

Instructor: Dr. Polina Pine

Phone 83134

Email: ppine@luc.edu

Office Location: FH-403

Office Hours: by appointment

during the scheduled days of the class

Lectures: students may attend only the sections they are enrolled to

CHEM 223-003 MWF 9:00-11:40 am **Location:** see LOCUS

CHEM 223-004 MWF 12:30- 3:10 pm

Best (the fastest) way to contact Dr. Pine is in person. If email is sent after 5pm during business days it may be answered the next day or within 24 hours or during the class if the subject matter is not confidential. If email is sent after 4:30 pm on Friday it will be answered on Monday after 4pm or during the class if the subject matter is not confidential.

Course Overview

This course is the first in a yearlong two-semester sequence of organic chemistry covering the structure, properties, and reactivity of aliphatic and alkenic molecules. Specific topics include bonding, nomenclature, conformational analysis, reaction mechanisms, multi-step synthesis, and spectroscopy (MS, IR, and ^1H and ^{13}C NMR).

The student should learn how to:

- Identify the various classes of organic compounds, their methods of preparation, and typical reactions.
- Name and draw specific organic compounds.
- Postulate a logical reaction mechanism for simple organic reactions.
- Discriminate amongst relative stabilities of reaction intermediates.
- Plan and write out multi-step syntheses using known functional group transformations.
- Analyze and interpret data from instruments used in separating and identifying compounds: IR, NMR, MS.

IDEA Objectives

These objectives include learning outcomes beyond this course and will apply across multiple courses and disciplines as you develop as an independent learner at Loyola. These have been selected by the faculty to apply to all sections of Organic Chemistry:

1. Gaining factual knowledge (terminology, classifications, methods, trends)
2. Learning fundamental principles, generalizations, or theories
3. Learning to apply course material (to improve thinking, problem solving, and decisions)
4. Learning how to find and use resources for answering questions or solving problems

The link to the IDEA evaluation of the course will be sent to students at the end of the Summer-I term. Please find 2-3 minutes to fill this online survey. Please remember that as the IDEA manual states: “...As student raters, you should also know that the results of your ratings for this class will be included as part of the information used to make decisions about promotion/tenure/salary increases

for this instructor. Fairness to both the individual and the institution require accurate and honest answers.”

Textbook and material:

1. **Organic Chemistry, Klein, 3rd ed., Wiley, 2017 (ISBN: 978-1-119-31615-2)**
2. **WileyPlus online homework/practice tool for the above textbook (Required and is comprised in the final grade calculation)- included in the textbook Package Options given below, no additional payment is needed. The flyer with the courseID will be uploaded on Sakai under Resources. Follow the flyer ONLY to enroll to your section!**
3. Student Study Guide and Solutions Manual, Klein, 3rd ed. Wiley, 2017 (ISBN: 978-1-119-37869-3)
4. Molecular modeling kit, Darling, Duluth, or equivalent - bring to each class (CH3-CH5)
5. Organic Chemistry as a Second Language: First Semester Topics, 4E ed. (or earlier), Klein, 2017, Wiley (ISBN: 978-1-119-11066-8 (PBK)) (Extremely Highly Recommended)

Package Options for the textbook:

(Contact Bookstore for more information)

- a. Loose-leaf printed textbook, printed study guide/solutions manual, and WileyPLUS online-practice problems (ISBN: 978-1-119-38071-9)
- b. Integrated e-textbook and e-study guide/solutions manual, loose-leaf printed textbook, and WileyPlus online-practice problems (ISBN: 978-1-119-43349-1)
- c. Integrated e-textbook and e-study guide/solutions manual and Wiley Plus online-practice problems (ISBN: 978-1-119-43016-2).

