

## Course Syllabus

# Chemistry 2320 – Organic Chemistry II

## Instructor Contact Information:

Dr. Bradley S. Davidson

Office: Widtsoe 341

Phone: (435) 720-3617

Email: [brad.davidson@usu.edu](mailto:brad.davidson@usu.edu) (<mailto:brad.davidson@usu.edu>)

The instructor will communicate with students mainly in class and using the Canvas Announcements tools. For further communication, the preferred method is email, either directly or through Canvas. Please put "CHEM 2320" in the subject line of any emails. You will typically receive a response within 24 to 48 hours. However, please allow an entire business day before emailing again on the same question or issue. Emails sent on Saturday or Sunday will receive a reply by Monday or Tuesday. Please do not expect to receive emails from your instructor late at night or on Saturdays or Sundays.

All times listed in this syllabus refer to the mountain time zone. As such, all due dates and times will be in mountain time.

Meeting Time/Place: MWF 10:30 – 11:20 AM, EBB 215; R 3:00 – 3:50 PM, ESLC 130

Office hours will be scheduled on Zoom. Access them through the Zoom link in the left menu. In person office hours available upon request.

Dr. Davidson Office Hours: W, 3:30-5:00 PM; Th, 4:00-5:30 PM

Supplemental Instructor (SI):

Kaden Bunch ([kaden.bunch@aggiemail.usu.edu](mailto:kaden.bunch@aggiemail.usu.edu) (<mailto:kaden.bunch@aggiemail.usu.edu>))

Undergraduate Teaching Fellows:

Kai Nethercott ([kanethercott@gmail.com](mailto:kanethercott@gmail.com)) (<mailto:kanethercott@gmail.com>)

Office hours:

Daryn Short ([shortdaryn9@gmail.com](mailto:shortdaryn9@gmail.com)) (<mailto:shortdaryn9@gmail.com>)

Office hours:

## Course Description:

The second of a two-semester sequence, covering structures, physical properties, nomenclature, mechanisms of reactions, and biological relevance of organic and bio-organic molecules.

## Course Format:

This course will meet face-to-face, but lecture content will be supplemented with online resources, including SmartBook assignments, Application problems, and other complimentary materials. Homework assignments will follow the chapter schedule. Due dates will vary. It is your responsibility to know when assignments are due. All materials are posted on Canvas and the instructor is available to answer questions and provide feedback.

## Course Learning Objectives:

Organic chemistry is a cumulative subject; therefore, you will be required to continue demonstrating your knowledge and understanding of the topics covered in CHEM 2310. In addition, upon successful completion of this course, you will be able to:

- Describe what structural properties are probed by mass spectrometry and infrared spectroscopy, and be able to use spectral data to identify the structures of organic molecules.
- Explain the structural properties probed using nuclear magnetic resonance (NMR) spectroscopy, such as the interactions between nuclei, magnetic fields, and radiofrequency radiation, and be able to interpret proton and carbon NMR spectra to identify the structures of organic molecules.

- Recognize reactions involving radicals as intermediates; write mechanisms for and predict the products of radical reactions.
- Categorize structures and chemical properties of carboxylic acid derivatives; write the mechanisms for nucleophilic substitution and hydrolysis reactions of such compounds, and to predict the products of such reactions.
- Write mechanisms for nucleophilic addition reactions and for addition-elimination reactions of aldehydes and ketones, and be able to predict the products of such reactions.
- Describe the reason for and predict the consequences of the acidity of protons alpha to carbonyl groups; write mechanisms for the reactions of enolate anions and predict the products of such reactions.
- Identify aromatic and antiaromatic compounds and appreciate the chemical consequences of aromaticity; write the mechanisms for and predict the products of electrophilic aromatic substitution reactions.
- Predict the effects of substituents on the reactivity and regiochemistry of electrophilic aromatic substitution reactions.

## Course Prerequisites:

Coursework prerequisite: CHEM 2310

Technology: You must have a computer with reliable high speed internet access to complete this course. Late assignments will not be accepted because of unreliable internet access.

