

Summer Chem 223-002 Syllabus
Organic Chemistry A
Summer 2020

Class meeting times: MWF, 12:30pm – 3:10pm

Class location: Online, through Zoom Classroom

Instructor: Dr. Andrew Basner

Email: abasner@luc.edu

Office: 428 Flanner Hall (Currently not available)

Office Phone: 773-508-3135 (Currently not available)

Office Hours: On Request through Zoom

Class Dates: May 18th, 2020 – June 26th, 2020

Final Exam: June 26th, 2020

Prerequisites: Chem 102 or Chem 106 (General Chemistry 2 – for majors or non-majors)

Course Description: This course is for non-chemistry majors surveying nomenclature, properties, stereochemistry, reactions, mechanisms, and syntheses of aliphatic hydrocarbons, alkyl halides, alcohols, and ethers.

Student Outcomes: A successful student in Chem 223 will be able to:

1. Identify classes of organic compounds and typical reactions.
2. Discriminate amongst intermediates and transition state stabilities.
3. Postulate reaction mechanisms.
4. Plan multi-step syntheses using reactions learned in Chem 223.
5. Analyze and interpret spectroscopy data.

Required Materials:

1. Organic Chemistry, Klein, 3rd ed, Wiley, 2017
2. Student Study Guide and Solutions Manual, Klein, 3rd ed, Wiley, 2017

Optional Materials:

1. Molecular Model Kit
2. Organic Chemistry as a 2nd language, Klein, 4th ed
3. Other organic textbooks

Exams and Grading: There will be 4 exams throughout the summer, in addition to a final. The lowest exam score (that isn't the final) will be dropped. The final must be taken and cannot be one of the dropped exams. If you miss an exam for any reason, that score will be the score that is dropped. Your final score will be determined as followed.

Exam 1: 20%

Exam 2: 20%

Exam 3: 20%

Attendance and discussion participation: 10%

Homework/non-exam quizzes: 0%

Final Exam: 30%

Rough breakdown of grade assignments:

Grade	Range
90+	A
86-90	A-
81-85	B+
76-80	B
71-75	B-
66-70	C+
55-65	C
50-54	C-
45-49	D+
40-44	D
35-39	D-
0-24	F

Notes on grading:

For each exam, a breakdown of the learning objectives required to receive a particular grade will be presented. An example based on an old exam is below. If a student is able to demonstrate all skills in the C range, it is likely the student will score around 70%, which corresponds to a C+/B-. The exact % assignments will vary test to test, but the above breakdown will a good estimate. The class is not graded on a curve. If every student demonstrates with skills and knowledge appropriate for an A, every student will get an A. Conversely, if every student fails to demonstrate the skills and knowledge required for a C, every student will receive a grade lower than a C. **Your success is independent of the success of others!**

Example of learning objects and corresponding grades:

Grade	Student will be able to:
A	Use NMR data, along with other spectroscopy data, to analyze complex organic molecules. Use the Diels-Alder reaction in conjunction with prior reactions in multi-step syntheses.
B	Use splitting patterns in ^1H NMR and DEPT ^{13}C spectra to analyze compounds. Predict the results of conjugated system reactions with regards to stereochemical elements.
C	Analyze basic ^1H NMR and ^{13}C NMR data. Predict the results of simple Diels-Alder reactions.
<C	Unable to complete C requirements above.

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). 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:

<http://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.

Student Accommodations: If you have any special needs, please let me know in the first week of classes. The university provides services for students with disabilities. Any student who would like to use any of these university services should contact the Student Accessibility Center (SAC), Sullivan Center, (773) 508-3700. Further information is available at <http://www.luc.edu/sac/>.

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:

<http://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. Any issue related to an exam will result in a 0% for the exam.

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 (develop standard form on web) describing the reason for and date of the absence.

This documentation must be signed by an appropriate faculty or staff member, and it must be provided as far in advance of the absence as possible. It is the responsibility of the student to make up any assignments. If the student misses an examination, the instructor is required to give the student the opportunity to take the examination at another time.

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

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.

Important Note on Classroom Recordings

In this class software will be used to record live class discussions. As a student in this class, your participation in live class discussions will be recorded. These recordings will be made available only to students enrolled in the class, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. All recordings will become unavailable to students in the class when the Sakai course is unpublished (i.e. shortly after the course ends, per the [Sakai administrative schedule](#)). Students who prefer to participate via audio only will be allowed to disable their video camera so only audio will be captured. Please discuss this option with your instructor.

The use of all video recordings will be in keeping with the University Privacy Statement shown below:

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.

Course Calendar: The topics and dates may vary slightly.

May 18 th	Review of General Chemistry/Structures	Chapter 1/2
May 20 th	Molecular Representations/Acids and Bases	Chapter 2/3
May 22 nd	Alkanes and Cycloalkanes	Chapter 4
May 25 th	Memorial Day, No Class	
May 27 th	Stereoisomerism	Chapter 5
May 29 th	Exam 1 (Material through May 22nd)	
Jun 1 st	Chemical Reactivity and Mechanisms	Chapter 6
Jun 3 rd	Nucleophilic Substitution and Eliminations Rxns	Chapter 7
Jun 5 th	Exam 2 (Material through Jun 1 st)	
Jun 8 th	Alkene Additions	Chapter 8
Jun 10 th	Alkynes/Radicals	Chapter 9/10
Jun 12 th	Exam 3 (Material through Jun 8th)	
Jun 15 th	Radicals/Synthesis	Chapter 10/11
Jun 17 th	Alcohols and Phenols	Chapter 12
Jun 19 th	Exam 4 (Material through Jun 15 th)	
Jun 22 nd	Ethers and Epoxides/Spectroscopy	Chapter 13/14
Jun 24 th	IR and Mass Spectrometry/Review	Chapter 14/Review
Jun 26 th	Final Cumulative Exam	