

Syllabus – Organic Chemistry II

Course Information

Chemistry 222 – Organic Chemistry II

Instructor: Dr. James Devery
Office: 215 Flanner Hall
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Weekly Schedule

Lecture: Monday, Wednesday, Friday 2:45 PM – 3:35 PM in LSB – Room 142
Discussion: (002) Tuesday 11:30 AM – 12:20 PM in Flanner Hall – Room 105
(003) Tuesday 1:00 PM – 1:50 PM in Flanner Hall – Room 105
Lab Section (004) Tuesday 2:30 PM – 5:15 PM in Life Sciences Building – Room 115
(005) Thursday 2:30 PM – 5:15 PM in Life Sciences Building – Room 115

Office Hours (*determined by vote*)

Monday 3:45 PM – 4:45 PM
Wednesday 3:45 PM – 4:45 PM
Thursday 1:00 PM – 2:00 PM

Email

You must use your Loyola email address for all official communication during this course, especially official communication regarding grades. Emails from outside sources can be blocked by spam filters.

Course Description

“Prerequisite: CHEM 221. Chemistry & Biochemistry majors only.”

“A lecture, discussion and laboratory course for chemistry majors continuing from 221 covering nomenclature, properties, reactions, syntheses, and spectroscopy of further classes of aliphatic and aromatic compounds, carbohydrates and other polyfunctional compounds.”

“Outcome: Students will be able to assign IUPAC names, spectroscopically identify, prepare, and propose reactions for these groups.”

Textbook and Additional Course Materials

Textbook: Organic Chemistry (3rd Edition)
Authors: David Klein
Publisher: John Wiley & Sons

Molecular Model Kit: Molecular Visions Organic Model Kit (#3) or Preferred Kit
Website: wileyplus.com and sakai.luc.edu

Grading

5 Quizzes (20 points)	100	10%
3 Midterm Exams (100 points)	300	30%
3 Synthesis Exams (50 points)	150	15%
Lab	200	20%
1 Final Exam (250 points)	250	25%
Total	1000	100%

Quizzes

There are **seven** quizzes offered during the semester. They will be given during the Discussion Sections on the dates listed below. The quizzes will be worth 20 points each. *The **two** lowest scored quizzes will be dropped.* **THERE ARE NO MAKEUP QUIZZES.** If you miss one quiz, it will be dropped, leaving 1 additional drop.

Quiz Dates: January 21, January 28, February 4, February 25, March 10, March 31, April 7

Midterm Exams

There are **three** midterm exams during the semester on the dates listed below. The midterm exams cover lecture topics and will be held during the Lecture. **EACH EXAM COUNTS.**

Midterm Exam Dates: February 12, March 18, April 15

Synthesis Exam Dates: February 11, March 17, April 14

Final Exam

The University sets the schedule for all final exams. The final will be held on:

Friday, May 1 at 4:15-6:15 PM

in **LSB Room 142**. You will have exactly 2 hours to complete the exam. Additional time will not be granted, even if you arrive 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 Lester Manzano, Assistant Dean for Student Academic Affairs, CAS Dean's Office (lmanzan@luc.edu).

The final exam is cumulative for Chem 221 & Chem 222. All topics discussed during both semesters are on the final.

Final Grades

A guideline for grades is shown below. At minimum, you will receive the grade indicated.

A = 93–100%	C+ = 68-72%
A- = 88–92%	C = 63-67%
B+ = 83–87%	C- = 58-62%
B = 78–82%	D = 50-57%
B- = 73–77%	F = 0-49%

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/>.

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:** You must make Devery aware of your request by **Thursday, January 23**. Alternative exam times will be arranged **ONLY** if Devery is notified before this date.

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/athletheadvising/attendance.shtml>)

Excused Absences for Exams

Missed exams will be handled on a case-by-case basis. If you miss an exam because of an illness, death in the family, or any other extenuating circumstance, you must provide written evidence (i.e.- note from doctor, etc.). Once approved, an alternative exam date and time will be assigned. If you miss the final exam with no prior notice, you will receive a zero on the exam.

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. **(please specify what the punishments will be for transgressions).**

Dropping and Withdrawal

Be aware of the following dates in the semester:

January 21: Last day to withdraw without a "W" grade

January 26: Last day to withdraw with a 100% Bursar credit

February 9: Last day to withdraw with a 50% Bursar credit

February 16: Last day to withdraw with a 20% Bursar credit

March 23: Last day to withdraw with a "W" grade, thereafter a "WF" will be assigned

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.

Class time

Lecture

Important! Feel free to bring your books and modeling kit to class **AND USE THEM**. Prepare for lecture by **READING** the textbook **BEFOREHAND**. Lectures will be the *most critical source* of information for this course. Remember, any questions not addressed during lecture can be addressed during discussion. You are responsible for all material covered in lecture. If you miss a lecture, please get the notes from another student in class.