- You will need Microsoft Office applications (Word, Power Point, and Excel), Adobe Acrobat, or a PDF viewer to open some of the course materials.
- If you do not have a computer at home with the necessary software or high speed internet access, use the computers available to you on campus.
- Please check your browser at the beginning of each semester and download appropriate software and plugins.

The [Technical Requirements](https://community.canvaslms.com/docs/DOC-10720-67952720329) page identifies the browsers, operating systems, and plugins that work best with Canvas. If you are new to Canvas quickly review the [Canvas Student Orientation](https://resources.instructure.com/courses/32) materials.

## Course Materials:

- eText: "Organic Chemistry with Biological Topics" by Smith, 6th edition.; McGraw-Hill Education, Inc.

The eText and homework system for this course is provided as "Auto Access Digital Materials" that are provided to you at a significantly lower price than traditional printed materials. These materials are paid for through your student tuition/fee account and are accessed through the Canvas course site. You may choose to opt-out of the all-inclusive materials and associated charges, but you will lose access to the required materials, which will have a negative effect on your performance in the course. [Opt-out requests](https://portal.verba.io/USU/LOGIN) must be submitted by January 31, 2022 at 11:59 pm mountain time.

- The Study Guide and Student Solutions Manual for Organic Chemistry with Biological Topics, 6th Edition, can be accessed via the "Bookshelf" link in the left menu. Here you can find study materials and answers to all of the problems in the eText.
- Molecular model kit (optional, but helpful). The Andrus kit is available in Chem Stores (on the first floor of Widtsoe) and costs about \$25.

## Course Schedule:

<u>Module</u>	<u>Dates</u>	<u>Reading in SmartBook</u>	<u>Assignments</u>
<b>Module A/B – Mass Spectrometry and Infrared Spectroscopy</b>	1/10 – 1/19	Sections A.1-A.5, B.1-B5	SB A/B, AP A/B, HL AB.1-AB.6 <sup>1</sup>
<b>Module C – Nuclear Magnetic Resonance Spectroscopy</b>	1/20 – 1/30	Sections C.1-C.11	SB C, AP C, HL C.1-C.5
<b>Chapter 12 – Conjugation, Resonance, and Dienes</b>	1/31 – 2/5	Sections 12.1-12.6, 12.8-12.14	SB12, AP12, HL 12.1-12.3

<b>Chapter 21 – Radical Chemistry</b>	2/6 – 2/9	Sections 21.1-21.13	SB21, AP21, HL 21.1-21.4
<b><u>Exam 1</u></b>	2/10 – 2/11		
<b><u>Exam 1-2</u></b>	2/12 – 2/16		
<b>Chapter 13 – Introduction to Carbonyl Chemistry; Organometallic Reagents; Oxidation and Reduction</b>	2/10 – 2/20	Sections 13.1-13.5, 13.7-13.17	SB13, AP13, HL 13.1-13.5
<b>Chapter 14 – Aldehydes and Ketones–Nucleophilic Addition</b>	2/21 – 3/1	Sections 14.1-14.3, 14.5-14.12, 14.14-14.18	SB14, AP14, HL 14.1-14.5
<b>Chapter 15 – Carboxylic Acids and Nitriles</b>	3/2 – 3/15	Sections 15.1-15.3, 15.6-15.13	SB15, AP15, HL 15.1-15.5
<b>Chapter 16 – Carboxylic Acids and their Derivatives–Nucleophilic Acyl Substitution</b>	3/16 – 3/23	Sections 16.1-16.4, 16.6-16.10, 16.12, 16.14	SB16, AP16, HL 16.1-16.5
<b><u>Exam 2</u></b>	3/24 – 3/25		
<b><u>Exam 2-2</u></b>	3/26 – 3/30		
<b>Chapter 17 – Substitution Reactions of Carbonyl Compounds at the <math>\alpha</math> Carbon</b>	3/24 – 4/3	Sections 17.1-17.10	SB17, AP17, HL 17.1-17.5
<b>Chapter 18 – Carbonyl Condensation Reactions</b>	4/4 – 4/9	Sections 18.1-18.7, 18.9-18.10	SB18, AP18, HL 18.1-18.5
<b>Chapter 22 – Amines</b>	4/10 – 4/13	Sections 22.1-22.4, 22.6-22.10, 22.12-22.13	SB22, AP22, HL 22.1-22.5
<b><u>Exam 3</u></b>	4/14 – 4/15		
<b><u>Exam 3-2</u></b>	4/16 – 4/20		
<b>Chapter 19 – Benzene and Aromatic Compounds</b>	4/14 – 4/19	Sections 19.1-19.10	SB19, AP19, HL 19.1-
<b>Chapter 20 – Reactions of Aromatic Compounds</b>	4/20 – 4/26	Sections 20.1-20.15	SB20, AP20, HL 20.1-20.7
<b><u>Final Exam</u></b>	4/28 – 4/30		

