

ORGANIC CHEMISTRY 222 – Spring 2022

Dr. Tatiana Esipova, Ph.D.

ONLINE and in-person

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LECTURE:	Mo/We/Fr	2:45-3:35 PM	Cuneo Hall109/online	CHEM 222-001-1103
DISCUSSION A:	Tu	11:30 AM-12:20 PM	Flanner Hall7/online	CHEM 222-002-1104
DISCUSSION B:	Tu	1:00-1:50 PM	Flanner Hall7/online	CHEM 222-003-1634
LAB SECTION I	We	5:45 PM-8:30 PM	Life Science bldg.115/online	CHEM 222-004-2269
LAB SECTION II	Th	11:30 AM-2:15 PM	Life science bldg.115/online	CHEM 222-005-2465

OFFICE HOURS: Monday & Wednesday 3:45-4.45 PM (right after lecture)
or e-mail me to schedule an appointment

ADDITIONAL OFFICE HOURS (run by Graden Snyder – Supplemental Student Instructor):
TBD, email: gsnyder@luc.edu

LAB SECTIONS INSTRUCTOR: Mr. Timothy Thomas tthoma1@luc.edu

SPRING 2022 MASKING REQUIREMENT (for in-person mode)

As a Departmental policy, even in the event the University relaxes its universal requirement for indoor mask-wearing during the Spring 2022 semester, **it will remain a principle of this class-section** that, out of respect for the health of housemates and others in regular contact with members of our community, **in this class we properly wear masks at all times (e.g. over nose and mouth).**

REQUIRED RESOURCES

Depending on the COVID-19 safety requirements, this course might be switched from **online synchronous course** to **in-person** mode. For the **online mode** a *desktop or laptop computer with working camera and high-speed Internet access* is required. Wired (ethernet cable) internet is preferred, but WI-FI is acceptable if the connection is reliable. If you do not have a desktop/laptop computer or Internet service, you need to contact the [Information Commons extended loan equipment program](#) within the first few days of the start of the course and arrange for these resources. The Instructor is not responsible for coordinating these resources for students.

Required Text: Organic Chemistry, Klein, 4th edition, hard copy or eText
Required Key: Student Study Guide and Solutions Manual for Organic Chemistry, Klein 4th
Required Online: WileyPlus online (can be purchased separately)

Prerequisites: CHEM 221. Lecture, discussion and laboratory.
Required: Your favorite organic molecular model kit from wherever. Here are just a few of options:
Duluth Labs MM-005 Student Set, *or* Darling Molecular Modeling Kit, *or* Prentice Hall Molecular Model Set

Extra Resources *Organic Chemistry as a 2nd Language I* (1st semester topics), David R. Klein
Organic Chemistry as a 2nd Language II (2nd semester topics), David R. Klein
Pushing Electrons by Daniel Weeks a workbook for extra help with *mechanisms*

Course Website sakai.luc.edu

COURSE DESCRIPTION

Second semester of a two-semester sequence for chemistry majors, CHEM 222 is 4 credit hour lecture, discussion and laboratory course. Mastery of the second semester material requires comprehensive understanding and recall of the first semester material and will continue the functional group-based approach with an emphasis on mechanisms toward understanding the synthesis and reactions of conjugated π systems, aromatics, carbonyl compounds, amines, carboxylic acids and their derivatives, carbohydrates, lipids and proteins.

Outcome: Identify various classes of organic compounds, assign and understand IUPAC names, predict reaction products and mechanisms, supply starting materials and reagents for synthetic conversions, interpret as well as predict spectra (MS, IR, NMR) for organic molecules, and learn aspects of executing organic reactions in the lab.

COURSE OBJECTIVES

At the end of the semester every student will be asked to complete an evaluation of this course via online program for instructor and course evaluation. The evaluation criteria for this course 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. Gaining a broader understanding and appreciation of intellectual/cultural activity

EXAMS AND GRADING

The midterm and final letter grades will be given based on the points scored in the course. Final grade will be determined from one of the following options whichever is higher:

Option 1:

Quizzes	07%
Mid-term Exam 1	16%
Mid-term Exam 2	16%
Mid-term Exam 3	16%
Laboratory works&exams	20%
Final Exam	25%

Option 2 (Lower mid-term exam score is a drop)

Quizzes	07%
Mid-term Exam	16%
Mid-term Exam	16%
Laboratory works&exams	20%
Final Exam	41%

Quizzes

There are seven quizzes offered during the semester on the dates listed below. Two lowest score quizzes will be dropped. There are NO MAKEUP quizzes. If you miss a quiz, it will be dropped and the remaining quizzes will be counted.