Learning procedure:

- **No Taking Photos**
- **No taking Videos**
- **No Audio recording**
- Only positive, respectful behavior is tolerated in this class. Please see **Harassment (Bias)** section at the end of the Syllabus.
- To contact Dr. Pine by email put CHEM223-YOURSECTION in the Subject field
- Using the computers, cell phones and tablets is not allowed. Must be operated on silent mode during lecture and discussion.
- **It is student's responsibility to follow the announcements, and all policies of the class.**
- **The class lectures and discussions will be the most critical source of information for this course.** If you miss a lecture, please find notes from another student in class.
- Make-up assignments, exams, quizzes are not available for this course.
- It is **impossible** to study organic chemistry without solving **all** assigned problems from the back of each chapter independently on one's own.

- Classes will be given as a combination of the following formats: board, multimedia, use of models, discussions, independent and facilitated problem solving.
- Dr. Pine's lecture slides **if** posted on Sakai may be doubling the material in the class or covering material that expected to be covered by students independently. Follow the announcements in class and ask Dr. Pine during the class, after or before the lecture if anything remains unclear.
- Bring the model kit to each class (for CH3-5 is especially important).
- The study guides in form of problems kits (discussion handouts) if assigned will be posted on Sakai, students must print these handouts, bring them to every class and follow all directions given in the handout
- **Please note that materials from this course cannot be shared outside the course without the instructor's written permission (as reminded by the CAS Dean's Office memo, Jan. 2018).**
- *The majority of the material from CH1 and CH3 was covered in General Chemistry CHEM 101 and CHEM 102 or equivalent class in great details. For this reason CH1&CH3 will be covered only briefly, and students will be tested on these concepts to insure students' readiness for the CHEM223 class. Organic chemistry is heavily based on concepts covered in general chemistry. If you feel hesitant about any of the concepts covered in previous classes you have to review it before coming to first class or during first week of the classes.*

Students have to expect to devote 20-40 HOURS OUTSIDE OF CLASS TIME PER WEEK to studying for organic chemistry. Try not to do homework with the solutions manual out. THIS IS A COMMON MISTAKE STUDENTS MAKE. Students who study in this manner often trick themselves into thinking they know chemistry when really they do not.

Make-up assignments are not available for this course. Contact a classmate for notes, sections/topics covered if you miss a class. **For success in this course, it is important to review your notes, read the textbook and look over the slides/material prior and after class, work on homework problems every day.** DO NOT FALL BEHIND. Attendance is not taken for credit but any absence or any not following the policies or announcements given in the class may result in poor performance.

Due to the fast pace of the semester announcements given in class may not be necessarily doubled/tripled in any electronic form (email, Sakai etc.) It is student's responsibility to follow the announcements, and all policies or changes of the class.

Grading policy:

There are NO EXTRA ASSIGNMENTS NO MAKE-UP EXAMS OR QUIZZES.

Under no circumstances may an exam/quiz be taken at a time and date other than that assigned.

The midterm and final letter grades will be given based on the points scored in the course only. Final grade will be determined from the following:

Quizzes	10%
Unit Exam 1	25%
Unit Exam 2	25%
Final Exam	40%
Total	100%

Approximate grading scale (letter grade is related to percentage scored in the class):

<i>A</i>	<i>A-</i>	<i>B+</i>	<i>B</i>	<i>B-</i>	<i>C+</i>	<i>C</i>	<i>C-</i>	<i>D+</i>	<i>D</i>	<i>F</i>
100-93	92-85	80-84	75 -79	70-74	65-69	60-64	55-59	50-54	40-49	less than 40

Only mistakes such as tallying up points by the lecturer are eligible for regarding.

All quizzes are online quizzes through the WileyPLUS online resource (see Package Options above) the dates of the quizzes are given in the *Tentative Lecture Schedule* below.

Our actual pace and the topics may vary from the schedule.

Tentative Lecture Schedule (students are expected to read the textbook before the lecture). The exams will contain all material covered by the date of each exam or as announced. Final exam is cumulative.