<sup>1</sup>SB=SmartBook assignments, AP=Application problems, HL=Highlight Videos

## Assignments and Grading Scheme:

Assignment Type	Points

Three one-hour exams (3 x 200 pt)	600 pt
Best twelve out of thirteen SmartBook assignments (12 x 20 pt)	240 pt
Best twelve out of thirteen application problems (12 x 20 pt)	240 pt
Highlight video questions (1 pt ea, up to 60 pt)	60 pt
Comprehensive Final (300 pt)	300 pt
<b>Total Points:</b>	<b>1440 pt</b>

## Grade Breakdown:

The grade received in the course is based on your performance on the exams, SmartBook assignments, application problems, and highlight videos. Grades are guaranteed as given below, following the standard USU curve, for overall percentage score. Actual grade ranges may be curved somewhat lower, depending on the overall class average.

- A 100% to 93%
- A- < 93% to 90%
- B+ < 90% to 87%
- B < 87% to 83%
- B- < 83% to 80%
- C+ < 80% to 77%
- C < 77% to 73%
- C- < 73% to 70%
- D+ < 70% to 67%
- D < 67% to 60%
- F < 60% to 0%

## Procedures:

**Lectures:** The primary content source for this course is classroom lectures. Pre-lecture outlines for each chapter will be available on the chapter pages. Download and use the outlines for note taking. Annotated post-lecture notes, as well as lecture recordings will be available, subsequently.

**Exams:** The exams are meant to test your *understanding* of the topics covered in lecture, not your ability to repeat memorized problems. Expect some questions that require you to *apply* your understanding to new problems. Ultimately, because you are in this course to *learn* organic chemistry, exams are meant to offer *learning opportunities*.

Each midterm exam will include two parts: 1) four free-response/written questions (100 pt), which will require you to draw structures and justify your answers, 2) 25 multiple-choice questions, each worth 4 points (100 pt total). Both parts will be taken simultaneously, on your own time at the [USU testing center \(http://testing.usu.edu/\)](http://testing.usu.edu/). A two day window will be allotted. The exams will be closed-book, but a list of CHEM 2310 reactions will be supplied. During the testing window, exam-relevant discussions between students who have completed the exam and those who have not will be considered cheating.

A self-correcting approach to the Canvas-based portion of the exam will be used. Without knowledge of your initial score, you will have the opportunity, after consulting your notes, textbook, even classmates, to repeat this portion of the exam by 11:59 PM on the designated day. The average of your two attempts will apply toward your grade.

There will be no planned make-up exams. It is possible to take an exam in advance, but only with a valid excuse and prearrangement with me. If you miss an exam without prearrangement, then you will receive a zero.

Any grading corrections should be discussed with me within one week of when the exams are returned. No point adjustments will be made after this time.

- **Assignments:** There will be two types of assignments for each chapter. Each assignment will typically be available from 8:00 AM on the first day scheduled for a chapter, until 11:59 PM on the due date. Note, the number of days allotted varies for each module. It is your responsibility to be aware of due dates.

*SmartBook reading and in-chapter problems.* As you read the assigned pages in the eText, you will periodically be asked questions to demonstrate your comprehension. The number and type of questions that you are asked will depend on your responses. If your responses demonstrate that you understand to topic, you will be sent back for more reading. If your responses show a lack of understanding, you will be presented with additional questions to help you increase your grasp of the content. Each LearnSmart assignment is worth 20 pt, awarded for completion.

