

# CHEM 231

## Organic Chemistry I

Spring 2022

Millersville University of Pennsylvania

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### Course Objectives and Aims

- 1 To recognize, name, and draw organic molecules and various functional groups
- 2 To provide students with the tools to understand the respective chemical properties, reactivity, and behavior of various functional groups and organic molecules
- 3 To instruct students in basic organic reactions and equip them with the ability to perform multi-step syntheses
- 4 To explain and describe reactivity based on structure and draw mechanisms for such reactivity using curved arrow notation
- 5 To perform spectroscopic analysis using UV-Vis, NMR, IR, and MS

This course syllabus outlines the agreement between instructor and student for the duration of the semester. The schedule is subject to change (i.e. due to inclement weather or unforeseen circumstances), but the course policies are NOT.

### Wear a Mask

#### COURSE MATERIALS

##### **Molecular Model Kit for Organic Chemistry**

ASIN : B01NCU854K on Amazon

<https://tinyurl.com/ModelKit22>

Should be ~\$19. Do NOT spend more than \$25 on a model kit!

**Textbook:** ISBN - 9781119659594

Klein Org Chem 4e loose leaf book – e-books also acceptable.

Student solutions manual optional.

**Notecards for  
Flashcards**

**Plickers (provided  
by instructor)**

**Composition  
notebook – 8.5 x 11  
inches – must be new**

## COURSE STRUCTURE (Cont.)

Letter Grade	Percentage
A	≥94.0%
A-	90.0-93.9%
B+	88.0-89.9%
B	84.0-87.9%
B-	80.0-83.9%
C+	78.0-79.9%
C	74.0-77.9%
C-	70.0-73.9%
D+	68.0-69.9%
D	64.0-67.9%
D-	60.0-63.9%
F	Below 60.0%

### GRADING SUMMARY

Four Exams (each is cumulative)	40% (10% each)
In-Class Plickers	15% (may drop 2 LOWEST)
Composition Notebook Homework (11)	20% (may drop 2 LOWEST)
Laboratory Work (13 labs)	25%
<b>Total Class %</b>	<b>100%</b>
<b>Extra Credit Available</b>	<b>10%</b>

### COURSE SCHEDULE

Chapter #	Chapter Title	Exam Schedule
Chapter 1	Review & Intro – ~3 lectures	
Chapter 2	Structure and Pattern – ~3 lectures	EXAM 1 – Feb. 11
Chapter 3	Acids and Bases – ~4 lectures	
Chapter 4	Alkanes – ~3 lectures	
Chapter 5	Stereoisomers – ~4 lectures	EXAM 2 – March 18
Chapter 6	Reaction Mechanisms – ~4 lectures	
Chapter 7	Haloalkanes/Substitution/Elimination – ~4 lectures	EXAM 3 – April 8
Chapter 8	Alkene Additions – ~4 lectures	
Chapter 9/11	Alkyne Additions/Synthesis – ~4 lectures	EXAM 4 – Finals Week
Chapter 10	Radicals – ~4 lectures	TBA

Chapter 14/15 (UV-Vis/IR/MS/NMR) will be discussed in the laboratory.

**Note:** If a class is canceled for any reason, then the missed exam will be given the next time the class meets. Check the Millersville University website for campus closures.

# COURSE STRUCTURE

Please wear a mask for the duration of your time on campus.

- ① **IN-CLASS PLICKERS (150 Pts):** These are graded group quizzes given every other Friday. You may not make up Plickers quizzes. You may drop the lowest two Plickers grades.
- ② **HOMEWORK (200 Pts):** Textbook problems from Klein will be assigned per chapter. You may drop the lowest two homework grades.
- ③ **LAB (250 Pts):** **You must pass the lab portion to pass the class. You must hand in all labs in order to pass the lab portion.**
- ④ **EXAMS (4 @ 100 Pts each = 400 Pts):** Exams are given synchronously face to face. Exams may not be made up except at the instructor's discretion. If you miss an exam, your fourth exam grade will replace the missed exam grade.

**EXTRA CREDIT (100 points):** The instructor offers extra credit, worth a total of 100 points over the semester. There are two sources of extra credit.

1. Study groups. Study Group policy: Groups of 3-4 students may meet WEEKLY (M-Su) to discuss chemistry problems and complete homework and other extra credit problems:
  - Students must meet weekly, M-Su, for 1 hour.
  - Pictures must be taken at onset and end of 1 hour and sent to Dr. Allen via Remind.
  - All students in the study group must participate the whole hour.
  - If the group does not meet in entirety, the meeting does not count as extra credit. (e.g. if one student bails, you do not get any credit) Pick your group wisely! Remove students who do not participate!
  - The max points over the spring semester are 20 (5 pts to be added per exam).
  - Study groups cannot be adjusted once they form during the second week except to remove members who do not participate. You must notify Dr. Allen of any changes.
2. Extra credit assignments to be submitted to D2L/handed in on paper for credit. These must be submitted by the due date posted for any credit. Late extra credit will not be counted. Extra credit may involve textbook problems, virtual simulations, online quizzes, and other materials. The max points over the semester are 70. This extra credit will be cumulatively added to your final grade.

# CHEM 231 SUPPORT

You Are NOT Alone!

## Remind App and Study groups

You may optionally enroll in the Remind app to be used to message the instructor, notify the instructor of study groups, and connect with your fellow students. Text @chem231s22 to 81010 or go to <https://www.remind.com/join/chem231s22> to join.

Study Groups are a great extra credit option! Consider building one ASAP!

## COURSE EXPECTATIONS

MORE OF THIS

Work lots of problems. *Then do more problems!*

*A minimum rule-of thumb in study time for each course you are taking should be about 4 hours for each 1 hour spent in class per week. That is, 12 hours of study time outside of class for a typical 3 hour per week lecture course. This does NOT include lab.*

Ask questions! There is no such thing as a “dumb” question.

Get help when needed!!! Don't put it off.

## ACADEMIC DISHONESTY

If you break the academic honesty policy of Millersville University, there are severe penalties. A failing grade will be assigned, and you may be prosecuted by an Academic Review board.

## FALLING BEHIND

Falling behind in a chemistry class by missing lectures, lab, or recitation is a BAD IDEA!

## DISRESPECTFUL LANGUAGE

Students are not allowed to call themselves, or others, 'stupid', 'dumb', or any other derogatory term.

LESS OF THAT

# COURSE POLICIES

## ACADEMIC ACCOMMODATIONS

Please see the Office of Learning Services in Lyle Hall (<http://www.millersville.edu/learning-services/>) as soon as possible if you have special learning needs for this class.

Students who miss an exam will be weighted heavier on their highest remaining exam. There is no makeup for homework, participation notecards, or any extra credit assignment. There is no making up missed labs. Please see the University Attendance Policy for more information. Flexibility in the above policies is at the instructor's discretion and in accordance with MU UAP.

<https://tinyurl.com/y53qn9nw>

## GRADING POLICIES

IF your grade falls between the delineated grades on the rubric, the instructor will 'bump' you UP or DOWN depending on: regular attendance at office hours, improvement in exam quality and grade, **regular** attendance at a study group, general quality work improvement (i.e. homework, recitation etc.). You agree to this policy by enrolling in the course.

## SAFE AND PRODUCTIVE ENVIRONMENT

Millersville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the University requires faculty members to report incidents of sexual violence shared by students to the University's Title IX Coordinator. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project.

## QUESTIONS????

### OFFICE HOURS:

**M 1 – 2 PM**

**T 11 – 1 PM**

**W 3 – 5 PM**

**@Caputo 317**