

Course Syllabus



Course CHEM 2327
Course Title Organic Chemistry 1
Professor Michael C. Biewer
Term Fall 2025
Meetings T/R 8:30-9:45, SLC 2.202

Professor's Contact Information

Office Phone 972-883-2811 (email is better form of communication)
Office Location BE 3.326
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Office Hours T/R 12-1. Office hours will not be set during days of exams.

General Course Information

Pre-requisites, Co-requisites, & other restrictions	CHEM 1312 General Chemistry II or CHEM 1316 Honors General Chemistry II
Course Description	<p>This course is designed to provide a unified overview of fundamental organic chemistry for science majors. Students who successfully complete this course acquire an integrated understanding of molecular architecture, molecular transformations, reaction energetics and mechanisms, synthetic strategy, and structure determination.</p> <p>Tests will be given on the dates given in the syllabus. The exams will be taken in class. There will also be 10 assignments given throughout the semester. These will be uploaded on a Thursday and are due by noon (central time) on the following Tuesday. These assignments will serve to help with you learning the material each week and also serve as a form of participation for the course. Even if you do not know the answer to questions being asked, you should submit the assignment to demonstrate you have been participating in the course. The content on these assignments will also help to study for quizzes and exams. There will be three quizzes given during the semester in class. You are allowed to drop your lowest quiz score, but preparing for these quizzes will help everyone be ready for the in-class exams.</p> <p>Students often view organic chemistry as a difficult course. I strongly recommend that everyone attempt to keep up with the class as it proceeds. This is not a course where it is easy to 'cram' for a test. Students invariably do better once they learn how to visualize organic molecules, and reactions, in three dimensions. If you know this is a problem I recommend using molecular models to try and view the molecules. Also try to realize that this is not a memorization course. While some memorization is unavoidable, the purpose of this course is to teach everyone the underlying basic principles that drive an organic reaction. Once these principles are handled a student will be able to understand, and predict, why any reaction occurs.</p>

	<p>The course notes used during lectures can be downloaded as pdf files from www.utdallas.edu/~biewerm. (Go to CHEM 2327 HONORS link under teaching section). Videos of these lectures will be uploaded to the eLearning site for viewing. You will be assigned certain lectures to view before each lecture. The in-class time will be used to demonstrate principles, work through problems, and give tips about how to approach particular topics. Before attending the in-class lectures, therefore, everyone should have 1) watched the assigned video lectures, 2) read the chapter being discussed that day in the book, and 3) worked through suggested problems from each chapter in the book. The suggested problems can be found on the same site where the course notes are located.</p>
Learning Outcomes	<p>Upon completing this class, students will:</p> <ul style="list-style-type: none"> • Be able to predict bonding and three-dimensional structure, including chirality, and to analyze properties of this 3-D structure of organic compounds. • Be able to compare reactivity amongst a series of organic compounds. • Be able to predict reactivity of specific functional groups and to construct simple and efficient routes for the preparation of desired organic compounds.
Required Texts & Materials	Jones and Fleming, "Organic Chemistry", fifth edition, 2014.
Recommended Materials	Solution manual to textbook, molecular model kit

Assignments & Academic Calendar

[Topics, Reading Assignments, Due Dates, Exam Dates]

Date	Videos before Attendance	In-class Topic	Chap.	Assign.
26-Aug	none	intro, class procedure	1	
28-Aug	lecture 1, 2	drawing, where are electrons, building MO's	1	1
2-Sep	lecture 3, 4	acid/base, resonance structures	1	
4-Sep	lect. 5, 6, 7	hybridization, Newman, naming	2	2
9-Sep	lecture 8, 9	CIP assignment, naming alkenes & alkynes	3	
11-Sep	lecture 10, 11	stereoisomers, R/S, Fischer	4	3
16-Sep	lecture 12	diastereomers, # of stereoisomers, meso	4	
18-Sep	lecture 13, 14	rings, chairs, bicyclic	5	4
23-Sep		problems		
25-Sep		EXAM		
30-Sep	lecture 15	substituted alkanes, naming	6	
2-Oct	lecture 16, 17	acidity properties, organometallic	6	5
7-Oct	lecture 18, 19	Reactions, S _N 2, stereo, substrate	7	
9-Oct	lecture 20	nucleophilicity, leaving group, solvent	7	6
14-Oct	lecture 21	S _N 1	7	
16-Oct	lecture 22	S _N 1 vs S _N 2, synthesis	7	7
21-Oct	lecture 23	elimination, Saytzeff	8	
23-Oct	lecture 24, 25	Hofmann, E1 vs E2, elim. vs subst.	8	8
28-Oct		problems		
30-Oct		EXAM		
4-Nov	lecture 26	alkene reactions, carbocation stability	10	
6-Nov	lecture 27	rearrangements, hydroboration	10	
11-Nov	lecture 28	pi bonds, dihalogen, epoxidation	11	
13-Nov	lecture 29, 30	glycol, carbonyl, alkyne, carbene	11	9
18-Nov	lecture 31	radical reactions	12	
20-Nov	lecture 32	photohalogenation, reactivity/selectivity	12	10
2-Dec		problems		
4-Dec		EXAM (cumulative)		
9-Dec		review		

Quizzes will occur at the end of class days on 9/18, 10/23, 11/20

Course Policies

Grading (credit) Criteria	Grades will be determined from a combination of 3 exams, highest two quiz grades, and the weekly packet assignments			
	Exams	3 x 250	750 points	
	Packets	10 x 15	150 points	
	Quizzes	2 x 50	100 points	
	Total	1000 points		
	900 – 1000 = A+	700 – 759 = B+	550 – 599 = C+	400 – 449 = D+
	800 – 899 = A	650 – 699 = B	500 – 549 = C	350 – 399 = D
	760 – 799 = A-	600 – 649 = B-	450 – 499 = C-	<350 = F
Comet Creed	<p><i>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</i></p> <p><i>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</i></p>			
Academic Support Resources	<p><i>The information contained in the following link lists the University’s academic support resources for all students.</i></p> <p><i>Please go to http://go.utdallas.edu/academic-support-resources.</i></p>			
UT Dallas Syllabus Policies and Procedures	<p><i>The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.</i></p> <p><i>Please go to http://go.utdallas.edu/syllabus-policies for these policies.</i></p>			

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.