



EAST TEXAS A&M
UNIVERSITY

CHEM 2325-01E (Organic Chemistry II) Course Syllabus, Spring Semester, 2026

MWF 11:00 am-11:50 am, Location: STC127 (Science Building)

(This is a face-to-face course)

INSTRUCTOR INFORMATION

Instructor: Allan D. Headley

Office: Science Building, 337

Office Hours: MW, 10:00 a.m. – 11:00 noon; F, 9:00 am – 10:00 am, TR, 1:30 p.m. to 3:30 p.m.

Telephone: (903) 468 – 8106

E-Mail: allan.headley@etamu.edu (preferred mode of communication)

COURSE INFORMATION

Your basic text is: Organic Chemistry, Concepts and Applications" 1st Edition, Headley, A. D., John Wiley & Sons; ISBN-13: 9781119504672.

The Student Companion (website for the textbook is: <http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=11621&itemId=1119504589>).

A model set.

Course Description

In this course, which is a continuation of the first semester of Organic Chemistry I, additional reaction types will be studied and applied to the synthesis of different target organic molecules. For each type of reaction, the mechanism involved will be discussed and used to rationalize the various outcomes of different reactions. In addition, various spectroscopic techniques will be covered in this course, but the basics are covered extensively in lab. A letter grade earned in this course not only reflects the student's knowledge of organic chemistry but also reflects the student's ability to solve scientific problems based on available information and to become a better scientist.

Prerequisite: CHEM 2323, CHEM 1412 with grade of "C" or better or consent of the instructor.

Corequisite: CHEM 202. Note: Credit will not be given for both CHEM 201 and 2323.

Student Learning Outcomes

1. Students should be able to utilize different reactions and strategies to synthesize various target molecules.
2. Students should be able to develop successful strategies for the synthesis of large organic compounds from smaller ones.
3. Students should be able to apply the basic concepts of organic chemistry that are discussed to mechanistic and synthetic organic chemistry problems.
4. This course is designed to develop and improve the student's ability to think critically and analytically about various problems.

5. Students' ability to think critically and solve problems should be improved.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

It is expected that students will have a basic knowledge of the internet and how to interface with D2L Brightspace, which is our learning management system (LMS). In addition, students must have the ability to scan written work and convert it to a pdf format for upload to D2L. There are many free applications, such as CamScanner, that are available that can be downloaded to smart phones, which will allow students to scan a document and convert it to a pdf format for upload.

Instructional Methods

This is a face-to-face course, and we will meet as shown in the university schedule of classes. Each week throughout the course, there will be a face-to-face quiz or a midterm exam and students are expected to be present to take these quizzes and exams. The format of the quizzes and exams will be a combination of multiple-choice questions and written responses. The final exam will be an ACS multiple-choice exam.

Student Responsibilities or Tips for Success in the Course

It is assumed that the good student will be able to work all the problems in the textbook (even the study problems within each chapter). You must work lots of problems; in addition, ensure that you work through the tutorial questions of CHEM 202, which is the corequisite for this course, and understand the concept of each question. The textbook has a student companion website (<http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=11621&itemId=1119504589>) which has a number of different resource material to assist students better understand and apply the concepts of organic chemistry. It is not a good idea to try to memorize solutions to problems, since identical problems will not be used again. You should always critically analyze your work to ensure that you have applied reasonable steps to deduce your solution. Also, ask yourself how a problem might be rearranged as a possible test item. Be precise with your answers. You will find this helpful in preparing for exams. Since there is typically more than one possible solution to a problem, discuss possible solutions with other students. Be precise with your answers. On your exams, you will be graded on what you write, not what you meant to write, or thought you wrote. If your responses to different problems are difficult for your classmates to understand, then your responses to questions on the exam will be very difficult to grade.

GRADING

Your course grade will be based on quizzes, midterm exams, and a final exam. Quizzes are worth 20%; each course midterm exam is worth 100 points (20% of your final grade), and a course comprehensive final American Chemical Society (ACS) final exam is worth 20% of your final grade. The key and score distribution will be posted on D2L. Each midterm exam is cumulative, but will emphasize the material covered since the previous midterm exam.

First Exam: Week of February 9, 2026

Second Exam: Week of March 16, 2026

Third Exam: Week of April 13, 2026

Final Exam: Week of May 4, 2026

Assessments

Your grade will be computed based on the class average, for example if the class average is around 77% with a standard deviation of approximately 15 the grade cutoffs is: A = 90%-100%; B = 80%-89%; C = 70%-79%; D = 60%-69%; F = 59% or below. If the class average is lower, the cutoffs will be adjusted, and students informed of the grade cutoffs after each exam and before the final exam. Your grade status in the class at any time will be available in D2L.

Course Specific Procedures/Policies

NO make-up exams will be offered. If you miss a midterm exam for a reason beyond your control, you may request in writing to be excused from that exam providing you have valid written documentation supporting your reason.

You are encouraged to carefully review your graded exams. If you think a grading error was made, you can request that the exam be regraded, but **ONLY** if the following procedure is followed:

- (1) Write a very concise note explaining what you think the error in grading was. This must be specific as to the mistake, typically no more than two sentences.
- (2) Include a signed statement that you have not made any changes to the exam since receiving your graded exam.
- (3) Return your request including your signed statement, along with the graded exam, to the instructor **NO LATER THAN ONE WEEK** after the graded exam was returned.

The entire exam will be regraded and results posted in D2L approximately one week after the request. You are allowed only one regrade for each midterm exam. There are no regrades for the final exam.

