# **Course Syllabus**

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Department of Chemistry

# CHEMISTRY 2096: Organic Chemistry II

### 3 Units

Spring 2024

### Course info, part 2

Meeting days: MWF	Instructor: Dr. Katherine Maloney
<b>Meeting times:</b> 8:30-9:25 am (Section 1) and 11-11:55 am (Section 2)	Phone: 619.849.3425 Email: <u>kmaloney@pointloma.edu</u> (mailto:kmaloney@pointloma.edu)
<b>Meeting location:</b> Ryan Learning Center 102	Final Exam: 4:30-7pm, Friday, May 3
Maloney office hours: TBD in Rohr Science 316 (accessed through RS330)	Student-led review sessions: TBD

#### **PLNU Mission**

#### To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community minds are engaged and challenged, character is modeled and formed, and service is an express.

faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

#### **COURSE DESCRIPTION**

Examination of basic organic chemistry from a mechanistic perspective and the use of synthetic procedures.

# **COURSE LEARNING OUTCOMES**

Chemistry 2096 Goals	Chemistry 2096 Outcomes
Students will	Students will be able to
learn to speak and think in the language of organic chemistry.	<ul> <li>translate between the names and formulas of organic compounds, particularly aromatic compounds, carboxylic acids and derivatives, aldehydes, ketones, organometallic reagents, and amines.</li> <li>identify important named reactions in organic synthesis, including the Diels-Alder reaction, Friedel-Crafts alkylation &amp; acylation, Sharpless epoxidation, Grignard reaction, the aldol, Claisen and Michael reactions, the Robinson annulation, and the Suzuki reaction.</li> </ul>
recognize the relationship between electronic structure and reaction selectivity.	<ul> <li>provide the starting materials, reagents, or products of common reactions of alkanes, alkenes, alkynes, alcohols, benzene derivatives, organometallic reagents, carboxylic acids and their derivatives, aldehydes, ketones, and amines.</li> <li>draw curved-arrow mechanisms for a variety of chemical transformations.</li> <li>explain the regio- and stereo-chemical outcome of a reaction using mechanistic reasoning.</li> </ul>
use steric and electronic arguments to predict the rate and product distribution of organic reactions.	<ul> <li>predict the relative stability of species (including alkenes, radicals, cations and anions) on the basis of arguments such as resonance, inductive effects, conjugation, and hyperconjugation.</li> <li>draw reaction coordinate diagrams for common organic reactions, labeling the reactant(s), product(s transition state(s), and any intermediates.</li> </ul>

Course learning outcomes

Syllabus for CHE2096-1 SP24 - Organic Chemistry II

	<ul> <li>explain reaction rate and product distribution on the basis of relative energy of reactants, intermediates, transition states, and products of a reaction.</li> </ul>
understand strategies for designing efficient syntheses of target molecules.	<ul> <li>propose a reaction or series of reactions that would lead to a given target molecule.</li> <li>justify the selection of one route over another on the basis of reaction rate or selectivity.</li> </ul>
use infrared (IR) and nuclear magnetic resonance (NMR) spectroscopy for elucidating the structure of organic molecules.	<ul> <li>use infrared spectral data to infer the functional groups present in an unknown carbon compound.</li> <li>analyze 1D <sup>1</sup>H NMR data – including chemical shift, integration, and splitting information – to infer the electronic environment, equivalence, and proximity of hydrogen atoms in an organic compound.</li> </ul>

**Program Learning Outcomes:** CHEM PLO 2 (GC, IR) and BCHM PLO 3 (GC, IR) will be assessed directly by faculty laboratory instructors' observation of students' use of instruments in the accompanying laboratory (CHE2096L).

# **REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES**

Janice Gorzynski Smith *Organic Chemistry*, 6<sup>th</sup> Edition, and Connect online homework access are required. The accompanying *study guide/solutions manual* is an optional but useful aid.

A molecular model set will be a tremendous asset for visualizing three-dimensional structures.

*Preparing for Your ACS Examination in Organic Chemistry, The Official Guide*, published by the American Chemical Society is an optional but useful aid in preparing for the final exam.

More information about resources can be found <u>here</u> (<u>https://canvas.pointloma.edu/courses/71261/pages/course-materials)</u>.

# COURSE SCHEDULE AND ASSIGNMENTS

Note: This schedule is subject to change. Any substantial changes (i.e. changes to anything other than *Details* or *Readings*) will be announced on the *Announcements* page in Canvas, and modified here in the *Syllabus*. Up-to-date reading assignments will also be listed in each Weekly Overview.

Unless otherwise stated, all Intro Problems and EdPuzzle videos are due before the start of class. All other assignments are due by 11:59pm.

