

Syllabus – Organic Chemistry A

The purpose of this syllabus is to describe the course, resources, and policies. It is meant help all students understand the expectations and requirements for the course, and it should be used as a reference for questions about policies. When updates to the syllabus are made during the term, a new version will be posted electronically, and all students will be notified.

Course Information

Course: Chemistry 223 – Organic Chemistry A (3 credits: Lecture & Discussion)

Prerequisites: Completion of Chemistry 102/106 & Math 118 with a grade of C- or better. A student missing a prerequisite may be withdrawn at any time.

Time Zone: This syllabus lists dates/times using Chicago local time (U.S. Central Time Zone)

In-Person Learning: All graded assignments scheduled during class time are available in class only.

Lectures: Lectures will be prerecorded and posted to Sakai. In class time will be used for discussions and problem solving to help understand the material.

Discussions:

- Mon at 8:20a
- Wed at 8:20a
- Fri at 8:20a

Instructor Contact Information

Chemistry 223 is a multi-section lecture & discussion course with common content and common outcomes across all sections. This course includes a Final Exam during the Common Final Exam Period as scheduled by the University. The Course Coordinator is responsible for consultation and coordination with instructors regarding policies, exam writing, and grading. Your Section Instructor is responsible for communicating with you regarding all course content and policies and is the first and primary person you should contact with questions about all aspects of the course. As needed, all Section Instructors will consult with the Course Coordinator throughout the semester

Section Instructor: Dr. Andrew Basner (Ph.D.)

Office: Flanner Hall, 428

Email: abasner@luc.edu

Email timing: I generally do not answer emails before 8pm or after 10pm. During the summer, I try to respond to any email within 12h.

Office Hours Schedule: Office hours will be at Thur, 10a-12p either via zoom or in my office, Flanner hall 428

Course Coordinator: Dr. James Devery (Ph.D.) jdevery@luc.edu

Peer Tutoring

Group peer tutoring study sessions through the Tutoring Center are available for this course. Sessions are free and anonymous meaning professors do not know who is attending. While attendance is open to all, it is extremely beneficial for those who attend regularly. To view times and Zoom information, please visit the Tutoring Center website (luc.edu/tutoring). Students who attend these interactive sessions find themselves working with peers as they compare notes, demonstrate and discuss pertinent problems and concepts, and share study and test-taking strategies. Research shows students who regularly attend sessions have higher grades and more deeply understand course concepts than those who do not. Students are asked to arrive with their Loyola ID, lecture notes, and textbook. For questions, please contact the Tutoring Center at tutoringcenter@luc.edu.

Required Course Materials

- Textbook: eText via [WileyPlus](#) and/or hard copy: Organic Chemistry, Klein, David, 4th edition.
- Loyola Sakai course management site: sakai.luc.edu/portal/ and tools integrated into the site.
- Loyola email: messages are sent to the entire class via Sakai, linked to your Loyola email account
- Access to WileyPlus. Register with course ID 223-004: B59352.
- Access to an application that converts photos to pdfs (examples: CamScanner, Scannable, GeniusScan, apple notes, etc).
- A desktop or laptop capable of accessing and running Zoom conference software.

Optional but Recommended Course Materials: e.g.

- Molecular Model Kit, Solutions Manual, etc. (as applicable)
- Organic Chemistry as a second Language, Klein, David, 2nd edition.

Copyright/Intellectual Property reminder: Course materials provided by your instructors at Loyola, including my materials, may not be shared outside any course without the instructor's **written permission**. Content posted without permission will be in violation of Copyright/Intellectual Property laws.

Course Content & Learning Outcomes

Topics will include: nomenclature, structures, properties, reactions, mechanisms and synthesis of alkanes, alkyl halides, alkenes, alkynes, alcohols and ethers; study of molecular structure, geometry, and properties; functional groups; reactive organic species; stereochemistry; spectroscopy; spectrometry. If successful, the student will be able to:

1. identify the various classes of organic compounds, their methods of preparation, and typical reactions.
2. name and draw specific organic compounds.
3. visualize and interpret multiple representations of organic molecules depicting connectivity, configuration, and conformations.
4. postulate logical reaction mechanisms for organic reactions.
5. discriminate among relative stabilities of reactive intermediates.
6. plan and write out single and multi-step syntheses using known reagents and conditions.
7. identify and compare general physical properties of organic compounds.
8. analyze, interpret, and predict spectral data (MS, IR, NMR) used in identifying organic compounds.
9. describe and analyze how organic chemistry affects the way we live and die.