TENTATIVE COURSE OUTLINE / CALENDAR

<u>Week of</u>	<u>TOPICS TO BE COVERED</u>
Jan 12	Review and applications of oxidation reactions (Chapter 11); mechanisms of elimination reactions; elimination bimolecular (E2) reaction mechanism; elimination unimolecular (E1) reaction mechanism (Chapter 12).
Jan 19	Elimination of hydrogen and halide (dehydrohalogenation); elimination of water (dehydration); dehydration products; carbocation rearrangement; pinacol rearrangement; applications of elimination reactions – synthesis.
Jan 26	Nucleophilic substitution reactions; bimolecular substitution reaction mechanism (S _N 2 mechanism); applications of bimolecular substitution reactions. (Chapter 15) Unimolecular substitution reaction mechanism (S _N 1 mechanism).
Feb 2	Applications of unimolecular substitution reactions (Chapter 15) Types of alkanes and alkyl halides; chlorination of alkanes; bromination of alkanes; reactions of alkyl halides (Chapter 14) Substitution reactions involving alcohols (Chapter 14)
Feb 9	Exam#1 Applications of nucleophilic substitution reactions – synthesis (Chapter 14)
Feb 16	Mechanism for acyl substitution; substitution reactions involving acid chlorides; substitution reactions involving anhydrides; substitution reactions involving esters; substitution reactions involving amides; substitution reactions involving carboxylic acids (Chapter 16)

Feb 23	Structure and properties of benzene; nomenclature of substituted benzene; stability of benzene; features of aromatic compounds; electrophilic aromatic substitution reactions of benzene. (Chapter 17)
Mar 2	Electrophilic aromatic substitution reactions of disubstituted benzene; electrophilic substitution reactions of polycyclic aromatic compounds (Chapter 17)
Mar 9	Spring break
Mar 16	Exam#2 Electrophilic substitution reactions of pyrrole; electrophilic substitution reactions of pyridine (Chapter 17) Nucleophilic aromatic substitution of substituted benzenes; nucleophilic aromatic substitution of substituted of pyridine (Chapter 17); Cycloaddition reactions; electrocyclic reactions; sigmatropic reactions. (Chapter 18)
Mar 23	Spectroscopy (Chapter 13)
Mar 30	Metals in coupling Reactions; palladium catalyzed coupling reactions. (Chapter 19)
Apr 6	Cationic polymerization of alkenes; anionic polymerization of alkenes; free radical polymerization of alkenes (Chapter 20)
Apr 13	Exam#3 Acid-Base Properties of amino Acids; synthesis of amino acids; reactions of amino acids; structure and properties of peptides; peptide synthesis; primary structure of proteins; secondary structure of proteins (Chapter 20)
Apr 20	Monosaccharides; disaccharides and polysaccharides; N-glycosides
Apr 27	Lipids; properties and reactions of waxes; properties and reactions of simple lipids; properties and reactions of phospholipids; complex Lipids. (Chapter 20)
May 4	Final Exam*

*Each midterm exam is cumulative but will emphasize the material covered after the previous midterm exam. Check examination schedule for specific date and time of final examination.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

Zoom Video Conferencing Tool

https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your instructor. The preferred mode of communication is via e-mail and if you have any questions or are having difficulties with the course material, please contact your instructor; response time is typically within one day.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

STUDENT RESPONSIBILITIES FOR COURSE

CWID and Password

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu.

Technology-Related Issues

Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

TECHNOLOGY REQUIREMENTS AND SUPPORT

Minimal Technical Skills Needed

Students will need reliable computer and internet access for this course. Students must be able to effectively use myLeo email, myLeo Online D2L, and Microsoft Office.

Learning Management System (LMS) – D2L

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are the technical requirements:

- View the [Learning Management System Requirements Webpage](#).
- Learn more on the [LMS Browser Support Webpage](#).

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found on the [Brightspace Support Webpage](#).

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement

If you have any questions or are having difficulties with the course material, please contact your instructor. Correspondence will always be through university email (your “myLeo” mail) and announcements in myLeo online (D2L). You will not RECEIVE email through D2L, so be sure to check your ETAMU email for communication. Students are encouraged to check university email daily.

Include the Following in Emails with Instructor:

- Course name and subject in the subject line
- Salutation (Good afternoon, Dr. Jackson)
- Proper email etiquette (no “text” emails – use proper grammar and punctuation)
- Student name and CWID after the body of the email (possibly add to student signature on email)

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The [Code of Student Conduct](#) is described in detail online in the [Student Guidebook](#).

Students should also consult the [Rules of Netiquette Webpage](#) for more information regarding how to interact with students in an online forum.

ETAMU Attendance

For more information about the attendance policy, please view the [Attendance Webpage](#) and the [Class Attendance Policy](#)

Academic Integrity

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty University Procedure 13.99.99.R0.03](#)

[Undergraduate Student Academic Dishonesty Form](#)

[Graduate Student Academic Dishonesty University Procedure 13.99.99.R0.10](#)

Graduate Student Academic Dishonesty Form

Use of Artificial Intelligence

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

East Texas A&M University
Velma K. Waters Library Rm 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@etamu.edu
Website: [Office of Student Disability Services](#)

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and ETAMU Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East Texas A&M University campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

East Texas A&M Supports Students' Mental Health – Counseling Services

The Counseling Center at East Texas A&M University, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

Mental Health and Well-Being

The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.



As an Institutional Member of the National Association of Schools of Music, East Texas State A&M University supports the Association's commitment to student health and wellness. The following web address provides links to information for resources related to physical and mental well-being, as well as assists in offering preventative measures that students can take to avoid serious and/or chronic conditions: [Musician Health and Safety - East Texas A&M University](#)