

CHEMISTRY 331 Organic Chemistry I Summer 2023

Sections:	Online.
Room:	Exams will be held online. More detailed information will come later.
Instructor:	Mason Koeritz
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Office Hours:	Held via WebEx. Fridays: 9:30 – 10:30 AM, or available by appointment.

Textbook: *Organic Chemistry*, 4th Edition, by David Klein (available as Ebook and physical book). An optional *Student Study Guide & Solutions Manual for Organic Chemistry*, 4th Edition is also available and is recommended.

Canvas: We will be using Canvas for this course. Lecture videos, previous exams, grades, homework assignments, and class announcements will be posted there.

Online Homework: We will use the Wiley online homework system in this course (wileyplus.com). WileyPLUS will be integrated into Canvas. Although the online homework is the only graded homework, prior student performance suggests that working end-of-chapter problems from your textbook greatly improves understanding. A solutions manual is available for purchase that will provide detailed answers to these end-of-chapter problems. You are strongly encouraged to work as many end-of-chapter problems as possible!

Grading: The course will be graded out of 400 points. The point breakdown is as follows: 100 points from online homework and 300 points from midterm exams. Your final grade may be curved based on the performance of the class, but you are guaranteed the following grades. The lowest score on a 100-point exam or a missed midterm exam will be automatically dropped. Missing an exam for any reason will result in that exam being dropped. Cheating on an exam will earn a zero for that exam, which **cannot** be dropped. You are guaranteed the following grades: >90% A, > 85% A-, >82% B+, >79% B, > 74% B-, >70% C+, >60% C, >50% D; <50% F. Thus, in principle everyone in the class can earn an A. Since an exam will be dropped, it is not possible to tell you exactly where you stand grade-wise until all exam grades have been submitted. ***Any errors in points or grades posted on Canvas should be addressed to mkoeritz@iastate.edu within a week from the date posted. It is your responsibility to monitor your score in Canvas.***

Exams: All exams are currently scheduled to held **ONLINE**. More details about the exam format will be communicated the week before the exam. Due to the nature of the online class, the exams will be open book/notes. **You may not use Chegg or related sites to complete your exams.** Use of these online sites constitutes cheating on an exam and will result in a grade of zero for the exam that cannot be dropped. There will be **four online exams** (100 pts each) with one exam grade being dropped (300 pts total). **THERE WILL BE NO MAKE-UP EXAMS.** Any re-grades on an exam must be requested within one week after receiving the graded exam. **Missing an exam for any reason will result in that exam being dropped.** The reason that I drop an exam is that it allows you to miss an exam for a personal or family emergency (such as an illness, a death in the family, car troubles, etc), or for other legitimate cause without suffering a grade penalty.

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

Drops and Audits: Students taking Chem 331L will be required to drop the lab if they drop or decided to audit Chem 331 lecture course. Auditing does not count towards full-time student status.

Schedule for Chem 331 (Fall 2022)

Week	Date	Recommended Reading	Key Topics
Week-1	May 15-19	Chapters 1 & 2	Intro to Organic Chemistry Review of General Chemistry Molecular Representation
Week-2	May 22 – May 26	Chapters 3 & 4	Acid–Base Chemistry Alkanes and Cycloalkanes
Week-3	May 29 – June 2	EXAM 1 Chapters 5 & 6	Exam 1: Tuesday, May 30th (Ch 1-4) Stereoisomerism Chemical reactivity and mechanisms
Week-4	June 5 – June 9	EXAM 2 Chapter 7	Exam 2: Tuesday June 6th (Ch 5-6) Substitution and Elimination Reactions
Week-5	June 12 – June 16	Chapter 7 Chapters 8	Substitution and Elimination Reactions Addition Reactions of Alkenes
Week-6	June 19 – June 23	EXAM 3 Chapters 9 & 10	Exam 3: Tuesday June 20th (Ch 7-8) Alkynes Radicals
Week-7	June 26 – June 30	Chapter 11 Chapters 14 & 15	Synthesis Infrared Spectroscopy and Mass Spectrometry NMR
Week-8	July 3 – July 7	Chapter 15 EXAM 4	NMR Exam 4: Friday July 7th (Ch 9-11, 14-15)

Course Expectations: *A large amount of new material will be covered in this course and it is extremely important that you keep up. You should read the appropriate chapter before the lecture covering that material in order to more easily follow the discussion. Also, do not cut classes and you will miss the connections between lectures. Work on the end-of-chapter problems for your own benefit. The answers to those problems are available in the Study Guide & Solutions Manual. It is strongly advised that you work as many problems as you can to do well in this course.*

The four most important tips for doing well in this class:

1. Read the book chapter before watching the lecture videos. This is an effective use of your time because you will get more out of the videos if you have read ahead.
2. Work all of the online homework following lecture.
3. Don't fall behind, as it is nearly impossible to catch up!
4. Ask as many questions as you need to!

Learning Objectives:

Organic chemistry is a challenging subject. You will be expected not only to learn factual information, but also to apply your newfound understanding to open-ended problems. You should not aim simply to memorize the material. Rather, you should try to make sense of trends so that you can make predictions in unfamiliar situations. Problems fall into Five major categories:

Naming of Organic Compounds: You will learn about naming compounds which are cyclic or acyclic, alkanes, alkenes and alkynes with or without specifying stereochemical information such as R, S, E, Z, cis or trans.

Structure and properties: Major topics in this area include the properties of functional groups (the key parts of organic molecules), conformational analysis (the study of how molecules fold in three dimensions), and stereochemistry (the study of molecules possessing mirror-imaged partners).

Reactions and mechanisms: You will learn to predict the products of reactions, propose reagents for effecting desired reactions, and explain why reactions proceed the way they do.

Organic synthesis: Using your understanding of reactions, you will propose methods for preparing target molecules through multi-step reaction sequences.

Structure determination: Using your understanding of organic chemistry, you will deduce the structures of unknown compounds by analyzing their properties under a variety of conditions

Mandatory Syllabus Statements:

Academic Dishonesty

The class will follow Iowa State University's policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office.

<http://www.dso.iastate.edu/ja/academic/misconduct.html>

Disability Accommodation

Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact (instructor name) to set up a meeting within the first two weeks of the semester or as soon as you become aware of your need. Retroactive requests for accommodations will not be honored.

Prep Week

This class follows the Iowa State University Dead Week policy as noted in section 10.6.4 of the Faculty Handbook <http://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.