Discussion

The discussion section will develop your problem solving skills through working problems and taking quizzes. Come prepared for discussion. Be ready to ask questions on lecture concepts, textbook problems, previous quizzes, or previous exams. *No one will be admitted into the room once the quiz has begun.*

Study Strategies and Suggestions: You can approach Organic Chemistry in a manner similar to studying a foreign language. Every topic you learn impacts the next topic. Because the material continues to build in complexity, practice is the best way to learn the material. Practice is done by working problems. Honest collaboration is encouraged. Experience dictates that positive outcomes (for exam and course grades) are directly proportional to working and understanding the assigned problems on a regular basis, i.e., applying the concepts learned to non-generic situations. Typically, Organic Chemistry is not self-taught. Overnight cramming will probably not produce success. You should quickly read the chapter/section to be covered BEFORE lecture to improve lecture comprehension. After lecture, careful detailed re-reading of the chapter/section and focused attempts of the assigned problems are appropriate, necessary, essential, and expected. In addition to student's participation in lecture, discussion, reading, as well as homework, joining and contributing to a study group is strongly encouraged.

If you anticipate earning a C, the minimal time per week devoted to Organic Chemistry is estimated at 4 h for lecture and discussion, 4 h for reading, and 4 h for homework.

Textbook Problems

Interactive assignments for each chapter are found in the Assignments tab in Wiley Plus.

Class Etiquette

"...treat people the way they want to be treated..."

Come to class on time.

No talking.

Mute electronic devices.

No eating.

No sleeping.

Students with multiple violations of classroom etiquette will be subject to point deductions throughout the semester.

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.***

Tutoring

Course tutor – **Emily Hodge**

The Center for Tutoring & Academic Excellence provides Loyola University students the opportunity to engage in Collaborative Learning conversations that will increase retention of course material, improve study habits, assist in achieving higher grades, and encounter new friends. For more information concerning our free tutoring services visit: www.luc.edu/tutoring/

Course Topics

Chapter 14: IR and MS (Review)

Chapter 15: NMR

Chapter 16: Conjugated Pi Systems and Pericyclic Reactions

Chapter 17: Aromatic Compounds

Chapter 18: Aromatic Substitution Reactions

Chapter 19: Aldehydes and Ketones

Chapter 20: Carboxylic Acids and Their Derivatives

Chapter 21: Alpha Carbon Chemistry

Chapter 22: Amines

Chapter 23: Organometallic Compounds

Chapter 24: Carbohydrates

Chapter 25: Amino Acids, Peptides, and Proteins

Chapter 26: Lipids

Chapter 27: Synthetic Polymers

Week	Date	Day	Chapter(s)	Description
1	13-Jan	Mon	14+15	IR, MS, & NMR
	15-Jan	Wed		
	17-Jan	Fri		
2	20-Jan	Mon		Martin Luther King Day
	22-Jan	Wed		Synthesis Boot Camp
	24-Jan	Fri		
27-Jan	Mon			
3	29-Jan	Wed	16	Conjugated Pi Systems & Pericyclic Reactions
	31-Jan	Fri		
	3-Feb	Mon		
4	5-Feb	Wed	17-18	Aromatic Compounds & Aromatic Substitution Reactions
	7-Feb	Fri		
	10-Feb	Mon		
5	12-Feb	Wed	14-18	Exam 1
	14-Feb	Fri	19	Aldehydes & Ketones
	17-Feb	Mon	19+20	Aldehydes & Ketones
19-Feb	Wed			
21-Feb	Fri			
7	24-Feb	Mon	20	Carboxylic Acids & Their Derivatives
	26-Feb	Wed		
	28-Feb	Fri		
8	2-Mar	Mon		Spring Break
	4-Mar	Wed		
	6-Mar	Fri		
9	9-Mar	Mon	21	Alpha Carbon Chemistry
	11-Mar	Wed		
	13-Mar	Fri		
10	16-Mar	Mon	22	Amines
	18-Mar	Wed	19-21	Exam 2
	20-Mar	Fri	22	Amines
11	23-Mar	Mon	22+23	Amines Intro to Organometallic Compounds
	25-Mar	Wed		
	27-Mar	Fri		
12	30-Mar	Mon	24+25	Carbohydrates Amino Acids, Peptides, and Proteins
	1-Apr	Wed		
	3-Apr	Fri		
13	6-Apr	Mon	25	Amino Acids, Peptides, and Proteins
	8-Apr	Wed		
	10-Apr	Fri		
14	13-Apr	Mon	22-25	Exam 3
	15-Apr	Wed		
	17-Apr	Fri		
15	20-Apr	Mon	26	Lipids
	22-Apr	Wed	27	Synthetic Polymers
	24-Apr	Fri		
16	1-May	Fri	Cumulative	Final