Q1: 1/28; **Q2:** 2/4; **Q3:** 2/11; **Q4:** 2/28; **Q5:** 3/21; **Q6:** 4/4; **Q7:** 4/25;

Mid-term Exams

There are three mid-term exams (50 min) during the semester on the dates listed below. The exams will be held during the Lectures. There are NO MAKEUP mid-term exams. If you miss one exam, option 2 will be used automatically to determine your grade. A second missed mid-term exam will result in score zero for the missed exam. Exams will be graded and returned as quickly as possible, usually by the following class period. All grading questions, points of clarification, and grading errors must be brought to the instructor's attention no later than one week after the graded exam is returned.

Mid-term Exam dates: February 16, March 25, April 27.

Final Exam

The final exam (2 hours) will take place on **Friday, May 6 at 4:15–6:15 PM**. *The final exam is cumulative.* All topics discussed during lecture over the semester are on the final. There are NO MAKEUP final exams.

IMPORTANT: Alternate exam dates are ONLY arranged for extenuating circumstances (see below).

The Exams and Quizzes procedure

Calculators, phones, headphones, tablets and any electronic devices ARE NOT PERMITTED. Three items are allowed: (1) working pens, (2) model kit, and (3) your Loyola ID visible on your desk to be checked during the exam.

All purses, bags, jackets, etc must be left at front of the room. Once the exam is distributed, if you exit the room for any reason before time is up, your exam is complete and will be collected.

When you are finished with your exam, please bring your completed exam to the front, and leave the room quietly without disturbing the other students.

Exams will be graded and returned as quickly as possible, usually by the following class period. All grading questions, points of clarification, and grading errors must be brought to the instructor's attention no later than one week after the graded exam is returned.

Any violation of these policies will be in violation with the Academic Integrity Policy described below.

Exams will be graded and returned as quickly as possible, usually by the following class period. All grading questions, points of clarification, and grading errors must be brought to the instructor's attention no later than one week after the graded exam is returned.

NOTE. In the event the University does not relieve its universal requirement to limit the number of in-person classes by the time of the exams/quizzes, the exams/quizzes will be run **online**. The online mode for the exams and quizzes cannot be opted individually due to sickness, possible COVID-19 exposure, or any other reasons listed in the **Absence Policy**.

The following requirements will be applied for the **online** exams/quizzes.

Only one electronic device with one screen is allowed during the exam (e.g. only one laptop/or only one desktop with one screen/or only one cell phone/or only one tablet). The exam will be posted on Sakai 10 min before the exam time. The students should log in into Zoom **WITH VIDEO**, and show their Loyola ID; only after that they will receive the link to download the text of the exam. All exams and quizzes will be proctored *via* Zoom, and might be recorded. The camera on the electronic device **MUST BE** always **ON** during the exam, and it should be pointed at the student's face and the exam. After 50 min the student will have additional 10 min to scan the exam and upload it to Sakai. The use of secondary electronic devices and headphones is **PROHIBITED**. The student may not discuss or share the questions and answers with any other student in any class. Students cannot use tablets or phones to take the exam. The exam MUST BE answered on a printed copy of the exam or on loose leaf paper. Three items are allowed: (1) working pens, (2) model kit, and (3) your Loyola ID visible on your desk to be checked during the exam. Calculators might be used only if specifically mentioned by the Instructor.

Final Grades

A guideline for grades is shown below. A curve for each individual exam might be (but not necessarily) applied based on the specific average and standard deviation, and will be provided upon return of the exam, along with exam grade distribution statistics.

A	=	94-100%	C+	=	75-77%
A-	=	89-93%	C	=	66-74%
B+	=	86-88%	C-	=	63-65%
B	=	81-85%	D	=	51-62%
B-	=	78-80%	F	=	0-50%

SYLLABUS

The current syllabus is posted on Sakai and is subject to change (dated at the top) during the semester. You are responsible for all changes announced whether or not you are in attendance.

DISCUSSION

The discussion section will be devoted to working through problems and answering questions about the homework problems and lecture/text material. *Attendance and participation are expected.*

HOMEWORK

Students have to expect to devote at least 12 HOURS OUTSIDE OF CLASS TIME PER WEEK to studying for organic chemistry. Try not to do homework with the solutions manual out. Homework problems will be recommended for each chapter but not collected, so you must be disciplined about working problems and keeping up with the pace of the lecture. Experience has demonstrated a direct correlation of success in organic with consistently working the assigned problems in the book and writing out the answers.

