

Syllabus – Organic Chemistry I

Course Information

Chemistry 221 – Organic Chemistry I

Instructor: Dr. James Devery

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Weekly Schedule

Lecture: Monday, Wednesday, Friday 2:45 PM – 3:35 PM in Crown Center – Auditorium

Discussion: (002) Tuesday 11:30 AM – 12:20 PM in Dumbach Hall – Room 118

(003) Tuesday 1:00 PM – 1:50 PM in Mundelein Center – Room 616

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

Monday 11:00 AM – 12:00 PM

Wednesday 4:00 PM – 5:00 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

“For chemistry majors only. CHEM 221 is a 4 credit hour lecture, discussion and laboratory course covering nomenclature, properties, reactions, syntheses, and spectroscopy (NMR, IR, MS) of organic molecules including alkanes, alkenes, alkynes, and alcohols.

“Outcome: Assign IUPAC names, understand and apply spectroscopy to identify unknowns, predict reaction products, supply starting materials or reagents, propose reasonable reaction mechanisms, and learn techniques for executing key reactions in the laboratory. “

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 (150 points)	450	45%
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: September 5, September 12, September 19, October 17, October 31, November 14, December 5

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: September 27, October 23, November 20

Final Exam

The final exam will take place on **Friday, December 15 at 4:15-6:15 PM.**

The final exam is cumulative. All topics discussed during lecture over the course of the semester are on the final.

IMPORTANT: You must make Devery aware of any exam conflicts by **Friday, September 16.** Alternative exam times will be arranged **ONLY** if Devery is notified before this date.

Final Grades

A guideline for grades is shown below. At minimum, you will receive the grade indicated. However, if the **course average** is below ~75%, then a curved grading system will be considered.

A = 94–100%

C = 66–74%

A– = 89–93%

C– = 63–65%

B+ = 86–88%

D+ = 56–62%

B = 81–85%

D = 50–55%

B– = 78–80%

F = 0–49%

C+ = 75–77%

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.

Class time

Lecture

Important! Feel free to bring your books and modeling kit to class **AND USE THEM.** Prepare for lecture by scanning the textbook. 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, 4-10 h for reading, and 4-10 h for homework.

Textbook Problems

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

Class Etiquette

"...treat people the same way you want them to treat you..."

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.

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, that can be viewed at:

<http://luc.edu/media/lucedu/cas/pdfs/academicintegrity.pdf>

Anything you submit that is incorporated as part of your grade in this course (quiz, exam, etc.) must represent your own work. Any students caught cheating will, **at the very minimum**, receive a grade of "zero" for the item that was submitted and this grade cannot be dropped. If the cheating occurred during a course exam, the incident will be reported to the Chemistry Department Chair and the Office of the CAS Dean. Depending on the seriousness of the incident, additional sanctions may be imposed.

Dropping and Withdrawal

Be aware of the following dates in the semester:

September 5: Last day to withdraw without a "W" grade

September 10: Last day to withdraw with a 100% Bursar credit

September 24: Last day to withdraw with a 50% Bursar credit

October 1: Last day to withdraw with a 20% Bursar credit

November 3: 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 obtain a signature from 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.

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 - Talal Al-Assil - talassil@luc.edu

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/

Disabilities

Students with a university-documented disability should contact me immediately. If your disability requires that quizzes and exams be taken outside of the scheduled time or place, please consult: www.luc.edu/sswd/. Services for Students with Disabilities (SSWD) serves students with disabilities by creating and fostering an accessible learning environment.

Course Topics

Chapter 1: Review of General Chemistry

Chapter 2: Molecular Representations

Chapter 3: Acids and Bases

Chapter 4: Alkanes and Cycloalkanes

Chapter 5: Stereoisomerism

Chapter 7: Alkyl Halides: Nucleophilic Substitution and Elimination Reactions

Chapter 8: Addition Reactions of Alkenes

Chapter 9: Alkynes

Chapter 10: Radical Reactions

Chapter 11: Synthesis

Chapter 12: Alcohols and Phenols

Chapter 13: Ethers, Epoxides, and Thioethers

Chapter 14: Infrared Spectroscopy and Mass Spectrometry

Chapter 15: Nuclear Magnetic Resonance Spectroscopy

Course/Instructor Evaluation – IDEA

At the end of the semester, you will complete an online evaluation of this course based on criteria set by IDEA and by the instructor. For this course, the main objectives are as follows:

1) Gaining a basic understanding of the subject (e.g. factual knowledge, methods, principles, generalizations, theories).

- 2) Learning to apply course material (to improve thinking, problem solving, and decisions.
- 3) Learning how to find, evaluate, and use resources to explore a topic in depth.
- 4) Learning to analyze and critically evaluate ideas, arguments, and points of view.

Keep these objectives in mind throughout the course.

Week	Date	Day	Chapter	Description
1	28-Aug	Mon	1+14	Gen Chem & MS
	30-Aug	Wed		
	1-Sep	Fri		
2	4-Sep	Mon	2+14	Labor Day
	6-Sep	Wed		Molecular Representations & IR
	8-Sep	Fri		
3	11-Sep	Mon	3	Acids & Bases
	13-Sep	Wed	4	Alkanes and Cycloalkanes
	15-Sep	Fri		
4	18-Sep	Mon	5	Stereoisomerism
	20-Sep	Wed		
	22-Sep	Fri		
5	25-Sep	Mon	1,2,3,4,5,14	Exam 1
	27-Sep	Wed		
	29-Sep	Fri		
6	2-Oct	Mon	6	Chemical Reactivity
	4-Oct	Wed	7	Alkyl Halides
	6-Oct	Fri		
7	9-Oct	Mon	7	Break
	11-Oct	Wed		Alkyl Halides
	13-Oct	Fri		
8	16-Oct	Mon	8	Alkenes
	18-Oct	Wed		
	20-Oct	Fri		
9	23-Oct	Mon	6,7,8	Exam 2
	25-Oct	Wed	9	Alkynes
	27-Oct	Fri		
10	30-Oct	Mon	10	Radical Reactions
	1-Nov	Wed		
	3-Nov	Fri		
11	6-Nov	Mon	11	Synthesis
	8-Nov	Wed		
	10-Nov	Fri		
12	13-Nov	Mon	15	NMR
	15-Nov	Wed		
	17-Nov	Fri		
13	20-Nov	Mon	9,10,11,15	Exam 3
	22-Nov	Wed		Thanksgiving
	24-Nov	Fri		
14	27-Nov	Mon	12	Alcohols
	29-Nov	Wed		
	1-Dec	Fri		
15	4-Dec	Mon	13	Ethers
	6-Dec	Wed		
	8-Dec	Fri		
16	15-Dec	Fri	Cumulative	Final