*Application problems.* These problems, also administered through McGraw-Hill Connect, will be a combination of structure drawing, matching, and fill-in. You will have an unlimited number of attempts at each homework assignment before the closing date. Only the best score will be counted. Each Application problem assignment is worth 20 pt. After the closing date practice problems will be opened for ungraded practice.

For Application problems there are several types of assistance provided, which can be used as you complete the problems:

**eBook and resources:** Clicking on the eBook Link icon within a question will show you relevant readings. There is no point penalty for using this.

**Hint:** The View Hint link will offer a direct suggestion but incurs a 5% deduction from the question score (the deduction is only applied once per question).

**Check my work:** You can click the "check my work" icon to see if your answer is correct before submitting it for grading. This can only be used once per question.

- **Highlight videos.** For each chapter, there are between three and seven highlight videos available that focus on the most important concepts. Examples of exam-type problems are analyzed and solved. Each video includes an average of three embedded questions, each worth 1 pt. Highlight videos can be re-watched, and up to 60 pt can be applied to your grade. On each Module/Chapter page, you will find links to the videos, followed by links that will allow you to download the slides, as either pptx or pdf files. This will help you take notes, as you watch the videos.

Highlight videos are available on a website called PlayPosit. To access them, you will need to establish a free account and enroll in our course. To do this, follow this link to the [PlayPosit website \(https://www.playposit.com/join-class/1230743-854589\)](https://www.playposit.com/join-class/1230743-854589). Be sure to sign up with your name as it is listed in Canvas and **enter your A-number** where it asks for an email/student ID. Our class code is: 1230743-1137453.

During the semester, if you run into issues when you login, please do not simply make a new account. Multiple accounts per person make the grade book a nightmare! All videos contain captioning. You can turn captions on or off by clicking on the small gear in the lower right-hand corner of the video, where you can select the captions file (same name as video) or select none. You can increase the speed, rewind, and rewatch the videos.

- **Extra Credit:** For each exam, a "Molecule of Interest" will be posted. An extra credit question pertaining to a "Molecule of Interest" worth 5 pt will be offered on each exam. There is also a pre-test and a synthesis review exercise. Each is worth 5 points.

## Teaching Assessment:

Assessment involves measuring student progress as well as teaching effectiveness. The following assessment strategies have been incorporated into this course.

- A pre-test/post-test approach will be used to measure comprehension and teaching of important concepts. The pre-test will be administered through Canvas and must be taken on your own time. The ten multiple choice questions of the pre-test will reappear in the final, in slightly altered form, to assess teaching and learning progress during the semester. If weaknesses are observed in specific subject areas, teaching methods will be reevaluated. If you take the pre-test, you will receive 5 points.
- **IDEA Evaluations:** Student evaluations will be used to evaluate course/instructor strengths and weaknesses. Constructive suggestions are welcome anytime. The on-line IDEA evaluation system provides a way for you to self-assess how well the course has helped you achieve the following general objectives.

1. Have you gained factual knowledge about Organic Chemistry, including terminology, methods, and trends, as further described in the Detailed Learning Objectives, shown below?

2. Have you learned fundamental principles, generalizations, and theories that describe and explain chemical reactions and chemical properties?
3. Have you further developed your ability to analyze and critically evaluate ideas, arguments, and scientific models.

## University Policies and Procedures:

### COVID-19 Classroom Protocols

In order to continue to provide various forms of face-to-face instruction at USU, and to limit the spread of COVID-19 during the pandemic, students are asked to follow certain classroom protocols during the fall 2022 semester. These protocols are based on CDC, state, and local health department guidelines and requirements are in place not only for your safety but also the safety of the entire campus community.

- While not mandated, USU encourages and welcomes the wearing of masks in all university building, especially within 6 feet of others. Furthermore, it is strongly encouraged to take measures to mitigate risk as recommended by federal and state public health officials. These measures include getting fully vaccinated, staying home if you are sick (even with mild symptoms), and maintaining good hygiene including frequent hand washing. Testing will be provided, without charge, throughout the semester and the [USU COVID Webpage \(https://www.usu.edu/covid-19/\)](https://www.usu.edu/covid-19/) will provide up-to-date information. Please remember; COVID can have significant impact on the health and safety of those around you so remain vigilant and respectful.