SAKAI MATERIALS

All handouts provided in class will be mirrored on Sakai. Multiple problem sets can be found on Sakai (sakai.luc.edu/) as the semester proceeds. We will use these problems as a basis for the Discussion Section. The problem sets will NOT be graded and are there to help you prepare for the quizzes and exams.

INTELLECTUAL PROPERTY

All lectures, videos, notes, PowerPoints and other instructional materials in this course are the intellectual property of the Instructor or Wiley, and are so marked on Sakai and elsewhere. As a result, they may not be distributed or shared in any manner, either on paper or in virtual form, without written permission. In lecture and discussion, no photographs or recordings of any kind are allowed without the expressed written permission of the instructor.

ACADEMIC INTEGRITY

Academic cheating is a serious act that violates academic integrity. Academic dishonesty includes, but is not limited to using notes or books during exams, using group chats during the exam period, or talking during an exam. Any student caught cheating on an assignment in any way will receive "zero" for that assignment, and this

grade cannot be dropped. The incident will be reported to the Chemistry Department Chair and the Office of the Dean. Additional sanctions including expulsion from the University may be imposed. All students in this course are expected to have read and to abide by the appropriate standard of personal honesty and integrity, drafted by the College of Arts & Sciences that can be viewed online at <https://www.luc.edu/cas/advising/academicintegritystatement/>

SUPPLEMENTAL INSTRUCTION (SI) AND TUTORING

There are Supplemental Instruction (SI) study sessions available for this course. SI sessions are led by an SI leader, who is a student that has recently excelled in the course. Session attendance is open to all and is voluntary, but extremely beneficial for those who attend weekly. Times and locations for the SI session can be found here: www.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 whom regularly attend sessions have higher grades at the end-of-the-semester and more deeply understand course concepts than those who do not. Students are asked to attend SI sessions with their Loyola ID, lecture notes, and textbook.

The Tutoring Center offers free small group tutoring and lab (drop-in) tutoring for Loyola students. The groups meet once a week through the end of the semester and are led by a student who has successfully completed study in the course material. To learn more or request tutoring services, visit the Tutoring Center online at www.luc.edu/tutoring. The Student ACS (American Chemical Society) affiliate also offers tutoring for free every week in Flanner Hall.

COURSE REPEAT RULE

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

The Student Accessibility Center (formerly known as Services for Students with Disabilities), Sullivan Center (773-508-3700), <http://www.luc.edu/sac>, has the mission “to support, service, and empower Loyola University Chicago students with disabilities” and to “Partner with faculty and staff to provide opportunities for collaboration, professional development, personal growth, and staff interaction, as they relate to students with disabilities.” Please direct all questions concerning accommodations of disabilities to the Student Accessibility Center. Academic accommodations afforded to students require documentation and review. The Student Accessibility Center will issue accommodation letters for registered students to present to their instructors: accommodations are not active until students present these letters to their instructors. If students’ accommodations involve attendance or deadlines, instructors and students will jointly complete and execute an Agreement Form articulating their terms. See <https://www.luc.edu/sac/faculty/facilitatingaccommodations/> for guidance about implementing various kinds of accommodations in a way that is appropriate to your class. The Student Accessibility Center stands ready to work with you.

ABSENCE POLICY

As stated above, there are no early nor make-up exams in this course. Normally, if you miss an exam you will receive a score of zero on that exam.

There are five exceptions to this rule, which apply only in very limited circumstances, as per University Regulations.

- (a) Absence due to medical emergency. This exemption will be granted only under the most extraordinary circumstances. The student must be able to demonstrate beyond doubt that it was a medical emergency. The student must supply the instructor with a doctor's verification of the emergency. If a student has a medical emergency, they must see a doctor immediately or go to a hospital emergency room that day. Colds, headaches, sore-throats, etc. do not constitute medical emergencies. Negative COVID-19 test results will not be considered as doctor's verification of the emergency.
- (b) Death of a member in the immediate family, with appropriate documentation.
- (c) Court appearance that cannot be rescheduled, with appropriate documentation.
- (d) Absence while representing Loyola University in an official capacity (academic, athletic, etc.) with appropriate documentation.
- (e) 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.

