CHEM-UA 225
Organic Chemistry I & Laboratory

Fall 2022

9/1/22-12/14/22, T, R

Class meeting times: 4:55 pm - 6:10 pm

GCASL Room C95

Instructor: Nicholas Angelo
Office: Waverly 435B
Email: nga207@nyu.edu
Office Hours: TBA

Recitation Leaders: TBA (Recitations begin on 9/9)

Required Textbook (available at the NYU bookstore): **Maitland Jones and Steven A. Fleming, Organic Chemistry, Fifth Edition, ISBN Number** *978-0-393-91303-3*

Recommended: *Maruzen, HGS Stereochemistry Molecular Model 4010 Student Set* or any similar molecular modeling set; *Maitland Jones, Jr., Henry L. Gingrich, Steven A. Fleming, Study Guide/Solutions Manual to Accompany Organic Chemistry, Fifth Edition, ISBN Number 978-0-393-93659-9*

Course Overview and Goals

Welcome! This course will introduce you to the major concepts in organic chemistry. It will emphasize the structure of organic molecules, the mechanism of organic reactions and the synthesis of complex organic molecules from simple starting materials. In this course we hope to build a strong foundation for the further study in organic chemistry, medicinal chemistry, biochemistry and other fields. Please read this syllabus carefully!

Upon Completion of this Course, students should be able to:

- Demonstrate knowledge of the content presented in lecture, recitations and the reading.
- Apply course concepts toward solving challenging problems on theory, structure and reaction mechanism.

- Develop strategies toward the synthesis of organic compounds from simple starting compounds.

Requirements and Grading

This course requires a great deal of time and commitment. We will cover a lot of material very quickly. YOU MUST NOT FALL BEHIND! The material in this course builds upon itself and you may not understand tomorrow's concepts if you do not get today's. It is important to consistently work toward mastering the course material throughout the course and well ahead of exam times! Attend lectures and recitations, read the textbook, work through the problems in the text on a consistent and regular basis, ask questions, and attend office hours!

Exams and Quizzes: Exams and quizzes will be in-person and will cover material presented in lecture and in the assigned reading. Quizzes will be administered during recitations. If you require special accommodations please contact the Moses Center (information at the end of this document). There will be "x" number of quizzes offered throughout the course and the highest "x-2" scores will be counted. Three "midterm" exams and a final exam will be offered on the dates indicated on the schedule below. Of the three "midterm" exams offered, the highest two scores will be counted. Please contact the course instructor immediately (at the latest before 9/16) if you have an unavoidable conflict that has been approved by the dean. *No make up quizzes will be given to any student for any reason.*

Regrade Requests: Exams may be submitted for a regrade request no later than one week after the graded exam has been made available to the student. Note that if an exam is submitted for a regrade the entire exam will be regraded, which means that the score may go up or down. To submit a regrade request, indicate which question you believe was graded incorrectly and give an explanation why based on the course material on a separate sheet of paper. Attach it to your exam and give it to your recitation leader. Any alterations made to an exam submitted for a regrade will be considered a violation of Academic Honesty and will be dealt with accordingly (see next section).

Academic Honesty: It is expected that all students are aware of their responsibilities to act honorably and to not cheat. All quizzes and exams must be completed independently. Exams submitted for regrade requests must not be altered in anyway. Students are not permitted to work together on exams and quizzes. Unless otherwise stated, students are not permitted to use any resources during exams and quizzes including but not limited to textbooks, sources on the internet, or any other individual or

entity. Students caught cheating on exams or quizzes will receive on F for the course and a letter will be sent to the dean.

Recitations: Recitations are an essential component of this course. Here is where students can work through problems and ask questions in a smaller setting. To get the most out of your recitation sessions you must prepare beforehand by attending lecture, doing the assigned reading and working through the problems in the textbook. Recitations are held on Fridays and will begin on 9/9. There will be no recitations held on exam days (see schedule below) although your recitation instructor may elect to hold review sessions or office hours on these days.

Laboratory: The laboratory score will count for 25% of the course grade. However, you must pass the laboratory component of the course with a score of 55% or greater in order to be eligible to pass the course, regardless of your performance in lecture. Details of the requirements for the laboratory component of the course can be found in the CHEM 225 Laboratory Syllabus on the Laboratory course site.

