

CHEM 255 – Organic Chemistry II (Fall 2025)

Time/Location: MWF 11:00-11:50 AM / SCCT 3024

Instructor Info: Max Majireck / SCCT 1073 / (315) 859-4742 (office) / mmajirec@hamilton.edu

***Office Hours:** Mon 3:30-4:30; Tue 9:30-10:30; Thu 11:00-12:00; Fri 1:30-2:30 or by appointment
**Subject to change! I will announce by email when this occurs.*

Review Sessions: Wednesdays at 6:00 PM in SCCT G041; Exam and travel weeks: time/location TBA

Course Overview: Second-semester organic chemistry emphasizes reaction mechanisms and multi-step synthesis. New topics include the chemistry of conjugated alkenes, aromatic systems, and carbonyl compounds. Additionally, an introduction to biologically relevant organic molecules based on carbohydrates and amino acids will be discussed.

Course Materials:

Lecture Materials:

- Organic Chemistry (McMurray 10th Ed., ISBN# 978-1711471853). Textbook and solutions manual are available as free PDFs at openstax.org. If desired, printed copies can be purchased from the bookstore or online.
- Molecular Model Kit (optional)
 - Molymod MMS-008 Model Kit (UPC# 884413000082). Other model kits can be used but check with me first to make sure it will work.

Lab Materials: (Separate syllabus on Blackboard)

- Making the Connections: A How-To Guide for Organic Chemistry Lab Techniques (A. B. Padias, 3rd Edition; ISBN# 978-0738074368)
- Freeman Laboratory Notebook (ISBN# 978-0716739005) – *you may use up any remaining pages from your Chem 120/125/190 lab notebook.*
- Note that failure to turn in 2 or more lab reports results in automatic failure in the entire course!

Honor Code in Chem 255 (Lecture): Collaboration is allowed on all homework and problem sets, however, each individual must turn in their own assignment representing their own work. No collaboration is allowed on exams. Consultation of internet services like Google or YouTube is not forbidden, but strongly discouraged since there are myriad ways in which a subtle difference in topic can change the overall approach/solution to a given problem. Use of AI like ChatGPT or non-Hamilton human-based like Chegg to work on assignments is not allowed.

Exam Policy: All exams must be taken on the assigned dates and times unless there are immovable conflicts, extenuating circumstances, or accommodations approved by the Dean of Students Office. Apart from emergencies, notice of conflicts must be given 48 hours in advance of the exam. Students with approved accommodation for alternate rooms must coordinate with myself and Testing and Accommodation Services (Coordinator – Michael Stratton, mstratto@hamilton.edu).

Disability Policy: Hamilton College is committed to supporting any students who may need special accommodations for a disability. If you will require any accommodations, please speak with me as soon as possible so that I can best help you. *All conversations will remain 100% confidential.* Please also contact Allen Harrison in the Dean of Students Office (Elihu Root House; (315) 859-4021) who will assist you with documentation and coordination of services.

Mental Health: *Your mental well-being takes priority over this class!* College is hard, and life circumstances can suddenly escalate normal levels of stress to acutely painful moments. Please keep the Dean of Students, your counselor, pastor, etc. or me (if desired) informed of any situations that are unusually stressful, no matter how big or small you perceive them to be. I will be happy to assist you in these circumstances. The following is a list of resources available to you on campus; I am happy to assist you in connecting with them:

- Counseling Center (www.hamilton.edu/offices/counselingcenter, 315 859-4340) located at 100 College Hill Road offers individual and group therapy, peer counselors, psychiatric treatment, and a 24-hour hotline. If you need immediate assistance, phoning the Counseling Center and selecting option 2 will connect you with a counselor, 24 hours a day, 7 days a week.
- Associate Dean of Students for Student Support, Sarah Solomon 315 859-4600; ssolomon@hamilton.edu)
- Associate Dean of Students for Academics, Adam Van Wynsberghe 315 859-4600; avanwyns@hamilton.edu)
- Your faculty advisor
- Your RA and Area Director in your residence hall

Assignments and Exams:

- **Lecture Questions – Graded on a +/- basis**
 - These small assignments are meant to keep you up to date with the lecture material. Most problems will be relatively straightforward and cover the basic concepts and problem solving required to understand the topic at hand. You should also use this as a form of self-evaluation to highlight areas that you might need to study in more depth. To receive credit, you must turn your written answer in to me. I will post an answer key on Blackboard and you are responsible for checking your answers.
- **Problem Sets – Graded on a 25 point scale.**
 - Problem set assignments will involve more in-depth problem solving that will more closely reflect the level of difficulty on an exam.
- **Exams – Graded on a 150 point scale.**
 - Exams will be in person on the scheduled dates (see below). They will focus on specific sections of the class but a cumulative knowledge of any prior sections is generally required.
- **Additional Practice**
 - Prof. Rosenstein also writes his own homework sets, problems sets, and review questions. It is *strongly suggested* that you take advantage of this material since we cover the same topics in the same order and at the same level of depth. There are only a few slight variations in the way we teach certain topics and I will point these out during the semester.