Course schedule



WEEK	DAY	TOPIC	READING/NOTES	
	M 1/8	Review	Review Ch 1-11, 13, 14	
1	W 1/10	Review	Review Ch 1-11, 13, 14	
	F 1/12	Reduction of alkenes, alkynes & alkyl halides	12.1-12.3, 12.5, 12.6	
	M 1/15	MLK day - nc	class	
2	W 1/17	Oxidation of alkenes, alkynes & alcohols	12.7-12.12, 12.15	
2	R 1/18	Assignment 1 Due (0	CONNECT only)	
	F 1/19	Finish Redox & Quiz: Chapter 12	12.4	
	M 1/22	Radical halogenation of alkanes	13.1-13.8	
3	W 1/24	Radical addition & polymerization of alkenes	13.10, 13.13, 13.14	
	F 1/26	Resonance and allylic carbocations	14.1-14.6	
	M 1/29	Conjugated alkenes & UV light	14.8-14.11, 14.15	
	W 1/31	Introduction to the Diels-Alder reaction	14.12-14.14	
4	R 2/1	Assignment 2 Due		
	F 2/2	Stereochemistry of the Diels-Alder reaction	14.13c-14.13d	
	M 2/5	Benzene & aromaticity	15.1-15.4, 15.6-15.8	
5	W 2/7	Exam 1: Chapters 12-14		
	F 2/9	Electrophilic aromatic substitution (EArS)	16.1-16.4	
	M 2/12	Friedel-Crafts alkylation and acylation	16.5	
6	T 2/13	Assignment 3 Due		
	W 2/14	Directing effects in EArS	16.6-16.11	
	F 2/16	Synthesis of benzene derivatives	16.12, 16.14-16.16	
7	M 2/19	Properties and reactions of carboxylic acids	19.1-19.3, 19.6-19.9	
	W 2/21	Oxidation and reduction of aldehydes & ketones	17.1-17.4, 17.7, 17.8	

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	F 2/23	Asymmetric reductions: reduction of esters, amides, and acid chlorides		
		Assignment 4 Due		
	M 2/26	Exam 2: Chapters 15-17.8, 19		
8	W 2/28	Organometallica, part I: Organolithium and Grignard reagents	17.9-17.11, 17.14	
	F 3/1	Organometallica, part II: Organocuprates and synthesis	17.13, 17.15, 17.17	
	3/4-3/8	Spring Break -	no class	
	M 3/11	Organometallica, part III: Metal-catalyzed cross-coupling reactions	24.1-24.3	
9	W 3/13	Properties and synthesis of aldehydes & ketones	18.1-18.3, 18.5	
	F 3/15	Reactions of aldehydes & ketones (featuring the Wittig reaction)	18.6-18.9, 18.12	
		Assignment 5 Due		
	Asynchronous	Imines, enamines, and acetals	18.10-18.14	
10	10	Properties and synthesis of carboxylic acid derivatives	20.1-20.4, 20.9 plus 19.1-19.3 re: nitriles only	
		Assignment 6 Due (CONNECT only)		
	M 3/25	Exam 3: Chapters 17.9-18, 24		
11	W 3/27	Substitution reactions of carboxylic acid derivatives	20.6-20.8, 20.10, 20.12, 19.12	
R 3/	/28 - M 4/1	Easter recess -	no class	
	W 4/3	Polymers	20.15, Chapter 28	
12	R 4/4	Assignment 7 Due (0	CONNECT only)	
	F 4/5	Enols and enolates: Acidity of the hydrogen	21.1-21.5	
13	M 4/8	Reactions at the carbon	21.4, 21.6-21.8	
	W 4/10	The aldol reaction	22.1-22.4	

	F 4/12	The Claisen reaction	22.5-22.7
	M 4/15	Conjugate addition reactions: the Michael reaction and Robinson annulation	22.8, 22.9, Review 17.15
14	W 4/17	Review: Reactions of carbonyl compounds	Chapters 17-22
	R 4/18	Assignment 8	3 Due
	F 4/19	Exam 4: Chapte	ers 20-22
	M 4/22	Properties of amines	23.1-23.3, 23.7, 23.9, 23.10
15	W 4/24	Introduction to carbohydrates & Fischer projections	26.1-26.3, 26.6
	R 4/25	Assignment 9 Due (CONNECT only)	
	F 4/26	Final Exam Info	Handout: ACS Tips
Finals week		Comprehensive Final Exam	4:30-7pm, Location TBA

# ASSESSMENT AND GRADING

**Introduction Problems -** A few short Introduction Problems will be assigned daily and will often be used to begin class discussion. The questions will be *based on that day's reading assignment* (which you can find in that week's Overview) and <u>will cover new material</u>. You should complete these problems before coming to class. Answers to Intro Problems will be graded for *participation* and *effort*.

