-tuyet.tran@sjsu.edu	MW 3 – 4 pm F 12 – 1 pm
Lab Coordinator		Melody Esfandiari	melody.esfandiari@sjsu.edu	Available via email
2 (Lab)	W 9:30 – 12:20, DH 611	Ryan Nhan DH 504	ryan.nhan@sjsu.edu	W 12:30 – 1:30 pm
3 (Lab)	Th 10:30 – 1:20, DH 611	Ryan Nhan DH 504	ryan.nhan@sjsu.edu	W 12:30 – 1:30 pm

**Prerequisite:** Chem 30A or Chem 1A (with a grade of “C” or better)

**Course Web Page**

Course materials such as syllabus, handouts, notes, assignment instructions, etc. may be found on the *Canvas Learning Management System course login website at <http://sjsu.instructure.com/courses>*. You are responsible for regularly logging on Canvas to learn of the updates. **Please check your canvas periodically as handouts/online quizzes will be uploaded or emailed via Canvas.**

**Course Format**

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

**Course Description**

Organic compounds produced both in nature and artificially and the reactions they undergo, particularly in human body. Prerequisite: CHEM 030A or CHEM 001A (with a grade of "C" or better; "C-" not accepted). Misc/Lab: Lecture 2 hours/lab 3 hours. Notes: No credit toward Chemistry major or minor.

**Student Learning Outcomes (SLOs)**

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

1. SLO 1: gain a general understanding of nomenclature rules, chemical structure, and chemical properties of organic compounds.
2. SLO 2: extend the aforementioned principles to biochemistry; which is, for the most part, the organic chemistry of living systems.
3. SLO 3: understand the role that various biochemicals and their corresponding reactions play in living systems
4. SLO 4: examine the interrelationships and interdependencies of organic and biochemistry with contemporary society
5. SLO 5: The laboratory section will:

- a) enhance the lecture portion by providing visual examples of the chemical and physical properties of organic and biochemical compounds.
- b) allow students to gain some fundamental basics of laboratory techniques

### **Textbook** (Recommended)

*General, Organic, and Biological Chemistry: Structure of Life, 4<sup>th</sup> edition* or newer, by Karen Timberlake.

**Lab Manual (Required)**: "*Chemistry 30B customized Lab Manual*". 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 3 hours per unit per week with 1 of the hours used for lecture) including preparing for class and lab, participating in course activities, completing assignments, and so on. More details can be found from University Syllabus Policy S16-9 at <http://www.sjsu.edu/senate/docs/S16-9.pdf>.

### **Grading Information**

Your course grade will be determined according to the following:

Two in-class lecture exams	30%
Lab Work	40%
Comprehensive Final Exam	30%

### **In-Class Lecture Exams (60%)**

**There will be two in-class lecture exams and one in-class comprehensive final exam.** 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.

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.**

### **Exam Dates**

**Exam 1: Monday, March 6<sup>th</sup>    Exam 2: Monday, Apr. 17<sup>th</sup> (100 points each)**

**Final Exam (200 points) Friday, May 19<sup>th</sup>, 7:15 am to 9:30 am**

### **Laboratory work (40%)**

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 611. 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. **ONE excused lab absence can be made up by attending another section and completing the work within the same week of the absence.** 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 multiple 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.**

The lab point break-down is as follows:

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

**B) Lab reports and worksheets:** You will have lab reports and worksheets. To prepare 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. There will also be workdays, where no experiments will be conducted but there will be practice worksheets. Attendance is mandatory and the worksheets must be turned in to your lab instructor at the end of the lab session.

**C) Pre-lab reports:** You must prepare a pre-lab for each experiment and submit it to your lab instructor at the beginning of the lab prior to the start of the experiment. The pre-lab will be a 1-2 page typed-up report. The pre-lab includes:

- Title of the experiment
- Abstract (brief summary that describes the main purpose of the experiment. A short description of the experimental techniques used and any pertinent mathematical and chemical equations should be included here).
- Answer to the pre-lab questions (the pre-lab questions for each lab can be found in your lab manual, usually after the lab procedure).

The pre-lab (including the answer to the pre-lab questions) must be typed up. If there are any calculations or structures, they can be hand-written.

**Please note that you need to be on-time to lab. If you are late, your lab instructor has the right to deduct 5 points from the pre-lab. Be on time!**

**Your grades for all exams and assignments 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.**

**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!!**

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

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%		

**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.

**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.**

### **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 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 instructor 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 30B (Dr. Tran, Dr. Esfandiari, or any lab instructors) be used for individual help. Make sure that you know your lab instructor's office hours.

### **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](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

**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/or Lab)
- 2) Lab instructors (Lab predominantly, although some can also provide excellent help for lecture)
- 3) *Peer Connections* provide small group, individual, and drop-in tutoring services. Consultation with mentors is also 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 (5<sup>th</sup> floor of DH, 1<sup>st</sup> floor of Sci) 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.
- 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!**

## Chem 30B, Spring 2023, Course Schedule

Tentative schedule of lecture and lab:

Week	Lecture Schedule	Lab Schedule
1/23-1/27	Orientation	No lab
1/30-2/03	Chapter 11: Intro to Organic Chemistry Alkanes	<i>Workday*</i> : Attendance and Safety Discussion
2/06-2/10	Chapter 11 (cont'd)	<i>Workday*</i> : Safety Quiz & Nomenclature Worksheet
2/13-2/17	Chapter 12: Alkenes and Alkynes	Check in & Exp: Organic Compounds: Alkanes (page 3)
2/20-2/24	Chapter 12 (cont'd)	Exp: Reactions of Unsaturated Hydrocarbons (page 19)
2/27-3/03	Chapter 13: Alcohols, Phenols, Thiols, & Ethers	<i>Workday</i> : (Review for exam I, practice worksheet)
3/06-3/10	<b>Monday Exam I (3/06/23)</b> Chapter 14: Aldehydes & Ketones	Exp: Alcohols and Phenols (page 25)
3/13-3/17	Chapter 14 (cont'd) Chapter 15: Carbohydrates	<i>Workday</i> : (discuss Exam I, Discussion on Aspirin synthesis)
3/20-3/24	Chapter 15 (cont'd)	Exp: Aspirin Synthesis (page 51)
3/27-3/31	<b>Spring Break</b>	<b>Spring Break</b>
4/03-4/07	Chapter 15 (cont'd) Chapter 16: Carboxylic Acids & Esters	Exp: Types of Carbohydrates (page 79)
4/10-4/13	Chapter 16 (cont'd)	<i>Workday</i> : (review for Exam II, practice worksheet)
4/17-4/21	<b>Monday Exam II (4/17/23)</b> Chapter 17: Lipids	Exp: Synthesis of Acetaminophen (page 71)
4/24-4/28	Chapter 17 (cont'd)	Exp: Lipids and making hand lotion (page 101)
5/01-5/05	Chapter 18: Amines & Amides	Exp: Saponification and Soaps (page 113)
5/08-5/12	Chapter 19: Proteins and Amino Acids	Lab check out <i>Workday</i> : (review for Final Exam, practice worksheet)
Monday 5/15	Ch.19 (cont'd) Review	No lab meeting
<b>Friday 5/19</b>	<b>Final Exam: Friday 5/19/23, 7:15 – 9:30 am</b> <b>(All chapters covered)</b>	

\* *Workdays* are mandatory. You MUST attend. You will earn points for attending and participating.

**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.