Student Accommodations

Loyola University provides reasonable accommodations for students with disabilities. Any student requesting accommodations related to a disability or other condition is required to register with Student Accessibility Center (SAC), located in Sullivan Center, Suite 117. Professors receive the accommodation notification from SAC via Accommodate. Students are encouraged to meet with their professor individually in order to discuss their accommodations. All information will remain confidential. Please note that in this class, software may be used to record class lectures in order to provide equal access to students with disabilities. Students approved for this accommodation use recordings for their personal study only and recordings may not be shared with other people or used in any way against the faculty member, other lecturers, or students whose classroom comments are recorded as part of the class activity. Recordings are deleted at the end of the semester. For more information about registering with SAC or questions about accommodations, please contact SAC at 773-508-3700 or SAC@luc.edu.

Course Repeat Rule

Effective with the Fall 2017 semester, students are allowed only THREE attempts to pass Chemistry courses with a C- or better grade. The three attempts include withdrawals (W). The Department advises that it is preferable to complete a course with a grade of C or C-, and to demonstrate growth in future coursework, than to withdraw from a course.

After the second attempt, the student must secure approval for a third attempt. Students must come to the Chemistry Department, fill out a permission to register form or print it from the Department of Chemistry & Biochemistry website: <https://www.luc.edu/chemistry/forms/> and personally meet and obtain a signature from

either the Undergraduate Program Director, Assistant Chairperson, or Chairperson in Chemistry. A copy of this form is then taken to your Academic Advisor in Sullivan to secure final permission for the attempt.

Academic Integrity

All students in this course are expected to have read and to abide by the demanding standard of personal honesty, drafted by the College of Arts & Sciences, which can be viewed at:

<https://www.luc.edu/cas/advising/academicintegritystatement/>

A basic mission of a university is to search for and to communicate the truth as it is honestly perceived. A genuine learning community cannot exist unless this demanding standard is a fundamental tenet of the intellectual life of the community. Students of Loyola University Chicago are expected to know, to respect, and to practice this standard of personal honesty.

Academic dishonesty can take several forms, including, but not limited to cheating, plagiarism, copying another student's work, and submitting false documents.

Any instance of dishonesty (including those detailed on the website provided above or in this syllabus) will be reported to The Chair of The Department of Chemistry & Biochemistry who will decide what the next steps may be. Evidence of cheating in this course will result in, at a minimum, a score of zero (which cannot be dropped from grade calculations) and penalty up to failure of the course. College policies include that instructors will report incidents of academic misconduct to their chairperson as well as to the Assistant Dean for Student Academic Affairs in the CAS Dean's Office. I will report incidents to the Chemistry & Biochemistry Department for further action(s).

Loyola University Absence Policy for Students in Co-Curricular Activities (including ROTC):

Students missing classes while representing Loyola University Chicago in an official capacity (e.g., intercollegiate athletics, debate team, model government organization) shall be allowed by the faculty member of record to make up any assignments and to receive notes or other written information distributed in the missed classes.

Students should discuss with faculty the potential consequences of missing lectures and the ways in which they can be remedied. Students must provide their instructors with proper documentation i.e., "[Athletic Competition & Travel Letter](#)" describing the reason for and date of the absence.

This documentation must be signed by the appropriate faculty or staff member and it must be provided to the professor in the first week of a semester. It is the responsibility of the student to make up any assignments. If the student misses an examination, the instructor is required to allow the student to take the examination at another time.

(<https://www.luc.edu/athleteadvising/attendance.shtml>)

Students who will miss class for an academic competition or conference must provide proper documentation to their instructor as early in the semester as possible.

