

Chemistry 325aL Fall 2024

	Lecturer	Lab Director	Course Coordinator	SI Leader	Discussion TA
	Prof. Travis Williams LHI 121 x05961	Dr. Jennifer Moore SGM 223	Dr. Xiaojun Zhang SGM 304	Nick Huang C 402 699 3541	Antonio Vasquez
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Office hours	MWF 2-3p or by appointment				

Lectures: 1:00-1:50 pm, MWF, in WPH B27
Discussion: 1:00-1:50 pm Tuesdays SGM 124
Quiz: 3:30-4:50 pm Wednesdays ZHS 159

Textbooks: “Organic Chemistry” P.Y. Bruice, 8th edition (Required)
“Organic Chemistry as a Second Language: First Semester Topics” D. Klein, 5th edition (Required)
You will need a handy molecular model kit (Required)
“Fall 2024 Chemistry 322aL Laboratory Manual” (Required)
“Organic Chemistry as a Second Language: Second Semester Topics” D. Klein, 5th edition (Recommended)
“Pushing Electrons” D. Weeks, 4th edition (Recommended)
“Study Guide and Solutions Manual,” P.Y. Bruice (Recommended)
“Making the Connections 2,” Anne B. Padias, 2nd edition (Optional)
A separate laboratory syllabus will be issued

Website: Brightspace provides administrative information for both lecture and laboratory. Selected course materials are available online such as lecture slides, study material, exam keys, and secured access to your grades.

Course Objectives:

In this course we will begin your path toward fluency in the language of molecular structure and reactivity. To get there, you will learn concepts of chemical bonding, structure, and reactivity that govern the chemistry of covalent compounds. You will become proficient at reasoning with a combination of analogy and molecular first principles. You will solidify your understanding by practicing problem solving strategies that you learn from instructors, peers, and yourself. At the end of this experience, successful students will achieve a working knowledge of essential concepts of molecular structure and bonding. You will develop skills that include

- Drawing organic structures and characterizing their bonding and orbital makeup.
- Predicting acid and base properties for organic molecules.
- Predicting physical properties for organic compounds.
- Interpreting IR, ¹H-NMR, and ¹³C-NMR data
- Understand how stereochemistry plays a role in reactions.
- Drawing electron pushing mechanisms for representative organic reactions.

Exams: There will be three 60 min exams, each given on Wednesdays at 3:30 pm. The final exam will be given on *Thursday, December 12, 8:00 a.m. – 10:00 a.m.* No exams will be given on alternative dates/times and there will be no make-up exams. Excuses from the final examination are granted only under exceptional circumstances. In such cases, the final will generally be deferred to the final at the end of the next quarter in which Chem 325a is offered.

Exam 1	Wednesday, September 18	3:30 pm	100 points
Exam 2	Wednesday, October 16	3:30 pm	100 points
Exam 3	Wednesday, November 13	3:30 pm	100 points
Final	Thursday, December 12	8:00 - 10:00 am	200 points

Please bring your USC student ID card to all exams. Electronic devices such as cell phones cannot be used during the exam. Textbooks are also not permitted in exams, but you may use your personal notes, written by your own hand. Graded exams will be scanned and available for viewing/printing from Brightspace.

Quizzes: There will be eleven 30 min group quizzes administered on Wednesdays at 3:30 pm when there is not an exam. Groups will consist of three students, and although you must work as a group, you may not consult

texts or online resources during the quiz. Your top eight scores will count toward your final grade. There are no make-ups for missed quizzes. The first three missed quizzes will count as your dropped quizzes. A fourth missed quiz will count as a zero towards your final grade.

Quiz 1	Wednesday, Aug 28	3:30 pm	25 points
Quiz 2	Wednesday, Sept 4	3:30 pm	25 points
Quiz 3	Wednesday, Sept 11	3:30 pm	25 points
Quiz 4	Wednesday, Sept 25	3:30 pm	25 points
Quiz 5	Wednesday, Oct 2	3:30 pm	25 points
Quiz 6	Wednesday, Oct 9	3:30 pm	25 points
Quiz 7	Wednesday, Oct 23	3:30 pm	25 points
Quiz 8	Wednesday, Oct 30	3:30 pm	25 points
Quiz 9	Wednesday, Nov 6	3:30 pm	25 points
Quiz 10	Wednesday, Nov 20	3:30 pm	25 points
Quiz 11	Wednesday, Dec 4	3:30 pm	25 points
Total (Top 8)			200 points

Homework: Read the chapter(s) to be covered in advance of lecture. Here is where you should be spending the majority of your time outside of class, ideally 1-2 hours every day! This is a relatively fast-paced class so working on it a little bit every day means you won't fall behind – trying to “cram” study and memorize material is NOT a successful strategy for organic chemistry! Working problems is the only way you can get practical experience and be prepared for exams. Try the in-chapter problems as you read and then continue to work on the end-of-chapter problems (answers at the back of the book or in Solutions Manual).

Every Monday that precedes a quiz, there will be a homework assignment. This will generally comprise questions representative of the coming quiz. One completed copy of this homework must be submitted by each quiz group as part of the quiz, thus it is due on Wednesday at 3:30p. Whereas only one homework is submitted per group, the best practice will be to work through the homework with your quiz group on Monday or Tuesday. Homework will receive full credit for any reasonable attempted answer, regardless of whether it is correct. The grade content will comprise 20 points for quiz questions and 5 for homework.