### Academic Freedom and Professional Responsibilities

Academic freedom is the right to teach, study, discuss, investigate, discover, create, and publish freely. Academic freedom protects the rights of faculty members in teaching and of students in learning. Freedom in research is fundamental to the advancement of truth. Faculty members are entitled to full freedom in teaching, research, and creative activities, subject to the limitations imposed by professional responsibility. Faculty Code Policy #403 further defines academic freedom and professional responsibilities.

### Academic Integrity – "The Honor System"

The University expects that students and faculty alike maintain the highest standards of academic honesty. The Code of Policies and Procedures for Students at Utah State University ([Student Conduct \(https://studentconduct.usu.edu/studentcode\)](https://studentconduct.usu.edu/studentcode)) addresses academic integrity and honesty and notes the following:

**Academic Integrity:** Students have a responsibility to promote academic integrity at the University by not participating in or facilitating others' participation in any act of academic dishonesty and by reporting all violations or suspected violations of the Academic Integrity Standard to their instructors.

**The Honor Pledge:** To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity". Violations of the Academic Integrity Standard (academic violations) include, but are not limited to cheating, falsification, and plagiarism

### Plagiarism

Plagiarism includes knowingly "representing by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials." The penalties for plagiarism are severe. They include warning or reprimand, grade adjustment, probation, suspension, expulsion, withholding of transcripts, denial or revocation of degrees, and referral to psychological counseling.

### Course Fees

Instructors that utilize course fees should identify the amount and explain the purpose of the course fee on the syllabus. Course fees are listed in the catalog.

### Grievance Process

Students who feel they have been unfairly treated [in matters other than discipline, admission, residency, employment, traffic, and parking - which are addressed by procedures separate and independent from the Student Code] may file a grievance through the channels and procedures described in the Student Code: [Article VII Grievances](https://studentconduct.usu.edu/studentcode/article7) [.\(https://studentconduct.usu.edu/studentcode/article7\)](https://studentconduct.usu.edu/studentcode/article7)

## Sexual Harassment

Utah State University is committed to creating and maintaining an environment free from acts of sexual misconduct and discrimination and to fostering respect and dignity for all members of the USU community. Title IX and [USU Policy 339](https://www.usu.edu/policies/339) [.\(https://www.usu.edu/policies/339\)](https://www.usu.edu/policies/339) address sexual harassment in the workplace and academic setting.

The university responds promptly upon learning of any form of possible discrimination or sexual misconduct. Any individual may contact [USU's Affirmative Action/Equal Opportunity \(AA/EO\) Office](http://aaeo.usu.edu/) [.\(http://aaeo.usu.edu/\)](http://aaeo.usu.edu/) for available options and resources or clarification. The university has established a complaint procedure to handle all types of discrimination complaints, including sexual harassment ([USU Policy 305](https://www.usu.edu/policies/305)) [.\(https://www.usu.edu/policies/305/\)](https://www.usu.edu/policies/305), and has designated the AA/EO Director/Title IX Coordinator as the official responsible for receiving and investigating complaints of sexual harassment.

## Students with Disabilities

USU welcomes students with disabilities. If you have, or suspect you may have, a physical, mental health, or learning disability that may require accommodations in this course, please contact the Disability Resource Center (DRC) as early in the semester as possible (University Inn # 101, 435-797-2444, [drc@usu.edu \(mailto:drc@usu.edu\)](mailto:drc@usu.edu)). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

## Withdrawal Policy, "I" Grade Policy and Dropping Courses

If a student does not attend a class during the first week of the term or by the second class meeting, whichever comes first, the instructor may submit a request to have the student dropped from the course. (This does not remove responsibility from the student to drop courses which they do not plan to attend.) Students who are dropped from courses will be notified by the Registrar's Office through their preferred e-mail account.