NYU Brightspace: All announcements and course information will be posted on the NYU Brightspace course site. Assigned textbook reading, recommended problems (not to be turned in or graded) and other resources will also be posted here. Note that there is a separate site for the laboratory component of the course.

Email: *Students must use their official NYU email account when emailing any of the course instructors.* You may also contact instructors through the email feature on the Brightspace course site. We will not respond to emails received from any non-NYU email accounts as these cannot be verified. Likewise, instructors will only send emails using their official NYU email accounts or through the course site.

Grading: The course grade for CHEM 225 will be composed of the following:

Graded Item	% of Final Grade
Quizzes	10%
Midterm Exams (Highest two scores)	40%
Final Exam	25%
Laboratory Grade	25%

No grading curve will be used for this course, which means that (1) there is no preset number of A's, B's etc. that will be given and (2) exams will not be rescaled to some preset average. Students are not competing for grades in this class. Instead, students are highly encouraged to work together in groups to learn the course material. Working in groups will give students the opportunity to discuss course concepts with each other and to explain concepts to their peers. One of the best ways to learn and test one's knowledge of a subject is to teach it. Work on the problems in the textbook and avoid looking at the Solutions Manual (available at the NYU bookstore) until you have put forth the effort needed to solve them. Students should contact the course instructor or any of the recitation leaders for any questions about the course material. We are here to help!

Tentative Schedule

Week/Date	Topic	Chapter
Week 1, 9/1	Atoms and Molecules, Orbitals and Bonding	1
Week 2, 9/6, 9/8	Lewis Structures, Resonance, Alkanes	1,2
Week 3, 9/13, 9/15	Alkenes, Alkynes, Addition Reactions, Carbocations, Stereochemistry	3
Week 4, 9/20, 9/22	Chirality	4
Week 5, 9/27, 9/29	Rings	5
Exam 1, 9/30	Chapters 1-5	

Week/Date	Topic	Chapter
Week 6, 10/4, 10/6	Substituted Alkanes, Synthesis of Alkanes	6
Week 7, 10/13 (No class on 10/11: Monday schedule for Legislative Day)	Substitution Reactions, SN2 Reaction	7
Week 8, 10/18, 10/20	SN1 Reaction	7
Week 9, 10/25, 10/27	Elimination Reactions	8
Exam 2, 10/28	Chapters 1-8	
Week 10, 11/1, 11/3	Infrared and UV-Vis Spectroscopy, Mass Spectrometry, Nuclear Magnetic Resonance Spectroscopy	9
Week 11, 11/8, 11/10	Electrophilic Additions to Alkenes	10
Week 12, 11/15, 11/17	Carbocation Rearrangements	10
Week 13, 11/22 (No class on 11/24 for Thanksgiving break)	More Additions to Pi Bonds	11
Week 14, 11/29, 12/1	Reactions of Alkynes	11
Exam 3, 12/2	Chapters 1-11	
Week 15, 12/6, 12/8	Radical Reactions	12
Week 16, 12/13	Review	
Final Exam, TBA	Chapters 1-12	

Resources

- **Access your course materials**: NYU Brightspace (brightspace.nyu.edu)
- **Databases, journal articles, and more**: Bobst Library (library.nyu.edu)
- **Assistance with strengthening your writing**: NYU Writing Center (nyu.mywconline.com)
- **Obtain 24/7 technology assistance:** IT Help Desk (nyu.edu/it/servicedesk)

Disability Disclosure Statement

Students requesting academic accommodations are advised to reach out to the Moses Center for Students with Disabilities as early as possible in the semester for assistance.

NYU's Henry and Lucy Moses Center for Students with Disabilities
Telephone: 212-998-4980
Website: http://www.nyu.edu/csd
Email: mosescsd@nyu.edu

Student Wellness Statement

The NYU Wellness Exchange is the constellation of NYU's programs and services designed to address the overall health and mental health needs of its students. Students can access this service 24 hours a day, seven days a week: wellness.exchange@nyu.edu; (212) 443-9999. Students may also call the Wellness Exchange hotline (212-443-9999) or the NYU Counseling Service (212-998-4780) to make an appointment for single session, short-term, or group counseling sessions.