Grading: Your final grade will comprise 500 points from the lecture component of the course and 250 points from the laboratory component. To receive a passing grade, satisfactory work must be done in both lab and the lecture portions of the course. **Students who do not earn at least 50% of the lecture points, 50% of the lab points, and an EHS-GLS certificate will not pass.**

Your lecture grade will be calculated from your eight best group quizzes, two highest midterm exams, and your final exam. Since no exams will be given on alternative dates and there will be no make-up quizzes or exams, **by enrolling in this course you agree to be present on campus (or on zoom if required by health or University travel) and take at least eight of the quizzes, two of the midterm exams, and the final exam.**

The 500 points from the lecture component will be calculated in whichever of the two following schemes gives you the highest score:

Plan I: 200 points from your best 8 group quizzes
200 points from your best 2 midterms
100 points from the final

Plan II: 200 points from group quizzes
100 points from your best 2 midterms
200 points from the final

Regrades: We try to be as fair, accurate, and fast as possible when grading exams, but occasionally, graders do make mistakes. Please compare carefully your graded exams with the posted key and bring any grading errors to our attention through the online system. If your exam is not graded according to the key, please submit re-grade requests by **the Monday (5pm)** after exams are returned.

Lab Safety: All students in Ch325aL are required to complete the USC General Lab Safety Course offered by the Office of Environmental Health and Safety. Instructions on completing this process are available online, <https://ehs.usc.edu/research/lab/gls-training/> EHS will offer the live “Meet and Greet” portion of that training in our discussion slot on September 10th, noon in SGM 124.

Drop Dates: **Friday, September 13, 2024:** Last day to drop without a mark of W and receive refund.

Friday, October 11, 2024: Last day to drop without a mark of W.

Friday, November 15, 2024: Last day to drop with a mark of W.

The mark of Incomplete (IN) may only be given to a student who is doing passing work through November 15, 2024 and is unable to complete the assigned work due to serious illness or a documented emergency occurring after November 15, 2024. If you drop the lecture, you must also drop the lab.

Attendance & Absences It will be imperative for you to attend class if you plan to succeed in this course. As technology allows, we will live stream all class lectures and these will be available in Blackboard. **If you are constrained to be off campus**, you should view live streamed lectures. You will be able to take group quizzes and midterms remotely by zoom only if you have a health (or equivalent) excuse that prevents you from attending live. Similar provisions will be made for the final exam, subject to changes in USC policy. Make-ups for exams or quizzes will not be given under any circumstances. If you are absent for any given exam or quiz, you need not ask permission; just be sure to attend at least 8 quizzes and 2 midterm exams. **Your agreement to complete 8 quizzes, 2 midterms, and EHS-GLS is a requirement for enrollment in the course.**

Students with Disabilities: Students requesting academic accommodations based on a disability are required to register with OSAS, the Office of Student Accessibility Services. A letter of verification for approved accommodations can be obtained from OSAS. OSAS is located in GFS 120. The phone number for OSAS is (213) 740-0776. Please provide the verification letter to the course coordinator Dr. Xiaojun Zhang at the beginning of the semester.

Academic Integrity: USC seeks to maintain an optimal learning environment. General principles of academic honesty include respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as to avoid using another’s work as one’s own. All students are expected to understand and abide by these principles. SCampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://www.usc.edu/scampus/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The review process can be found at: <https://sjacs.usc.edu>.

Statement on Support Systems

The Office of Student Accessibility Services

See Dr. Zhang to register disability accommodation requests.

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://safety.usc.edu/resources/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class or any case of sexual assault in the USC community. <https://eeotix.usc.edu>.

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://campussupport.usc.edu>

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. <https://diversity.usc.edu/>

Lecture Schedule

Week	Monday	Wednesday	Friday	Comments
1	8/26 Course Intro	8/28 Chapter 1 GROUP QUIZ 1	8/30 Chapter 1*	
2	9/2 Labor Day	9/4 Chapter 2 GROUP QUIZ 2	9/6 Chapter 2	
3	9/9 Chapter 2	9/11 Chapter 3 GROUP QUIZ 3	9/13 Chapter 3	GLS Meet & Greet 9/10, 12p SGM 124
4	9/16 Chapter 4	9/18 Chapter 4 EXAM 1	9/20 Chapter 4	
5	9/23 Chapter 5	9/25 Chapter 5 GROUP QUIZ 4	9/27 Chapter 5	
6	9/30 Chapter 6	10/2 Chapter 6 GROUP QUIZ 5	10/4 Chapter 6	
7	10/7 Chapter 7	10/9 Chapter 7 GROUP QUIZ 6	10/11 Fall Recess	
8	10/14 Chapter 7	10/16 Chapter 8 EXAM 2	10/18 Chapter 8	
9	10/21 Chapter 8	10/23 Chapter 9 GROUP QUIZ 7	10/25 Chapter 9	
10	10/28 Chapter 9	10/30 Chapter 10 GROUP QUIZ 8	11/1 Chapter 10	
11	11/4 Chapter 10	11/6 Chapter 11 GROUP QUIZ 9	11/8 Chapter 11	
12	11/11 Veterans Day	11/13 Chapter 12* EXAM 3	11/15 Chapter 12	
13	11/18 Chapter 13	11/20 Chapter 14 GROUP QUIZ 10	11/22 Chapter 14	
14	11/25 Chapter 14	11/27 Thanksgiving	11/29 Thanksgiving	
15	12/2 Review	12/4 Review GROUP QUIZ 11	12/6 Review	
16	12/9 No class	12/11 No class	12/13 No class	Thursday, 12/12 FINAL EXAM