Accommodations for Religious Reasons

If you have observances of religious holidays that will cause you to miss class or otherwise effect your performance in the class you must alert the instructor **within 10 calendar days of the first class meeting of the semester** to request special accommodations, which will be handled on a case by case basis.

Other Items

- A link to the official Loyola calendar can be found here: <https://www.luc.edu/academics/schedules/>
- The Withdraw deadline for the semester is on Friday, June 23rd.
- Loyola is using SmartEvals to provide instructor & course feedback. OIE will send emails near the end of the term.

Class Recording & Content Information

In general lecture, meetings may be recorded. The following is a mandatory statement for all courses in the College of Arts & Sciences (CAS). We will discuss class norms and standards during the first week and continue the discussion as needed throughout the semester.

Privacy Statement

Assuring privacy among faculty and students engaged in online and face-to-face instructional activities helps promote open and robust conversations and mitigates concerns that comments made within the context of the class will be shared beyond the classroom. As such, recordings of instructional activities occurring in online or face-to-face classes may be used solely for internal class purposes by the faculty member and students registered for the course, and only during the period in which the course is offered. Students will be informed of such recordings by a statement in the syllabus for the course in which they will be recorded. Instructors who wish to make subsequent use of recordings that include student activity may do so only with informed written consent of the students involved or if all student activity is removed from the recording. Recordings including student activity that have been initiated by the instructor may be retained by the instructor only for individual use.

Additional Content, Copyright & Intellectual Property Statement

By default, students may not share any course content outside the class without the informed written consent of the owner of that content. This includes any additional recordings posted by students, materials provided by the instructor, and publisher-provided materials. For example, lectures, quiz/exam questions, book figures/slides, and videos may not be shared online outside the class. In some cases, copyright/IP violations may overlap with breaches of academic integrity. Remember that obtaining consent to share materials is an active process.

Pass/Fail Conversion Deadlines and Audit Policy

A student may request to convert a course into or out of the "Pass/No-Pass" or "Audit" status only within the first two weeks of the semester. For the Fall 2022 semester, students are able to convert a class to "Pass/No-Pass" or "Audit" through Monday, September 12th. Students must submit a request for Pass/No-Pass or Audit to their Academic Advisor.

Health, Safety, and Well-Being On-Campus

Please be familiar with and adhere to all policies and protocols posted on the *Campus Info & Resources* site:

<https://www.luc.edu/healthsafetyandwellbeing/campusinforesources/>

Final Exam

The final will be held on:

Fri, Jun 30th at 8:45a

You will have exactly 2 hours to complete the exam. Additional time will not be granted, even if you start late. There will be no make-up final exams given under any circumstance, and the exam will not be given early, either.

Instructors may not reschedule final exams for a class for another day and/or time during the final exam period. There can be no divergence from the posted schedule of dates for final exams. Individual students who have four (4) final examinations scheduled for the same date may request to have one of those exams rescheduled. If a student reports having four final examinations scheduled for the same date, students should be directed to e-mail a petition to Adam Patricoski, Assistant Dean for Student Academic Affairs, CAS Dean's Office (apatricoski@luc.edu).

Universal Absence Accommodation Policy

As an online course, the attendance policy will vary from in person sections. You will be required to watch all associated lectures outside of our class time. The in-class sessions are used for problem solving and practicing the skills from these lectures. They are not mandatory, but highly recommended. If you do not attend, there are no points lost, but you are responsible for the required problems.

Exams must be completed during the scheduled exam time. No early or late exams are allowed due to academic integrity issues. The lowest non-final exam will be dropped. If you miss a non-final exam, that will be the dropped exam and no make up exam will be offered.

To reiterate:

One missed in-class unit exam due to absence for any reason is already accommodated in the course grading system. Given that only the best three in-class exams are included in this calculation, a missed exam would be the one not included in this calculation, as it would be the lowest score (0%) of the three exams.

Course Grading System

The standards for each letter grade are listed here according to all required course components. Each student will receive a midterm grade via LOCUS at least one week prior to the Withdraw deadline for the semester. Grades are only based on the criteria listed in the syllabus: no substitutions, and no additions.