Students may drop courses without notation on the permanent record through the first 20 percent of the class. If a student drops a course following the first 20 percent of the class, a W will be permanently affixed to the student's record (check [General Catalog](https://catalog.usu.edu/misc/catalog_list.php?catoid=12) [.\(https://catalog.usu.edu/misc/catalog\\_list.php?catoid=12\)](https://catalog.usu.edu/misc/catalog_list.php?catoid=12) for exact dates).

Students with extenuating circumstances should refer to the policy regarding [Complete Withdrawal from the University and the Incomplete \(I\) Grade policy in the General Catalog](https://catalog.usu.edu/content.php?catoid=12&navoid=3823) [.\(https://catalog.usu.edu/content.php?catoid=12&navoid=3823\)](https://catalog.usu.edu/content.php?catoid=12&navoid=3823).

## No-Test Days Policy

For classes that meet for a full semester, a five-day period designated as "no-test" days precedes final examinations. During this time, no major examinations, including final examinations will be given in order that students may concentrate on classwork, the completion of special assignments, writing projects, and other preparation for duly scheduled final examinations. Approved exceptions include final papers, weekly chapter quizzes, quizzes, projects, and examinations associated with a lab that does not meet during final examinations. This policy does not apply to classes that meet only during the second 7-week session of the semester or to classes offered during the summer term. Complete information related to [Final Examination Policies](https://catalog.usu.edu/content.php?catoid=12&navoid=3311) [.\(https://catalog.usu.edu/content.php?catoid=12&navoid=3311\)](https://catalog.usu.edu/content.php?catoid=12&navoid=3311) can be reviewed in the General Catalog.

## Assumption of Risk

All classes, programs, and extracurricular activities within the University involve some risk, and some involve travel. The University provides opportunities to participate in these programs on a voluntary basis. Therefore, students should not participate in them if they do not care to assume the risks. Students can ask the respective program leaders/sponsors about the possible risks a program may generate, and if students are not willing to assume the risks, they should not select that program. By voluntarily participating in classes, programs, and extracurricular activities, students do so at their own risk. General information about University Risk Management policies, insurance coverage, vehicle use policies, and risk management forms can be found at <http://www.usu.edu/riskmgmt/> [.\(http://www.usu.edu/riskmgmt/\)](http://www.usu.edu/riskmgmt/).

## Mental Health

Mental health is critically important for the success of USU students. As a student, you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. Utah State University provides free services for students to assist them with addressing these and other concerns. You can learn more about the broad range of confidential mental health services available on campus at [Counseling and Psychological Services \(CAPS\)](https://counseling.usu.edu/) (<https://counseling.usu.edu/>).

Students are also encouraged to download the ["SafeUT App"](https://healthcare.utah.edu/uni/programs/safe-ut-smartphone-app) (<https://healthcare.utah.edu/uni/programs/safe-ut-smartphone-app>) to their smartphones. The SafeUT application is a 24/7 statewide crisis text and tip service that provides real-time crisis intervention to students through texting and a confidential tip program that can help anyone with emotional crises, bullying, relationship problems, mental health, or suicide related issues.