**EdPuzzle Videos -** Short lecture videos may be provided to introduce the day's topic, in addition to the day's Intro Problems. Like the Intro Problems, these should be completed before coming to class.

**In-Class Exercises -** In-class Exercises will frequently be distributed (as paper copies in class, and as PDFs on Canvas) to help solidify concepts in that day's lecture. After class, you should upload a copy of your In-Class Exercise to Canvas to verify participation and effort.

**Assignments -** Problems requiring greater thought and reflection will be completed outside of class and will be due periodically throughout the course. Given the large class size and recognizing the need for rapid feedback, a portion of each assignment will be *electronic* and provided by Connect. If you bought a new book from the book store you already received access to Connect in your bundle; alternatively, access to Connect with the eBook can be purchased online for approximately \$160. The Connect format allows you to check your answer in real time. Note that the interface will only accept homework submissions up to the set due time and date.

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Most assignments will also include a handwritten portion to give you a chance to practice skills (such as drawing organic mechanisms, or multistep synthesis) that don't lend themselves well to online chemistry homework systems. These problems will be submitted on Canvas and graded by a TA.

**Exams** - There will be one quiz (20 minutes, in class), four midterm exams (one hour each, in class) and one final (two hours). Despite focusing on recently-covered material, midterm exams are technically *cumulative* and may assume knowledge from CHE2094 or earlier in CHE2096.

The final exam is a *comprehensive* standardized multiple choice exam published by the American Chemical Society. You may find the ACS study guide (listed under <u>Course Materials</u> (<u>https://canvas.pointloma.edu/courses/71261/pages/course-materials</u>)) helpful as you prepare for the final. See the course schedule for exam dates.

Makeup examinations will be given only for excused absences. In such cases, appropriate documentation must be provided within two working days of the end of the excused absence.

**Organic Learning Community (OLC)** - Learning a challenging subject like organic chemistry is easier with the help of a regular study group. For each week that you meet with your study group for at least 1 hour, answer a couple questions about your session, and provide documentation of the meeting (e.g. a screenshot or photo), you can receive 1 <u>extra credit</u> point toward your Participation grade. (That's in addition to the benefit you'll get from that hour of focused study time!) You can connect with others looking for a study group <u>here (https://canvas.pointloma.edu/courses/71261/pages/organic-learning-community-study-group-sign-up-page)</u>.

The activities described above will contribute to your total course grade according to the following distribution:

Intro Problems & EdPuzzle videos	10%
In-class participation	10%
Homework Assignments	15%
Quiz & Midterm Exams	45%
Final Exam	20%

#### Grade distribution

Student grades will be posted in the Canvas grade book as they are graded, up to the last day of regular class. Final grades will be posted to Workday (NOT to Canvas) within one week of the end of the class. Grades will be based on the following:

#### Standard Grade Scale Based on Percentages

Α	В	С	D	F
A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	F Less than 59



Α	В	С	D	F
A- 90-92	B 83-86	C 73-76	D 63-66	
	B- 80-82	C- 70-72	D- 60-62	

#### **STRATEGIES FOR SUCCESS IN CHE2096**

- 1. Focus on recognizing *patterns* and understanding *general concepts* that are applicable to a variety of situations rather than merely memorizing information.
- 2. Work practice problems (lots of them)! Extra practice problems from Smith will be posted in CONNECT. And *hide the answer key*. Often the most challenging part of a problem is figuring out what is being asked of you; don't skip practicing this skill!
- 3. Come prepared to class. This means *reading the assigned sections, completing the intro problems,* and *watching any posted videos*. The time you invest before class will be repaid in full when it comes time to study for the exams!
- 4. Get help if you don't understand something! The instructor is here for you.

If you don't believe me, check out the advice provided by students in past iterations of Prof. Maloney's OChem II class <u>here (https://canvas.pointloma.edu/courses/71261/pages/advice-from-recent-students-in-maloneys-ochem-ii-class)</u>.

#### FINAL EXAMINATION POLICY

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the <u>Traditional Undergraduate Records: Final Exam Schedules</u> (<u>http://www.pointloma.edu/experience/academics/class-schedules</u>) site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for one of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

# STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on <u>State Authorization</u> (<u>https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures)</u> to view which states allow online (distance education) outside of California.

# **INCOMPLETES AND LATE ASSIGNMENTS**



Unless otherwise stated, all Intro Problems and EdPuzzle videos are due before the start of class. All other assignments (including uploads of In-Class Exercises) are due by 11:59pm. Incompletes will only be assigned in extremely unusual circumstances.

#### PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

#### PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See <u>Academic Policies (http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278)</u> for definitions of kinds of academic dishonesty and for further policy information.

#### PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

#### PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all synchronous class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions *(4 lectures)*, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent



*(that's 8 lectures!)*, the student may be de-enrolled without notice until the university withdrawal date or, after that date, receive an "F" grade.

#### SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the <u>Office of Spiritual Development (https://www.pointloma.edu/offices/spiritual-development)</u>

#### SEXUAL MISCONDUCT AND DISCRIMINATION

In support of a safe learning environment, if you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that accommodations and resources are available through the Title IX Office at <u>pointloma.edu/Title-IX (http://pointloma.edu/Title-IX)</u>. Please be aware that under Title IX of the Education Amendments of 1972, faculty and staff are required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at <u>counselingservices@pointloma.edu</u> (mailto:counselingservices@pointloma.edu) or find a list of campus pastors at <u>pointloma.edu/title-ix</u> (http://pointloma.edu/title-ix).

#### **ASSIGNMENTS AT-A-GLANCE**

The table below lists our assignments and their due dates. Click on any assignment to review it.

# Course Summary:

Date	Details	Due
Wed Feb 2, 2022	Intro Problems 10 due (https://canvas.pointloma.edu/courses/71261/assignments/998821)	e by 8:30am
Mon Apr 4, 2022	P Intro Problems 29 due (https://canvas.pointloma.edu/courses/71261/assignments/998841)	e by 8:30am
Tue Apr 5, 2022	<u>Assignment 7 (Connect only)</u> due     (https://canvas.pointloma.edu/courses/71261/assignments/998811)	by 11:59pm
Mon Jan 8, 2024	Intro Problems 1 (https://canvas.pointloma.edu/courses/71261/assignments/999796) (Section 1-CHE2096)	e by 8:30am

Date	Details	Due
	Intro Problems 1 (https://canvas.pointloma.edu/courses/71261/assignments/99 (Section 2-CHE2096)	<u>9796)</u> due by 11am
	Image: Week 1   Monday class           (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8861)</u>
Tue Jan 9, 2024	Assignment 3a (Connect part) (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8804)</u>
	Intro Problems 2 (https://canvas.pointloma.edu/courses/71261/assignments/99 (Section 1-CHE2096)	<mark>883d</mark> µe by 8:30am
	Week 1   Video 1: NMR review (https://canvas.pointloma.edu/courses/71261/assignments/99 (Section 1-CHE2096)	<u>886dy</u> e by 8:30am
	Intro Problems 2 (https://canvas.pointloma.edu/courses/71261/assignments/99 (Section 2-CHE2096)	<u>8831)</u> due by 11am
Wed Jan 10, 2024	Week 1   Video 1: NMR review (https://canvas.pointloma.edu/courses/71261/assignments/99 (Section 2-CHE2096)	<u>8862)</u> due by 11am
	Week 1   Wednesday class (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8864)</u>
	Image: Week 7   Wednesday class           (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8927)</u>
	Week 8   Wednesday class (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8932)</u>
Thu Jan 11, 2024	Post-quiz reflection  (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8857)</u>
Fri Jan 12, 2024	Intro Problems 11 (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 8:30am <u>8822)</u>
	Intro Problems 13     Intro Problems     Intro Problems	due by

/8/24, 10:14 AM	Syllabus for CHE2096-1 SP24 - Organic Chemistry II
Date	Details Due
	(https://canvas.pointloma.edu/courses/71261/assignments/998824)
	Intro Problems 16 due by 8:30am (https://canvas.pointloma.edu/courses/71261/assignments/998827)
	Intro Problems 3 due by 8:30am (https://canvas.pointloma.edu/courses/71261/assignments/998842)
	Week 1   Video 2: Introduction     to organic reductions         due by 8:30am     (https://canvas.pointloma.edu/courses/71261/assignments/998863)     (Section 1-CHE2096)
	Week 1   Video 2: Introduction     to organic reductions     (https://canvas.pointloma.edu/courses/71261/assignments/998863)     (Section 2-CHE2096)
	Assignment 4a (Connect part) due by 11:59pm (https://canvas.pointloma.edu/courses/71261/assignments/998806)
	Assignment 4b (written) due by 11:59pm (https://canvas.pointloma.edu/courses/71261/assignments/998807)
	Week 1   Friday class     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998860)
	Week 7   Friday class     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998923)
	Week 8   Friday class     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998929)
Sun Jan 14, 2024	Assignment 5a (Connect part) due by 11:59pm (https://canvas.pointloma.edu/courses/71261/assignments/998808)
	Week 1 - Extra credit Organic     Learning Community (OLC)     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998859)
	Week 10 - Extra credit Organic     due by     Community (OLC)     due by     Community (OLC)

