



College of Arts & Sciences
Organic Chemistry II - CHEM 2325 - 001 Syllabus

Instructor: Dr. G. Robert Shelton
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Class Hours: MWF 9:00-9:50
Class Location: Hall 102
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Course Materials

eTextbook: Organic Chemistry A Learner-Centered Approach, by Richard Mullins.
eHomework: Mastering Chemistry by Pearson
Suggested Optional Materials: Molecular Modeling Kits

Course context as outlined by the American Chemical Society (ACS)

Carbon-based molecules are central to a host of chemical and biological processes because of their broad range of structure and reactivity. The millions of organic compounds alone, ranging from polymers to pharmaceuticals, make the field important for study. Yet organic chemistry is also a highly integrated discipline that impacts and is impacted by the other branches of chemistry and other sciences. Indeed, organic chemistry enables a molecular understanding of physicochemical phenomena in materials science, the environment, biology, and medicine. Because the field has reached a high level of integration with these areas, progress in organic chemistry continues at a fast pace and much more remains to be discovered.

Conceptual topics as suggested by the ACS

- the understanding that our only way to molecular knowledge is through experimentation; correlating structure with reactivity and function through wet chemical methods, spectroscopy, (notably nuclear magnetic resonance and infrared spectroscopy and X-ray crystallography) and use of computational simulations
- bonding and its consequences on molecular structure and reactivity
- interplay between electronic, steric, and orbital interactions in the behavior and properties of molecules
- the dependence of structure and reactivity on context, particularly solvent effects and other non-covalent interactions
- Lewis and Brønsted acid-base chemistry
- stereochemistry and conformational analysis
- addition, elimination, substitution and rearrangement mechanisms, and reactive intermediates
- functional groups and their interconversions, particularly redox transformations
- organic synthesis, including retrosynthetic analysis of target molecules
- synthesis and behavior of macromolecular species, including biomolecules such as proteins and polysaccharides, and synthetic polymers

- methods of activation, including Brønsted or Lewis acid/base, free radical chemistry, and organometallic catalysis

Student responsibilities

Communication. The best way to contact me is through email, grshelto@tamusa.edu. All correspondence between professors and students must occur via university email accounts. You must have a Jaguar email account ready and working. If it is not working, contact the help desk at sahelp@tamusa.tamus.edu or at 210-784-4357. Students are expected to access Blackboard for updates on the course, announcements, and other course materials. All students are strongly encouraged to come to office hours or make appointments at other times to discuss course material and answer questions.

Attendance Policy. All students are expected to attend lecture and actively engage in class discussion, activities and online assignments. Attendance will be monitor and can be used to make decisions on cases of borderline grades. If you are absent, you are responsible for the material covered and are expected to get notes, announcements and any other material from another student in the class. Absences will be excused if due to illness (medical excuse), death of a close family member, religious holiday (please inform instructor), official university activity or cancellation of classes, military duties, pregnancy & related conditions and participation in legal proceedings. Excessive absences and tardiness will not be tolerated. *Accumulation of more than four unexcused absences will result in the instructor dropping you from the course.*

Conduct and Behavior. As an instructor my goal is to create a safe and engaging learning environment. Class disruptions are unacceptable, asking questions to clarify material during class does not qualify as a disruption and is encourage. If you are disrupting the class you will be ask to leave. Technology in the classroom may be a great a resource but it can also hinder the learning process. Therefore students are not allow to wear ear buds and headphones and/or use cellphones during class. All cellphones must be on vibrate or turned off for the entirety of the class/lab period. In case of an emergency call, leave the room before answering the call. Texting during class is absolutely prohibited. The use of laptops, tablets or other devices for non-class related activities is not allowed. **Electronic Devices during Exams.** All electronic devices must be completely stored during exams and quizzes. Academic misconduct and attempts to cheat during the exam will be pursued according to Texas A&M-San Antonio code of conduct policy. You are discourage from leaving the room during an exam. If you need to use the restroom ask and leave all electronic devices with the instructor. **Aggressive Behavior.** The academic environment is meant for discussing ideas in a respectful manner. Tolerance, empathy, respect and courtesy help us create a safe environment. Abusive and aggressive behavior will result in contacting the University Police Department and immediate removal of the student from the classroom. **Visitors.** Only students enrolled in the course are allowed in the classroom. No visitors are allowed unless you clear it with me in advance under a special circumstance such as a childcare issue. **IMPORTANT.** Each student receives this information during the first lecture. It is your responsibility to read this material and be familiar with the course content, procedures, and grading.

Grading

Your final grade will be assigned based on your performance in the following areas:

Homework	233 pts possible (pro-rated)	100 pts	15%
Quizzes	3-5 pts each	50 pts	8%
Exams	4 exams, 100 pts each	400 pts	62%
<u>ACS Final</u>	<u>70 questions (manipulated score)</u>	<u>100 pts</u>	<u>15%</u>
Total Points:		650 pts	100%

Letter Grade:	A	B	C	D	F
Total Points	100-89.5%	89.4-79.5%	79.4-69.5%	69.4-59.5%	<59.4%

Example:

Homework	200/233 pts (85.8% pro-rated)	86 pts
Quizzes		25 pts
Exams		329 pts
ACS Final		77 pts
Total Points:		517/650 pts => 79.5% "B".

