

Sections:	Monday, Wednesday, Friday 7:45 to 8:35 AM
Room:	1002 Gilman Hall
Instructor:	Dr. Junqi Li
Office:	3128 Hach Hall
Phone:	294-7268
Email:	junqili@iastate.edu [Write "CHEM 331" in the beginning of the subject line]
Discussion time:	Wed and Fri 10-11 am or by appointment
Head TA:	Ms. Amaya Jayaweera (amayajt@iastate.edu) will handle logistics related to this class such as the online homework, exam rearrangements, and exam regrades.

Recommended textbook: Organic Chemistry, 4th Edition, by David Klein. The textbook is not required to complete the course. All exams and quizzes are based on the lecture notes.

Canvas: Lecture notes, previous exams, grades, and class announcements will be posted on Canvas. Lecture notes will be uploaded onto Canvas by 12 noon the day before the lecture. You are highly encouraged to download and print them before lectures.

Grading: Maximum total: 400 points.

Four mid-term exams	45%	<ul style="list-style-type: none"> Held during regular lecture hours in 1002 Gilman Feb 8 (Wed), Mar 10 (Fri), Apr 12 (Wed), Apr 28 (Fri) Exam with lowest score is dropped. No make-up exams Show ISU ID to the TA when you turn in your exams Cheating on an exam will earn a zero for that exam (cannot be dropped). Any re-grades on an exam must be requested within one week after receiving the graded exam. Mark the questions you request regrade on the cover page and briefly explain the issue. Turn the exam to Ms. Taylor Gerdes (1608 Gilman Hall) and she will hand it on to the head TA.
Cumulative final exam	25%	<ul style="list-style-type: none"> Date to be determined Covers all modules
Lecture participation	10%	<ul style="list-style-type: none"> Top Hat questions will be asked during lecture 0.5 points for answer 0.5 points for correctness Total Top Hat points scored as a percentage of highest score
Top Hat quizzes	10%	<ul style="list-style-type: none"> Due one week after the lectures in the module are completed Single try Questions mimic exams
WileyPlus	10%	<ul style="list-style-type: none"> Due one week after the lectures in the module are completed For general practice Three tries without penalty

Your final grade may be curved based on the performance of the class, but you are guaranteed the following grades:

>85% for an A- | >75% for a B- | >60% for a C- | >50% for a D-

Your final grade is calculated from the components listed above. No extra credits can be earned.

Using Top Hat. We will be using Top Hat (www.tophat.com) for class participation. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. For instructions on how to download the Top Hat app, please refer to the Top Hat's Getting Started Guide (<https://bit.ly/31TGMLw>). Please note you cannot create an account through mobile applications.

If you already have a Top Hat account, go to the course within Canvas and click the link for Top Hat. If you are new to Top Hat, you will be prompted to create an account once you click on the link to Top Hat.

If you do not click the link, then you will be removed from the course roster every night when the sync happens. In this case, you simply need to access Top Hat using a link one time. If you completed any assignments using a Top Hat account with the same email address as the email address you use to log into Canvas, then your answers and grades will be restored.

If a paid subscription is required, it will be listed at checkout when you access the Top Hat course.

Should you require assistance with Top Hat at any time please contact their Support Team directly by way of email (support@tophat.com), the in-app support button, or by calling 1-888-663-5491. Specific user information may be required by their technical support team when troubleshooting issues.

Co-requisite: Chem 331 is a CO-REQUISITE for Chem 331L.

Drops: Students taking Chem 331L will be required to drop the lab if they drop.

Learning Objectives: Organic chemists seek to understanding the link between structure and reactivity, and using that understanding to make molecules. The purpose of this course is

There are two main parts to the course:

- Structure and properties. You will learn to:
 - Represent organic compounds by their names and structure drawings.
 - Identify unreasonable structures
 - Visualize molecules in 3D space.
 - Learn techniques used to identify organic compounds

- Reactions and mechanisms. You will learn to:
 - Learn why reactions occur
 - Represent how reactions occur using arrow-pushing mechanisms

Course Expectations:

Three tips for you to do well in class:

1. Keep up with the lectures. Don't fall behind – each lecture builds on the last.
2. Participate in Top Hat questions in class.
3. Practice drawing structures with pencil and paper (or tablet and stylus)! The homework is online, but the exams are on paper. Before each exam, work on previous exams to review your understanding.