Date	Details	Due
	<u>meeting</u> ( <u>https://canvas.pointloma.edu/courses/71261/assignments/998865)</u>	
	Week 7 - Extra credit Organic	
	Learning Community (OLC) meeting due by 11:59	9pm
	(https://canvas.pointloma.edu/courses/71261/assignments/998922)	
	Week 8 - Extra credit Organic	
	Learning Community (OLC) meeting due by 11:55	9pm
	(https://canvas.pointloma.edu/courses/71261/assignments/998928)	
	Week 9 - Extra credit Organic	
	Learning Community (OLC) meeting due by 11:59	9pm
	(https://canvas.pointloma.edu/courses/71261/assignments/998933)	
	Week 10   Monday class due by 11:59 (https://canvas.pointloma.edu/courses/71261/assignments/998868)	9pm
	Week 12   Monday class due by 11:59 (https://canvas.pointloma.edu/courses/71261/assignments/998876)	9pm
Mon Jan 15, 2024	Week 7   Monday class due by 11:59 (https://canvas.pointloma.edu/courses/71261/assignments/998924)	9pm
	Week 9   Monday class due by 11:59 (https://canvas.pointloma.edu/courses/71261/assignments/998935)	9pm
Wed Jan 17, 2024	Intro Problems 26 (https://canvas.pointloma.edu/courses/71261/assignments/998838)	0am
	Intro Problems 4 due by 8:30 (https://canvas.pointloma.edu/courses/71261/assignments/998851)	0am
	Week 2   Video 1: Oxidation of     alkenes and alkynes     due by 8:30     (https://canvas.pointloma.edu/courses/71261/assignments/998896)     (Section 1-CHE2096)	0am
	Week 2   Video 1: Oxidation of alkenes and alkynes (https://capyas.pointloma.odu/courses/74264/accignments/000000)	m

(https://canvas.pointloma.edu/courses/71261/assignments/998896)

https://canvas.pointloma.edu/courses/71261/assignments/syllabus

Date	Details	Due
	(Section 2-CHE2096)	
	Week 11   Wednesday class	0
	<u>(https://canvas.pointloma.edu/courses/71261/assignments/998873)</u>	9pm
	Week 12   Wednesday class     due by 11:5     (https://canvas.pointloma.edu/courses/71261/assignments/998879)	9pm
	<u></u>	
	Week 13   Wednesday class     due by 11:5     (https://canvas.pointloma.edu/courses/71261/assignments/998883)	9pm
	Week 9   Wednesday class     due by 11:5     (https://canvas.pointloma.edu/courses/71261/assignments/998938)	9pm
	Week 2   Wednesday class     due by 11:5     (https://canvas.pointloma.edu/courses/71261/assignments/998897)	9pm
	Assignment 1 (Connect only) due by 11:5 (https://canvas.pointloma.edu/courses/71261/assignments/998801)	9pm
Thu Jan 18, 2024	Assignment 8a (Connect part) due by 11:5 (https://canvas.pointloma.edu/courses/71261/assignments/998812)	9pm
	Assignment 8b (written) due by 11:5 (https://canvas.pointloma.edu/courses/71261/assignments/998813)	9pm
Fri Jan 19, 2024	Intro Problems 5 (https://canvas.pointloma.edu/courses/71261/assignments/99885due by 8:3 (Section 1-CHE2096)	0am
	Intro Problems 5 (https://canvas.pointloma.edu/courses/71261/assignments/998852) due by 1 (Section 2-CHE2096)	1am
	Assignment 5b (written) due by 11:5 (https://canvas.pointloma.edu/courses/71261/assignments/998809)	9pm
	Assignment 6 (Connect only)     due by 11:5     (https://canvas.pointloma.edu/courses/71261/assignments/998810)	9pm
	Week 10   Asynchronous class     due by     (https://canvas.pointloma.edu/courses/71261/assignments/998866)	

10/24, 10.147 Wi		
Date	Details	Due
	Week 10   Asynchronous class video (https://canvas.pointloma.edu/courses/71261/assignments/998867)	1:59pm
	Week 11   Friday class due by 1 <sup>2</sup> (https://canvas.pointloma.edu/courses/71261/assignments/998871)	1:59pm
	Week 12   Friday class due by 1 <sup>2</sup> ( <u>https://canvas.pointloma.edu/courses/71261/assignments/998875</u> )	1:59pm
	Week 14   Friday class due by 1 <sup>2</sup> (https://canvas.pointloma.edu/courses/71261/assignments/998885)	1:59pm
	Week 15   Friday class     due by 1 <sup>2</sup> (https://canvas.pointloma.edu/courses/71261/assignments/998890)	1:59pm
	Week 9   Friday class due by 1 <sup>n</sup> (https://canvas.pointloma.edu/courses/71261/assignments/998934)	1:59pm
	Week 2   Friday class     due by 1 <sup>2</sup> (https://canvas.pointloma.edu/courses/71261/assignments/998895)	1:59pm
Sun Jan 21, 2024	Week 11 - Extra credit Organic Learning Community (OLC) meeting (https://canvas.pointloma.edu/courses/71261/assignments/998870)	1:59pm
	Week 12 - Extra credit Organic Learning Community (OLC) meeting (https://canvas.pointloma.edu/courses/71261/assignments/998874)	1:59pm
	Week 13 - Extra credit Organic Learning Community (OLC) meeting (https://canvas.pointloma.edu/courses/71261/assignments/998880)	1:59pm
	Week 14 - Extra credit Organic Learning Community (OLC) meeting (https://canvas.pointloma.edu/courses/71261/assignments/998884)	1:59pm