Week	Day	Monday	Wednesday	Friday
1	May 21, 23, 25	CH1/CH2	CH2/CH3	CH3/CH4 QUIZ1
2	May 28, 30, June 1	NO CLASS	CH4	CH4/CH5
3	June 4, 6, 8	Exam I CH5	CH6	CH6/CH7 QUIZ 2
4	June 11, 13,15	CH7/CH8	CH8/CH9	CH9/CH10
5	June 18, 20, 22	EXAM II CH10/CH11	CH12	CH12/CH14 QUIZ 3
6	June 25, 27, 29	CH14	CH13	FINAL EXAM

- *May 22 Last day to drop a course without a grade of "W";*
- *June 22 Last day to withdraw from session without a penalty grade of "WF"*

Students must read carefully all directions related to the exam procedure given in the booklet of each exam. Not following the direction, not reading the directions, missing the direction will not be tolerated.

There are NO EXTRA ASSIGNMENTS NO MAKE-UP EXAMS OR QUIZZES. Under no

circumstances may an exam/quiz be taken at a time and date other than that assigned.

Final exam is mandatory and has to be taken during the scheduled time only (LAST LECTURE OF THE TERM) or a grade of F will automatically result. Final exam is comprehensive.

All exams will be graded within seven business days. Students must pick up their score reports or exams (if available) during the time announced by the instructor only. Issues with graded exams must be submitted within one calendar day of being returned, otherwise scores will be considered final.

The Exams procedure

Calculators, phones, headphones, tablets, smart watches and any electronic devices **are not permitted**. Come to the exam with **three** items only: **HB-2 pencil(s)**/pens, model kit, and your **Loyola ID** visible on your desk to be checked during the exam. Cumulative final exam is two hours duration.

All purses, phones, smart watches, 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.

Instructor Privileges

Instructor reserves the right to make changes and adjustments to this syllabus as necessary, including, but not limited to the grading policy and course schedule.

Course Topics (Not all textbook sections will be fully covered or covered in the order the textbook dictates, so focus first on the material that is directly covered in lecture and assigned for homework and discussion handouts):

Chapter 1: Review of General Chemistry

Chapter 2: Molecular Representations

Chapter 3: Acids and Bases

Chapter 4: Alkanes and Cycloalkanes

Chapter 5: Stereoisomerism

Chapter 6: Chemical Reactivity and Mechanisms

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 (will be integrated in different chapters, students must read and practice this chapter on their own on a daily basis after chapter 10 is covered)

Chapter 12: Alcohols and Phenols

Chapter 13: Ethers and Epoxides; Thiols and Sulfides

Chapter 14: Infrared (IR) Spectroscopy and Mass Spectrometry

Academic Integrity

Trust and integrity are important qualities in students. All submitted work must represent your own work and your own work only. Academic dishonesty of any kind, such as plagiarism and cheat sheets on exams, will not be tolerated. Any student caught cheating on an assignment in any way will receive a “zero” for that assignment and be reported to Chairperson of the Chemistry Department and the Dean School of Art and Science. For further information regarding the Academic Integrity policy and disciplinary procedures, refer to the Undergraduate Studies Catalog: http://www.luc.edu/academics/catalog/undergrad/reg_academicintegrity.shtml.

Disability Accommodations

At times, students with disabilities may wish to avail themselves of the University’s ancillary services. Students requiring accommodations at the University need to contact the Coordinator of Services for Students with Disabilities, then provide documents and schedule arrangements with the instructor at the beginning of the term. Information is available at: <http://www.luc.edu/sswd/>

Tutoring Center

The CTAE offers several different programs each semester, including class-specific tutor-led small groups, Academic Coaching groups dedicated to general academic support, and a Study Buddy Directory for students seeking out more independent collaboration with other students in the same class or subject area. For more information refer to http://www.luc.edu/tutoring/Small_Group_Info.shtml

Harassment (Bias Reporting)

It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias. In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: <http://webapps.luc.edu/biasreporting>

A link to the official Loyola calendar can be found here: <http://luc.edu/academics/schedules/index.shtml>