- Textbook Questions: A document is posted on Blackboard that lists problems from Wade 7th, 8th, and 9th edition that are related to the material covered in lecture. Note that the solutions manual is available on reserve at the library.
- Review Sessions: Occasionally, I will create additional questions to go over in my review sessions. However, most often I will use this time to answer questions about lecture topics, homework questions, etc. Most students find that these reviews are extremely helpful to them and it is strongly recommended that you attend if possible. If you cannot make it to my reviews, you may attend Prof. Rosenstein's (Tuesday's at 6:00 PM in G042), the dedicated Chem 255 student TA's (Mondays or Thursdays at 7:00 PM in G042), or your QSR tutor's (TBD).

Grading:

- **6 Homework Sets** (0.67% each, 4% total)
- **4 Problem Sets** (1.5% each; 6% total)
- **3 In-Semester Exams** (15% each; 45% total)
- **Final Exam** (20%)
- **Lab** (25%)

Chronological Order of Exams and Tentative Assignment Due Dates:

- Lecture Questions – *Not graded, but try to complete each chapter's problems shortly after they are covered in lecture. This will save you much time and effort later on!*
- Homework Set 1 – 9/5 (Fri)
- Homework Set 2 – 9/12 (Fri)
- Problem Set 1 – 9/19 (Fri)
- **Exam 1 – 9/25 (Thu) 7:00 pm in 3024**
- Homework Set 3 – 10/3 (Fri)
- Homework Set 4 – 10/10 (Fri)
- Problem Set 2 – 10/20 (Mon)
- **Exam 2 – 10/23 (Thu) 7:00 pm in 3024**
- Homework Set 5 – 10/31 (Fri)
- Problem Set 3 – 11/7 (Fri)
- **Exam 3 – 11/18 (Tue) 7:00 pm in 3024**
- Homework Set 6 – 12/5 (Fri)
- Problem Set 4 – 12/12 (Fri)
- **Final Exam – 12/15 (Mon) from 7:00-10:00 pm in 3024**

Lecture and Exam Schedule*, **

Dates	Unit/Topics	Chapter(s) in McMurry
8/29; 9/1	Introduction and Review of Chem 190 Concepts	emphasis on 6,7, 8, and 17
9/3, 5, 8	Unit XIII. Chemistry of Alkynes	9
9/10, 12, 15	Unit XIV. Chemistry of Ethers and Epoxides	18
9/17, 19, 22	Unit XV. Chemistry of Conjugated Systems	14
9/25 (Thu)	Exam 1 at 7 pm in 3024 covering Units XIII, XIV, and XV	
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9/24, 26, 29	Unit XVI. Aromaticity in Organic Compounds	15
10/1, 3, 6, 8, 10	Unit XVII. Reactions of Aromatic Compounds	16
10/13, 15, 20, 22	Unit XVIII. Chemistry of Aldehydes and Ketones	19
10/23 (Thu)	Exam 2 at 7 pm in 3024 covering Units XVI, XVII, and XVIII	
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10/24, 27, 29, 31; 11/3	Unit XIX. Chemistry of Enolates Pt. 1	select sections of 22, 23
11/5, 7, 10, 12, 14	Unit XX. Chemistry of Amines	24
11/18 (Tue)	Exam 3 at 7 pm in 3024 covering Units XIX and XX	
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11/17, 19, 21;	Unit XXI. Carboxylic Acids and Derivatives (via screencasts)	20, 21
12/1, 3, 5, 8, 10, 12	Unit XXII. Chemistry of Enolates Pt. 2	remainder of 22, 23
12/15 (Mon)	Final Exam at 7 pm in 3024. Cumulative with emphasis an on Units XXI and XXII	

*Certain dates and topics are subject to change.

**Occasionally, you will be asked to watch one or more short screencasts outside of (or in lieu of) lecture in order to maximize time for in-class problem solving. You will not be tested on anything we do not cover prior to an exam.l