Date	Details Due
	Week 15 - Extra credit Organic     Learning Community (OLC)     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998889)
	Week 2 - Extra credit Organic     Learning Community (OLC)     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998894)
	Intro Problems 6 (https://canvas.pointloma.edu/courses/71261/assignments/99885due by 8:30am (Section 1-CHE2096)
	Week 3   Video 1: Reaction     types in organic chemistry         due by 8:30am     (https://canvas.pointloma.edu/courses/71261/assignments/998901)     (Section 1-CHE2096)
	Intro Problems 6 ( <u>https://canvas.pointloma.edu/courses/71261/assignments/998853</u> )due by 11am (Section 2-CHE2096)
Mon Jan 22, 2024	Week 3   Video 1: Reaction     types in organic chemistry     (https://canvas.pointloma.edu/courses/71261/assignments/998901)     (Section 2-CHE2096)
	Final Exam due by 4:30pm (https://canvas.pointloma.edu/courses/71261/assignments/998819)
	Week 13   Monday class     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998881)
Wed Jan 24, 2024	Intro Problems 7 (https://canvas.pointloma.edu/courses/71261/assignments/99885due by 8:30am (Section 1-CHE2096)

Date	Details Du
	(Section 1-CHE2096)
	Intro Problems 7 ( <u>https://canvas.pointloma.edu/courses/71261/assignments/998854</u> )due by 11a (Section 2-CHE2096)
	Week 3   Video 2: Allylic     bromination & alkene addition     (https://canvas.pointloma.edu/courses/71261/assignments/998902)     (Section 2-CHE2096)
	Week 14   Wednesday class     due by 11:59p     (https://canvas.pointloma.edu/courses/71261/assignments/998888)
	Week 15   Wednesday class     due by 11:59p     (https://canvas.pointloma.edu/courses/71261/assignments/998893)
	Week 3   Wednesday class     due by 11:59p     (https://canvas.pointloma.edu/courses/71261/assignments/998904)
Thu Jan 25, 2024	Assignment 9 (Connect only)     due by 11:59p     (https://canvas.pointloma.edu/courses/71261/assignments/998814)
	Intro Problems 8 due by 8:30a (https://canvas.pointloma.edu/courses/71261/assignments/998855)
	Week 3   Video 3: Tips for drawing resonance structures (https://canvas.pointloma.edu/courses/71261/assignments/998903) (Section 1-CHE2096)
Fri Jan 26, 2024	Week 3   Video 3: Tips for drawing resonance structures (https://canvas.pointloma.edu/courses/71261/assignments/998903) (Section 2-CHE2096)
	Week 3   Friday class     due by 11:59p     (https://canvas.pointloma.edu/courses/71261/assignments/998899)
Sun Jan 28, 2024	Week 3 - Extra credit Organic Learning Community (OLC) meeting (https://canvas.pointloma.edu/courses/71261/assignments/998898)

Date	Details	Due
	Intro Problems 9 ( <u>https://canvas.pointloma.edu/courses/71261/assignments/99</u> (Section 1-CHE2096)	<u>885<b>d</b>µ</u> e by 8:30am
Mon Jan 29, 2024	Intro Problems 9 (https://canvas.pointloma.edu/courses/71261/assignments/99 (Section 2-CHE2096)	<u>8856)</u> due by 11am
	Week 4   Monday class (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8907)</u>
	Week 4   Video 1: Tips for drawing the Diels-Alder product (https://canvas.pointloma.edu/courses/71261/assignments/99 (Section 1-CHE2096)	due by 8:30am <u>8908)</u>
Wed Jan 31, 2024	Week 4   Video 1: Tips for drawing the Diels-Alder product ( <u>https://canvas.pointloma.edu/courses/71261/assignments/99</u> (Section 2-CHE2096)	due by 11am <u>8908)</u>
	Week 4   Wednesday class     (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8909)</u>
	<u>Assignment 2a (Connect part).</u> ( <u>https://canvas.pointloma.edu/courses/71261/assignments/99</u>	due by 11:59pm <u>8802)</u>
Thu Feb 1, 2024	Assignment 2b (written)     (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm 8803)
Fri Feb 2, 2024	<u>     Week 4   Friday class</u> (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8906)</u>
Sun Feb 4, 2024	Week 4 - Extra credit Organic Learning Community (OLC) meeting (https://canvas.pointloma.edu/courses/71261/assignments/99	due by 11:59pm <u>8905)</u>
Mon Feb 5, 2024	Intro Problems 12 (https://canvas.pointloma.edu/courses/71261/assignments/99 (Section 1-CHE2096)	<mark>882dy</mark> e by 8:30am
	Week 5   Video 1: Rules for counting pi electrons	due by