Tentative schedule for Spring 2022 CHEM 331

Week	Date	Module	Key Topics
1	Jan 18 Jan 20	1	Course introduction Drawing Lewis structures Drawing bond-line structures
2	Jan 23 Jan 25 Jan 27	1 2	Drawing bond-line structures and functional groups Molecular orbitals Intermolecular interactions
3	Jan 30 Feb 1 Feb 3	2 3	Drawing resonance structures Infrared Spectroscopy
4	Feb 6 Feb 8 Feb 10	4	<i>Exam 1 review</i> Exam 1. Topics: Modules 1-3 NMR
5	Feb 13 Feb 15 Feb 17	4 5	NMR Alkane nomenclature Newman projections and cyclohexane conformations
6	Feb 20 Feb 22 Feb 24	6	Stereochemistry
7	Feb 27 Mar 1 Mar 3	7 8	Chemical reactivity Acids and bases
8	Mar 6 Mar 8 Mar 10	8	Acids and bases <i>Exam 2 review</i> Exam 2. Topics: Modules 4-8
9	Mar 13-17	--	Spring break, no classes
10	Mar 20 Mar 22 Mar 24	9	Alkyl halides
11	Mar 27 Mar 29 Apr 31	9 10	Alkyl halides Alkenes
12	Apr 3 Apr 5 Apr 7		Alkenes
13	Apr 10 Apr 12 Apr 14	11	<i>Exam 3 review</i> Exam 3. Topics: Modules 9 and 10 Radicals
14	Apr 17 Apr 19 Apr 21		Radicals Synthesis
15	Apr 24 Apr 26 Apr 28	12	Mass spectrometry <i>Exam 4 review</i> Exam 4. Topics: Modules 9, 10, 11, 12
16	May 1 (Dead week)		Final exam review
17	May 8-11		Comprehensive final exam

The final exam has not been scheduled. Do not make arrangements for vacation until the final exam date is announced.

Mandatory syllabus statements:

Academic Dishonesty: Academic Misconduct in any form is in violation of Iowa State University Student Disciplinary Regulations and will not be tolerated. This includes but is not limited to: copying or sharing answers on tests or assignments, plagiarism, and having someone else do your academic work. Depending on the act, a student could receive an F grade on the test/assignment, F grade for the course, and could be suspended or expelled from the University. See the Conduct Code at www.dso.iastate.edu/ja for more details and a full explanation of the Academic Misconduct policies.

Accessibility Statement: Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu, by contacting SAS staff by email at accessibility@iastate.edu, or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

Dead Week: This class follows the Iowa State University Dead Week policy as noted in <https://www.provost.iastate.edu/resources/faculty-handbook>

Harassment and Discrimination: Iowa State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon race, ethnicity, sex (including sexual assault), pregnancy, color, religion, national origin, physical or mental disability, age, marital status, sexual orientation, gender identity, genetic information, or status as a U.S. veteran. Any student who has concerns about such behavior should contact his/her instructor, Student Assistance at 515-294-1020 or email dso-sas@iastate.edu, or the Office of Equal Opportunity and Compliance at 515-294-7612.

Religious Accommodation: If an academic or work requirement conflicts with your religious practices and/or observances, you may request reasonable accommodations. Your request must be in writing, and your instructor or supervisor will review the request. You or your instructor may also seek assistance from the Dean of Students Office or the Office of Equal Opportunity and Compliance.

Free Expression: Iowa State University supports and upholds the First Amendment protection of freedom of speech and the principle of academic freedom in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

Contact Information: If you are experiencing, or have experienced, a problem with any of the above issues, email academicissues@iastate.edu.