If you must miss an exam for one of the reasons specified in University regulations, please let me know as soon as practical, and submit supporting and verifiable documentation. In such cases your final exam will be weighted more to compensate for the missed exam. It is in your interest to not miss an exam for any reason. For appropriate final exam scheduling issues, students must e-mail a petition to Lester Manzano, Assistant Dean for Student Academic Affairs, CAS Dean's Office (lmanzan@luc.edu).

Other exams or a heavy workload during your exam day are not valid reasons for missing your exam. Missing, stolen, or lost textbooks or class notes are not a sufficient reason to delay taking the exam at the scheduled time. Vacation travel plans or a desire to end your semester early are not valid reasons for missing an exam.

WELLNESS

If there are events in your personal life that directly affects your performance in this course and others, please consult me or contact the Wellness Center (<http://www.luc.edu/wellness/>) or the Dean of Students Office (<http://www.luc.edu/dos/>). These resources are included in your tuition and may be an invaluable resource during the completion of your degree.

DROPPING AND WITHDRAWAL

January 24: Last day to withdraw without a "W" grade

January 31: Last day to withdraw with a 100% Bursar credit

February 14: Last day to withdraw with a 50% Bursar credit

February 21: Last day to withdraw with a 20% Bursar credit

March 28: Last day to withdraw with a "W" grade, thereafter a "WF" will be assigned

ONLINE CLASS SPECIFICS

Recording of Zoom class meetings

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 course has concluded. *Students will be required to turn on their cameras at the start of class. Students who have a need to participate via audio only must reach out to me to request audio participation only without the video camera enabled.* 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.

CALENDAR

week	Monday	Tuesday	Wednesday	Thursday	Friday
1		1/18 Discussion 1A Discussion 1B	1/19 Lecture 1 (ch15)	1/20	1/21 Lecture 2 (ch15)
2	1/24 Lecture 3 (ch16)	1/25 Discussion 2A Discussion 2B	1/26 Lecture 4 (ch16)	1/27	1/28 Lecture 5; Q1 (ch16)
3	1/31 Lecture 6 (ch17)	2/1 Discussion 3A Discussion 3B	2/2 Lecture 7 (ch17)	2/3	2/4 Lecture 8; Q2 (ch17)
4	2/7 Lecture 9; Q2 (ch18)	2/8 Discussion 4A Discussion 4B	2/9 Lecture 10 (ch18)	2/10	2/11 Lecture 11; Q3 (ch18)
5	2/14 Lecture 12 (ch19)	2/15 Discussion 5A Discussion 5B	2/16 Midterm 1	2/17	2/18 Lecture 13; Q2 (ch19)
6	2/21 Lecture 14 (ch19)	2/22 Discussion 6A Discussion 6B	2/23 Lecture 15 (ch20)	2/24	2/25 Lecture 16 (ch20)
7	2/28 Lecture 17; Q4 (ch20)	3/1 Discussion 7A Discussion 7B	3/2 Lecture 18 (ch21)	3/3	3/4 Lecture 19 (ch21)
8	3/7 Spring Break	3/8 Spring Break	3/9 Spring Break	3/10 Spring Break	3/11 Spring Break
9	3/14 Lecture 20 (ch21)	3/15 Discussion 9A Discussion 9B	3/16 Lecture 21; Q5 (ch22)	3/17	3/18 Lecture 22 (ch22)
10	3/21 Lecture 23; Q5 (ch22)	3/22 Discussion 10A Discussion 10B	3/23 Lecture 24 (ch22-23)	3/24	3/25 Midterm 2
11	3/28 Lecture 25 (ch23)	3/29 Discussion 11A Discussion 11B	3/30 Lecture 26 (ch23)	3/31	4/1 Lecture 27 (ch23-24)
12	4/4 Lecture 28; Q6 (ch24)	4/5 Discussion 12A Discussion 12B	4/6 Lecture 29 (ch24)	4/7	4/8 Lecture 30 (ch24-25)
13	4/11 Lecture 31 (ch25)	4/12 Discussion 13A Discussion 13B	4/13 Lecture 32 (ch25-26)	4/14	4/15 Good Friday
14	4/18 Easter	4/19 Discussion 13A Discussion 13B	4/20 Lecture 33 (ch26)	4/21	4/22 Lecture 34; Q7 (ch26)
15	4/25 Lecture 35; Q7 (ch27)	4/26 Discussion 14A Discussion 14B	4/27 Midterm 3	4/28	4/29 Lecture 36 (ch27)
16	5/2	5/3	5/4	5/5	5/6 Final Exam 4:15 PM