## Course Summary:

Date	Details	Due
Fri Jan 14, 2022	 <a href="https://usu.instructure.com/courses/683938/assignments/3539008">Pre-Test (extra credit)</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3539008">https://usu.instructure.com/courses/683938/assignments/3539008</a> )	due by 11:59pm
	 <a href="https://usu.instructure.com/courses/683938/assignments/3539016">Synthesis Review (extra credit)</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3539016">https://usu.instructure.com/courses/683938/assignments/3539016</a> )	due by 11:59pm
Wed Jan 19, 2022	 <a href="https://usu.instructure.com/courses/683938/assignments/3539012">Spectroscopy A/B</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3539012">https://usu.instructure.com/courses/683938/assignments/3539012</a> )	due by 11:59pm
	 <a href="https://usu.instructure.com/courses/683938/assignments/3539013">Spectroscopy A/B Application Problems</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3539013">https://usu.instructure.com/courses/683938/assignments/3539013</a> )	due by 11:59pm
Sun Jan 30, 2022	 <a href="https://usu.instructure.com/courses/683938/assignments/3539014">Spectroscopy C</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3539014">https://usu.instructure.com/courses/683938/assignments/3539014</a> )	due by 11:59pm
	 <a href="https://usu.instructure.com/courses/683938/assignments/3539015">Spectroscopy C Application Problems</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3539015">https://usu.instructure.com/courses/683938/assignments/3539015</a> )	due by 11:59pm
Sat Feb 5, 2022	 <a href="https://usu.instructure.com/courses/683938/assignments/3538974">Chapter 12. Application Problems</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3538974">https://usu.instructure.com/courses/683938/assignments/3538974</a> )	due by 11:59pm
	 <a href="https://usu.instructure.com/courses/683938/assignments/3538975">Chapter 12. Conjugation, Resonance, and Dienes</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3538975">https://usu.instructure.com/courses/683938/assignments/3538975</a> )	due by 11:59pm
Wed Feb 9, 2022	 <a href="https://usu.instructure.com/courses/683938/assignments/3538994">Chapter 21. Application Problems</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3538994">https://usu.instructure.com/courses/683938/assignments/3538994</a> )	due by 11:59pm
	 <a href="https://usu.instructure.com/courses/683938/assignments/3538995">Chapter 21. Radical Reactions</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3538995">https://usu.instructure.com/courses/683938/assignments/3538995</a> )	due by 11:59pm
Fri Feb 11, 2022	 <a href="https://usu.instructure.com/courses/683938/assignments/3538956">Exam 1-MC</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3538956">https://usu.instructure.com/courses/683938/assignments/3538956</a> )	due by 8:30pm
	 <a href="https://usu.instructure.com/courses/683938/assignments/3560862">Exam 1-Written</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3560862">https://usu.instructure.com/courses/683938/assignments/3560862</a> )	due by 8:30pm
Wed Feb 16, 2022	 <a href="https://usu.instructure.com/courses/683938/assignments/3538998">Exam 1-MC-ave</a> ( <a href="https://usu.instructure.com/courses/683938/assignments/3538998">https://usu.instructure.com/courses/683938/assignments/3538998</a> )	due by 11:59pm



Date	Details	Due
	<a href="https://usu.instructure.com/courses/683938/assignments/3538958">Exam 1-MC2</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538958">https://usu.instructure.com/courses/683938/assignments/3538958</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538999">Exam 1-Total</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538999">https://usu.instructure.com/courses/683938/assignments/3538999</a>	due by 11:59pm
Sun Feb 20, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538976">Chapter 13. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538976">https://usu.instructure.com/courses/683938/assignments/3538976</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538977">Chapter 13. Intro to Carbonyl Chemistry; Organometallic Reagents; Oxidation</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538977">https://usu.instructure.com/courses/683938/assignments/3538977</a>	due by 11:59pm
Tue Mar 1, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538978">Chapter 14. Aldehydes and Ketones–Nucleophilic Addition</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538978">https://usu.instructure.com/courses/683938/assignments/3538978</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538979">Chapter 14. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538979">https://usu.instructure.com/courses/683938/assignments/3538979</a>	due by 11:59pm
Tue Mar 15, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538980">Chapter 15. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538980">https://usu.instructure.com/courses/683938/assignments/3538980</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538981">Chapter 15. Carboxylic Acids and Nitriles</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538981">https://usu.instructure.com/courses/683938/assignments/3538981</a>	due by 11:59pm
Wed Mar 23, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538982">Chapter 16. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538982">https://usu.instructure.com/courses/683938/assignments/3538982</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538983">Chapter 16. Carboxylic Acids and their Derivatives–Nucleophilic Acyl Subst</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538983">https://usu.instructure.com/courses/683938/assignments/3538983</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3539002">Exam 2-Total</a> <a href="https://usu.instructure.com/courses/683938/assignments/3539002">https://usu.instructure.com/courses/683938/assignments/3539002</a>	due by 11:59pm
Fri Mar 25, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538955">Exam 2-MC</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538955">https://usu.instructure.com/courses/683938/assignments/3538955</a>	due by 8:30pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3560900">Exam 2-Written</a> <a href="https://usu.instructure.com/courses/683938/assignments/3560900">https://usu.instructure.com/courses/683938/assignments/3560900</a>	due by 8:30pm
Wed Mar 30, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538959">Exam 2-MC2</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538959">https://usu.instructure.com/courses/683938/assignments/3538959</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3539001">Exam 2-MC-ave</a> <a href="https://usu.instructure.com/courses/683938/assignments/3539001">https://usu.instructure.com/courses/683938/assignments/3539001</a>	due by 11:59pm
Sun Apr 3, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538985">Chapter 17. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538985">https://usu.instructure.com/courses/683938/assignments/3538985</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538986">Chapter 17. Substitution Reactions of Carbonyl Compounds at the <math>\alpha</math> Carbon</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538986">https://usu.instructure.com/courses/683938/assignments/3538986</a>	due by 11:59pm