Grading Scheme (Modify highlighted as needed)

| | |
|-------------------|--|
| WileyPlus | 10% |
| Unit Exams | 60% (individual, in-class, graded assessments) |
| <u>Final Exam</u> | <u>30%*</u> |
| Total score | 100% |

*The final exam is mandatory to earn a passing grade

Letter Grade Cutoffs*:

| | | | |
|----|-------|----|-------|
| A | 90.0% | C+ | 65.0% |
| A- | 85.0% | C | 60.0% |
| B+ | 80.0% | C- | 55.0% |
| B | 75.0% | D | 40.0% |
| B- | 70.0% | F | < 40% |

Wiley plus assignments will be scheduled throughout the summer semester. These must be completed by the appropriate deadlines set. These are worth 10% of your overall grade.

There will be 4 unit exams throughout the semester, with the lowest being dropped. The remaining 3 will be worth 20% each.

There will be a cumulative final exam, worth 30% of your grade. The final exam is required to receive a passing grade in the course.

Changes to Syllabus

There may be changes to the syllabus during the semester. ***You are responsible for all syllabus changes made in class whether or not you attend.***

Course Topics

- Chapter 1: Review
- Chapter 2: Drawing Molecules
- Chapter 3: Acids & Bases
- Chapter 4: Alkanes and Cycloalkanes
- Chapter 5: Stereochemistry
- Chapter 6: Chemical Reactivity & Mechanisms
- Chapter 7: Alkyl Halides
- Chapter 8: Alkenes
- Chapter 9: Alkynes
- Chapter 10: Radicals
- Chapter 11: Total Synthesis
- Chapter 12: Alcohols
- Chapter 13: Ethers
- Chapter 14: IR and MS

Tentative Semester Calendar

| Monday | Wednesday | Fri |
|--|--|---|
| May 22 nd – Chapter 1 , Lecture and problem solving. Review of important general chemistry topics and structures | May 24 th – Chapter 2 , Problem solving. Molecular representations, acids, and bases | May 24 th – Chapter 14 , Problem solving. Functional groups, IR spectroscopy, and MS |
| May 29 th – Memorial Day, no classes! | May 31 st - Chapter 3 , Problem solving. Molecular representations, acids, and bases | Jun 2 nd – Chapter 4 , Problem solving. Alkanes and cycloalkanes. (First hour) Unit Exam 1 – Starts at 9:45a. Ends at 10:45a. Covers chapters 1, 2, and 14 |
| Jun 5 th - Chapter 5 , Problem solving. Stereoisomerism. | Jun 7 th - Chapter 6/7 , Problem solving. Chemical reactivity and mechanisms. Nucleophilic substitution reactions. | Jun 9 th - Chapter 7 , Problem solving. Nucleophilic substitution and elimination reactions. (First hour) Unit Exam 2 – Starts at 9:45a. Ends at 10:45a. Covers chapters 3, 4, and 5, plus select topics from 1, 2, and 14. |
| Jun 12 th - Chapter 8 , Problem solving. Alkene properties and reactions. | Jun 14 th - Chapter 8 , Problem solving. Alkene properties and reactions. | Jun 16 th - Chapter 9 , Problem solving. Alkynes. (First hour) Unit Exam 3 – Starts at 9:45a. Ends at 10:45a. Covers chapters 6, 7, and 8, plus select topics from 1 - 5. and 14. |
| Jun 19 th – Juneteenth no classes! | Jun 21 st - Chapter 10 , Problem solving. Radicals. Chapter 11 , Problem solving. Synthesis. | Jun 23 rd - Chapter 12 , Problem solving. Alcohols and phenols. (First hour) Unit Exam 4 – Starts at 9:45a. Ends at 10:45a. Covers chapters 8, 9, 10, and 11, plus select topics from 1 - 7. and 14. |
| Jun 26 th - Chapter 13 , Problem solving. Ethers and Epoxides | Jun 28 th – Final Review , Problem solving. | Jun 30 th – Final Exam Covers chapters 1-14. |