

CHEMISTRY 331 Organic Chemistry I Fall 2024

Sections:	M/W/F 9:55-10:45 pm.
Room:	1104 Gilman. Our exams will be held <u>in person</u> at 6:45-7:45 PM, exam room TBD.
Instructor:	Dr. Art Winter
Office:	2101D Hach Hall
Phone:	294-2813
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Office Hours:	M/W after class or by appointment

Textbook: *Organic Chemistry*, 3rd Edition, by Joel Karty (available as Ebook and physical book).

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 online homework system called SmartWorks, which is integrated into Canvas. You can access the homework through the Canvas "Modules" tab. In total, the homework is worth 75 pts (15%). The settings on the electronic homework are meant to make it possible to get (nearly) all the points as long as you stick to it. It's a learning tool, not a testing tool.

Smartwork does not "reside" on Canvas; it is a service of the textbook publisher. However, we have gotten what is supposed to be complete integration between the two. ***You should access your homework sets by going through Canvas***, but behind the scenes, they are actually being done on the Norton web site. When you are done, the grade is supposed to go back to Canvas. Please keep an eye on your grades in Canvas. If things look wrong, please let me know.

Technical support is provided by the publisher, not by me; I won't be able to help you much with account problems, browser problems, or registration. This is part of our agreement with the publisher. If you have tried the technical support and are still in trouble, I do have a personal contact I can get in touch with, but you are obliged to try technical support first.

Grading: There will be four 100-pt exams and a 125-pt cumulative final exam. The course grade will be based on the three best 100-point exam scores plus the final exam score (which cannot be dropped) and 75 pts for homework (total = 500 points). The lowest score on a 100-point exam or a missed hour 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. **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.

Homework 75 points (15%): You get the percentage of points that you get percent on the homework. The homework is set up so that you should be able to get >95% as long as you work through it.

Midterm Exams 300 points (60%): Midterms will be written to score out of 100 points and you keep the best three out of four scores.

Final exam 150 points (25%). This will be a normal comprehensive final exam.

Organic chemistry exams typically have somewhat lower averages than many courses you may have been in. I am generally very happy when the average reaches as high as 70. By the time we add in the (easy to get) homework points and drop the lowest exam, the distribution of the final letter grades will be no different than for

a typical chemistry course. Of course, the grading system is set up so that in principle every student in the class can get an A, so you are not competing with one another like in a curved class.

The grading scale for the course is:

A \geq 87%; A- \geq 85%; B+ \geq 83%; B \geq 77%; B- \geq 75%; C+ \geq 72%; C \geq 65%; C- \geq 60%; D \geq 55%; D- \geq 50%.

No D+ grades will be given.

Relationship to the “non-majors” section 1 and 2 (taught by Prof. Mason Koeritz): In the regular section, we assume you are a pre-med, pre-vet, biologist, or not-super-chemical chemical engineer. We teach you a good solid organic chemistry course, but there are lots of “interesting bits” that we leave out in favor of more “examples from your life.” In this section, we assume that you are interested in chemistry enough that you’re choosing to be here and want a little more of the big picture...a little more subtlety and pure chemistry.

The other thing to know is that switching back and forth between the majors and regular section at the semester break is not a good idea. The first few weeks of the classes are the same as we learn the basics of structure. But as we get past the first few chapters, this course focuses on types of reactions as the basis of organization, with types of molecules being incidental. The regular sections start with types of molecules and treats types of reactions more incidentally. It’s a little bit like a history course doing social history then political history vs one that does everything by chronological years. At the end, we will have covered the same ground, but if you switch in the middle (in either direction), you’ll have lots of material you have to teach yourself over winter break...because 331 and 332 really are a yearlong course in two parts, not two separate courses.

I encourage *anyone* with the interest to be in our section. I don’t think it’s harder or anything. But if you do have doubts, you should switch by the time we are hitting chapter 4 or 5.

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.

Class Calendar.

The class calendar and due dates are based on what I would have been doing for a lecture calendar for the semester. Very roughly speaking, we cover one chapter per week with the homework due on the Sunday night at 11:55 pm following the week we would have been in class. Thus, since the first day of class is Monday, Aug 26, the chapter 1 homework will be due the night of Sunday Sep 1.

The following calendar shows what chapter we will be working on each day of the semester and the dates of each midterm.

Week number	Date of the Monday	Monday	Wednesday	Friday
1	Aug 26	1	1	1
2	Sep 2	Labor day	Nom A	2
3	Sept 9	2	3	3
4	Sept 16	3	Nom B	Test 1 ^a
5	Sept 23	4	4	4
6	Sept 30	5	5	5
7	Oct 7	6	6	Test 2 ^b
8	Oct 14	Nom D/ 7	7	7

9	Oct 21	MO(C)/8	8	8
10	Oct 28	9	9	9
11	Nov 4	10	10	10
12	Nov 11	11	11	11
13	Nov 18	Test 3^c	12	12
14	Dec 2	12	13	13
15	Dec 9	13	Test 4^d	review

^a Test on 1-3, Nom A and B; ^bTest on 4-6 and Nom D; ^cTest on NomD/MO C 7-11; ^dTest on 12-13.

Final exam: TBA (Dec 16-19) Keep an eye on the registrar site for announcement of final exam dates/times.

Exam dates:

- Friday, September 20 (Ch 1-3 and Nom A,B)
- Monday, October 11 (Chapters 4-6)
- Wednesday, November 18 (Nom D and Chapters 7-11)
- Wednesday, December 11 (Chapters 12-13)

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.*

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

1. Read the book chapter and work the in-chapter problems **prior** to coming to class. 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 (use old exams to study the week before a test).
3. Don't fall behind, as it is nearly impossible to catch up!

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.

Mandatory Syllabus Statements:

Accommodations: 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.

In general, we refer students who need exam accommodations (most commonly extra time and/or quiet/isolated rooms) to take the exams at Hixson-Lied.

Academic Integrity: You are encouraged to work on homework and study together. I also don't care if you talk to each other about the homework. If you game the system and get those points without learning anything, it will show up when you take the exams. The homework is meant to be "formative", not "summative." That's professor-speak for Learning Experiences, not Testing Experiences.

All midterms and finals are normal, individual, closed-book, closed-notes exams

Fortunately, cheating in this course is very rare...but any instances suspected cheating will be referred to the Dean of Students office with a minimum penalty of a non-droppable zero.

See <http://www.studentconduct.dso.iastate.edu/academic-misconduct>.

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 a zero score 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.

Classroom Etiquette: When I lecture, I invite interruption for questions and discussion. I will encourage you to talk amongst yourselves to work on materials during class. Please be respectful of one another. Please do not come to our class and sit there and work on your French homework. If you need to do your French homework, please do it elsewhere. You are expected to participate in class.

Prep/Dead Week We will follow the ISU Prep Week policy as noted in section 10.6.4 of the Faculty Handbook with no exam on thursday or friday of Prep Week (there is an exam on Weds).

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

(<http://www.studentassistance.dso.iastate.edu/>) at 515-294-1020 or email dso-sas@iastate.edu, or the Office of Equal Opportunity and Compliance (<http://www.eoc.iastate.edu/>) at 515-294-7612.

Free Expression. Iowa State University supports and upholds the First Amendment protection of [freedom of speech](#) and the principle of [academic freedom \(Links to an external site.\)](#) 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.