Date	Details	Due
Sat Apr 9, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538987">Chapter 18. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538987">https://usu.instructure.com/courses/683938/assignments/3538987</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538988">Chapter 18. Carbonyl Condensation Reactions</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538988">https://usu.instructure.com/courses/683938/assignments/3538988</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538996">Chapter 22. Amines</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538996">https://usu.instructure.com/courses/683938/assignments/3538996</a>	due by 11:59pm
Wed Apr 13, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538997">Chapter 22. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538997">https://usu.instructure.com/courses/683938/assignments/3538997</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3539004">Exam 3-Total</a> <a href="https://usu.instructure.com/courses/683938/assignments/3539004">https://usu.instructure.com/courses/683938/assignments/3539004</a>	due by 11:59pm
Fri Apr 15, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538960">Exam 3-MC</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538960">https://usu.instructure.com/courses/683938/assignments/3538960</a>	due by 8:30pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3560901">Exam 3-Written</a> <a href="https://usu.instructure.com/courses/683938/assignments/3560901">https://usu.instructure.com/courses/683938/assignments/3560901</a>	due by 8:30pm
Tue Apr 19, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538989">Chapter 19. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538989">https://usu.instructure.com/courses/683938/assignments/3538989</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538990">Chapter 19. Benzene and Aromatic Compounds</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538990">https://usu.instructure.com/courses/683938/assignments/3538990</a>	due by 11:59pm
Wed Apr 20, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538957">Exam 3-MC2</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538957">https://usu.instructure.com/courses/683938/assignments/3538957</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3539007">IDEA</a> <a href="https://usu.instructure.com/courses/683938/assignments/3539007">https://usu.instructure.com/courses/683938/assignments/3539007</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3539003">Exam 3-MC-ave</a> <a href="https://usu.instructure.com/courses/683938/assignments/3539003">https://usu.instructure.com/courses/683938/assignments/3539003</a>	due by 11:59pm
Mon Apr 25, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538991">Chapter 20. Application Problems</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538991">https://usu.instructure.com/courses/683938/assignments/3538991</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3538992">Chapter 20. Reactions of Aromatic Compounds</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538992">https://usu.instructure.com/courses/683938/assignments/3538992</a>	due by 11:59pm
Sat Apr 30, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3538961">Final-MC</a> <a href="https://usu.instructure.com/courses/683938/assignments/3538961">https://usu.instructure.com/courses/683938/assignments/3538961</a>	due by 5pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3560903">Final-Written</a> <a href="https://usu.instructure.com/courses/683938/assignments/3560903">https://usu.instructure.com/courses/683938/assignments/3560903</a>	due by 5pm
Wed May 4, 2022	<a href="https://usu.instructure.com/courses/683938/assignments/3539005">Final Exam-Total</a> <a href="https://usu.instructure.com/courses/683938/assignments/3539005">https://usu.instructure.com/courses/683938/assignments/3539005</a>	due by 11:59pm
	<a href="https://usu.instructure.com/courses/683938/assignments/3539006">Highlight Videos</a> <a href="https://usu.instructure.com/courses/683938/assignments/3539006">https://usu.instructure.com/courses/683938/assignments/3539006</a>	