Date	Details Due
	(https://canvas.pointloma.edu/courses/71261/assignments/998913) (Section 1-CHE2096)
	Intro Problems 12 (https://canvas.pointloma.edu/courses/71261/assignments/998823) due by 11am (Section 2-CHE2096)
	Week 5   Video 1: Rules for counting pi electrons (https://canvas.pointloma.edu/courses/71261/assignments/998913) (Section 2-CHE2096)
	Week 5   Monday class     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998912)
	Edpuzzle   Intro to EArS reactions (https://canvas.pointloma.edu/courses/71261/assignments/998914) (Section 1-CHE2096)
Fri Feb 9, 2024	Edpuzzle   Intro to EArS     reactions     due by 11am     (https://canvas.pointloma.edu/courses/71261/assignments/998914)     (Section 2-CHE2096)
	Week 5   Friday class     due by 11:59pm     (https://canvas.pointloma.edu/courses/71261/assignments/998911)
Sun Feb 11, 2024	Week 5 - Extra credit Organic Learning Community (OLC) meeting (https://canvas.pointloma.edu/courses/71261/assignments/998910)
Mon Feb 12, 2024	Intro Problems 14 ( <u>https://canvas.pointloma.edu/courses/71261/assignments/99882due by 8:30am</u> (Section 1-CHE2096)
	Week 6   Video 1: Friedel- Crafts Alkylation (https://canvas.pointloma.edu/courses/71261/assignments/998918) (Section 1-CHE2096)
	Intro Problems 14 ( <u>https://canvas.pointloma.edu/courses/71261/assignments/998825</u> )due (Section 2-CHE2096)

Date	Details	Due
	Week 6   Video 1: Friedel- Crafts Alkylation (https://canvas.pointloma.edu/courses/71261/assignments/998918) (Section 2-CHE2096)	lue by 11am
	Week 6   Monday class     due     (https://canvas.pointloma.edu/courses/71261/assignments/998917)	by 11:59pm
Tue Feb 13, 2024	Assignment 3b (written) due (https://canvas.pointloma.edu/courses/71261/assignments/998805)	by 11:59pm
	Intro Problems 15 ( <u>https://canvas.pointloma.edu/courses/71261/assignments/998826</u> ) (Section 1-CHE2096)	e by 8:30am
Wed Feb 14, 2024	Week 6   Video 2: Rate of EArS     Reactions     (https://canvas.pointloma.edu/courses/71261/assignments/998919)     (Section 1-CHE2096)	e by 8:30am
	Intro Problems 15 ( <u>https://canvas.pointloma.edu/courses/71261/assignments/998826)</u> (Section 2-CHE2096)	lue by 11am
	Week 6   Video 2: Rate of EArS     Reactions     (https://canvas.pointloma.edu/courses/71261/assignments/998919)     (Section 2-CHE2096)	lue by 11am
	Week 6   Wednesday class     due     (https://canvas.pointloma.edu/courses/71261/assignments/998921)	by 11:59pm
	Week 6   Video 3: Benzylic     Reactivity     due     (https://canvas.pointloma.edu/courses/71261/assignments/998920)     (Section 1-CHE2096)	e by 8:30am
Fri Feb 16, 2024	Week 6   Video 3: Benzylic Reactivity ( <u>https://canvas.pointloma.edu/courses/71261/assignments/998920</u> ) (Section 2-CHE2096)	lue by 11am
	Week 6   Friday class due (https://canvas.pointloma.edu/courses/71261/assignments/998916)	by