Exams. There will be **no makeup examinations!** Should you miss an exam, the final exam score will be used for your missed exam. Should you miss two or more exams via an unexcused absence a grade of FA will be assigned. Should you have a question concerning the way that your examination was graded, or if you think that there was a calculation error, then it is your responsibility to bring the matter to the attention of the instructor within three calendar days of the date when your exam was given to you after graded. The three-day policy applies to all 100-point exams, except the last 100-point examination. Students have until the day of their final examination to bring up grading concerns. No extra examination time will be given, the only time that the students must work on the examination is the allotted time. No examination will be distributed once the first student has completed the examination and left the classroom.

Tentative Schedule

Week	Date	Topic	Readings	Notes
1	Aug. 26	Introductions, Syllabus Review, & Course Overview		
	Aug. 28	Chapter 14	14.1 – 14.4	☐ Pre-lecture due at 9:00am ☐ Introduction to Mastering Organic Chemistry & Organic Primer due Thursday 8/29 @11:59pm
	Aug. 30		14.5 – 14.8	
2	Sept. 2	Labor Day – No Lecture.		
	Sept. 4	Chapter 15	15.1 – 15.3	☐ Post-lecture Chapter 14 due 9/3@11:59pm ■ No pre- or post- lecture assignments for chapter 15.
	Sept. 6		15.4 – 15.5	
3	Sept. 9		15.6 – 15.8	
	Sept. 11	Chapter 16	16.1 – 16.3	☐ Pre-lecture due at 9:00am
	Sept. 13		16.4 – 16.6	☐ Post-lecture Chapter 16 due 9/15@11:59pm
4	Sept. 16	Exam 1	Chapters 14 – 16	
	Sept. 18	Chapter 17	17.1 – 17.4	☐ Pre-lecture due at 9:00am
	Sept. 20		17.4 – 17.6	
5	Sept. 23		17.7 – 17.8	
	Sept. 25		17.9 – 17.10	☐ Post-lecture Chapter 16 due 9/26@11:59pm
	Sept. 27	Chapter 18	18.1 – 18.4	☐ Pre-lecture due at 9:00am
6	Sept. 30		18.5 – 18.6	
	Oct. 2		18.7 – 18.8	☐ Post-lecture Chapter 18 due 10/3@11:59pm
	Oct. 4	Chapter 19	19.1 – 19.4	☐ Pre-lecture due at 9:00am
7	Oct. 7		19.5 – 19.7	
	Oct. 9		19.7 – 19.9	
	Oct. 11		19.9 – 19.10	☐ Post-lecture Chapter 19 due 10/13@11:59pm
8	Oct. 14	Exam 2	Chapters 17 – 19	
	Oct. 16	Chapter 20	20.1 – 20.3	☐ Pre-lecture due at 9:00am
	Oct. 18		20.4 – 20.5	
9	Oct. 21		20.5 – 20.7	☐ Post-lecture Chapter 20 due 10/22@11:59pm
	Oct. 23	Chapter 21	21.1 – 21.3	☐ Pre-lecture due at 9:00am
	Oct. 25		21.3 – 21.4	
10	Oct. 28		21.4 – 21.5	☐ Post-lecture Chapter 21 due 10/29@11:59pm
	Oct. 30	Chapter 22	22.1 – 22.3	☐ Pre-lecture due at 9:00am
	Nov. 1		22.3 – 22.4	☐ Post-lecture Chapter 22 due 11/3@11:59pm <i>Dr. Shelton is out of town attending a conference.</i>
11	Nov. 4	Exam 3	Chapters 20 – 22	

	Nov. 6	Chapter 23	23.1 – 23.3	☐ Pre-lecture due at 9:00am
	Nov. 8		23.3 – 23.5	
12	Nov. 11		23.6 – 23.7	Last day to drop with an automatic “W”
	Nov. 13		23.8 – 23.8	
	Nov. 15		23.8 – 23.10	☐ Post-lecture Chapter 23 due 11/17@11:59pm
13	Nov. 18	Chapter 24	24.1 – 24.3	☐ Pre-lecture due at 9:00am
	Nov. 20		24.4 – 24.5	
	Nov. 22		24.5 – 24.6	☐ Post-lecture Chapter 24 due 11/24@11:59pm
14	Nov. 25	Exam 4	Chapters 23 – 24	
	Nov. 27	Study Day – No Lecture.		
	Nov. 29	Thanksgiving Break		
15	Dec. 2			
	Dec. 5			
	Dec. 6	Study Day – No Lecture.		
Dec. 7-13		Date and time of final to be announced		