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Date	Details	Due
Sun Feb 18, 2024	Week 6 - Extra credit Organic Learning Community (OLC) meeting (https://canvas.pointloma.edu/courses/71261/assignments/9989	due by 11:59pm <u>15)</u>
	ACS Exam raw score     (https://canvas.pointloma.edu/courses/71261/assignments/9988	<u>00)</u>
	Exam 1: Chapters 12-14 (https://canvas.pointloma.edu/courses/71261/assignments/9988	<u>15)</u>
	Exam 2: Chapters 15-17.8, 19 (https://canvas.pointloma.edu/courses/71261/assignments/9988	<u>16)</u>
	Exam 3: Chapters 17.8-18, 24 (https://canvas.pointloma.edu/courses/71261/assignments/9988	<u>17)</u>
	Exam 4: Chapters 22-24 (https://canvas.pointloma.edu/courses/71261/assignments/9988	<u>18)</u>
	IDEA evaluation for CHE2096 (https://canvas.pointloma.edu/courses/71261/assignments/9988)	<u>20)</u>
	Intro Problems 17 (https://canvas.pointloma.edu/courses/71261/assignments/9988)	<u>28)</u>
	Intro Problems 18 (https://canvas.pointloma.edu/courses/71261/assignments/9988)	<u>29)</u>
	Intro Problems 19 (https://canvas.pointloma.edu/courses/71261/assignments/9988)	<u>30)</u>
	Intro Problems 20 (https://canvas.pointloma.edu/courses/71261/assignments/9988)	<u>32)</u>
	Intro Problems 21 (https://canvas.pointloma.edu/courses/71261/assignments/9988)	<u>33)</u>
	Intro Problems 22 (https://canvas.pointloma.edu/courses/71261/assignments/9988	<u>34)</u>

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# Details Intro Problems 23 (https://canvas.pointloma.edu/courses/71261/assignments/998835) Intro Problems 24 (https://canvas.pointloma.edu/courses/71261/assignments/998836)

Intro Problems 25 (https://canvas.pointloma.edu/courses/71261/assignments/998837)

Intro Problems 27 (https://canvas.pointloma.edu/courses/71261/assignments/998839)

Intro Problems 28 (https://canvas.pointloma.edu/courses/71261/assignments/998840)

Intro Problems 30 (https://canvas.pointloma.edu/courses/71261/assignments/998843)

Intro Problems 31 (https://canvas.pointloma.edu/courses/71261/assignments/998844)

Intro Problems 32 (https://canvas.pointloma.edu/courses/71261/assignments/998845)

Intro Problems 33 (https://canvas.pointloma.edu/courses/71261/assignments/998846)

Intro Problems 34 (https://canvas.pointloma.edu/courses/71261/assignments/998847)

Intro Problems 35 (https://canvas.pointloma.edu/courses/71261/assignments/998848)

Intro Problems 36 (https://canvas.pointloma.edu/courses/71261/assignments/998849)

Intro Problems 37 (https://canvas.pointloma.edu/courses/71261/assignments/998850)

Quiz: Oxidation & Reduction
 (https://canvas.pointloma.edu/courses/71261/assignments/998858)



Date

Details	Due
₽ Week 10   Video 1: Acetals,	
hemiacetals, imines & enamines	
( <u>https://canvas.pointloma.edu/courses/71261/assignments/998869)</u>	
Week 11   Video 1: Reactions	
of carboxylic acid derivatives	
(https://canvas.pointloma.edu/courses/71261/assignments/998872)	
₽ Week 12   Video 1: Enolate	
ions & keto-enol tautomerization	
(https://canvas.pointloma.edu/courses/71261/assignments/998877)	
₽ Week 12   Video 2: Kinetic &	
thermodynamic enolates	
(https://canvas.pointloma.edu/courses/71261/assignments/998878)	
Week 13   Video 1: The Claisen	
Reaction	
( <u>https://canvas.pointloma.edu/courses/71261/assignments/998882)</u>	
Week 14   Video 1: Enolate C-C	
bond-forming reactions summary	
( <u>https://canvas.pointloma.edu/courses/71261/assignments/998886)</u>	
🖙 <u>Week 14   Video 2: Amines</u>	
(https://canvas.pointloma.edu/courses/71261/assignments/998887)	
₽ Week 15   Video 2:	
Carbohydrates and Fischer	
<u>projections</u>	
( <u>https://canvas.pointloma.edu/courses/71261/assignments/998891)</u>	
Week 15   Video 3: Finishing	
<u>up carbohydrates handout</u>	
(https://canvas.pointloma.edu/courses/71261/assignments/998892)	
By <u>Week 7   Video 1: Carboxylic</u>	
acid and pKa	
(https://canvas.pointloma.edu/courses/71261/assignments/998925)	

 Week 7 | Video 2: Reactions of carbonyl compounds (https://canvas.pointloma.edu/courses/71261/assignments/998926)



Date

#### Details

 Week 8 | Video 1:

 Organometallic reagents

 (https://canvas.pointloma.edu/courses/71261/assignments/998930)

Week 8 | Video 2:
 Organocuprates
 (https://canvas.pointloma.edu/courses/71261/assignments/998931)

Week 9 | Video 1: Reactions of
 aldehydes & ketones
 (https://canvas.pointloma.edu/courses/71261/assignments/998936)

Week 9 | Video 2: Making
 alkenes
 (https://canvas.pointloma.edu/courses/71261/assignments/998937)

