Organic Chemistry 337 (Spring 2019)
Meetings: M,W,F 1:00 PM - 1:50 PM
Location: La Tourette Hall 201
Instructor: Prof. Timothy J. Hagen
Office: FR 350, Office Hours: M 12:00-1:00 & W 2:00-3:00 pm, and by appointment
Email: thagen@niu.edu
Phone: (815) 753-1463

Tentative Lecture Schedule

Lecture Dates	Chapters	Subject
1/14 to 2/6	10	Radical reactions
	11	Alcohols and ethers
2/8		**Exam 1**
2/11 to 3/8	12	Carbonyl chemistry
	13	Conjugated systems
	14	Aromatics
3/8		**Exam 2**
3/11to 3/15		***Spring recess***
3/18 to 4/3	15	Reactions of aromatics
	16	Aldehydes and ketones
	18	α-Carbon chemistry
4/5		**Exam 3**
4/8-4/24	17	Carboxylic acid and their derivatives
	19	Condensation chemistry
	20	Amines
4/26		**Exam 4**
4/29 to 5/1	21	Phenols and aryl halides
5/3 (Friday)		Reading Day
5/8/17		**Final exam: Wednesday May 8, Noon-1:50 p.m.**

On-Line Course Information and Tools: Blackboard (https://webcourses.niu.edu)

Materials Organic Chemistry, 12th Ed Solomons, Fryhle, and Snyder Wiley & Sons, NY, NY
ISBN: 9781118133576

Optional texts: Student Study Guide and Student Solutions Manual To Accompany Organic Chemistry 11e / Edition 11by T. W. Graham Solomons ISBN: 9781118147900

Recommended: Molecular Visions: Flex molecular model kit ISBN: 9780964883710

The textbooks and study guides have been placed on reserve at the Founders Memorial Library and the Faraday Library.

Class Format: The course will be composed of lectures, in-class exams, in-class quiz and online learning tools and assessments. *It is important that you attend class, and attendance will be taken each class period.* **The in-class lectures need to be supplemented by your reading of the text, working of problems.** If you miss a class, it is your responsibility to acquire the lecture notes and any assigned class work from a fellow classmate and you should check Blackboard each day for postings.

Solving the problems for each chapter, with a time limit, is good practice for the exams.

BlackBoard Access: You must know your student id login and password.
https://webcourses.niu.edu/webapps/portal/frameset.jsp

Exams and Grades: The course grade will be assigned based on your point totals from the exams and in-class/online quizzes. The course grade will be assigned based on your point totals from exams, quizzes and a final exam. ***One exam may be dropped, and because of this no make-up exams will be given.*** Under certain justified circumstances students may take tests early or late; please contact me ahead of time to make arrangements. If an exam is missed, a score of zero will be assigned. The on-line quiz will be administered through the NIU Blackboard system. If more than ten quizzes are given then the lowest score(s) will be dropped and the best ten will be used in the grade calculation.

Final Exam: The 200 point final exam will be comprehensive and will be given on Wednesday, May 8th from 12:00 - 1:50 am. The point total is as follows:

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Exams (Best 3 of 4 at 100 pts each)	300 Points
Quiz (ten at 10 pts each)	100 Points
Final exam (Wed, 5/8/19 at 12 noon-1:50 pm)	200 points
Total Points	600 Points

Approximate Grading Scale: Average grade: A (100-87%), A- (86-85), B+ (84-83), B (82-75%), B- (74-70), C+ (69-68), C (67-55%), D (54-45%), F (44-0%)

NOTE: by enrolling in this class, you are agreeing to take the exams on the scheduled dates.

Optional Study Group Sessions: I will hold an optional one-hour group study session to go over material and work through problems. The time and location will be announced in class.

Extra Credit: THERE IS NO EXTRA CREDIT AVAILABLE.

Requests for regrades will be accepted for one week after the day the exams are distributed in class. To request a regrade, list the pages and numbers of the problems that you believe were graded incorrectly along with reasons for a regrade and submit this list along with the original exam. The requests will be reviewed, and exams will be returned during the next class meeting. *The instructor may make copies of exams prior to distribution to the class.* Individuals who make submissions for re-grades will have the copy of the original exam and the exam submitted for re-grading compared. Discrepancies between the two will constitute academic dishonesty and the situation will be dealt with appropriately.

Important Dates *Consult your academic adviser and the NIU website*:
https://calendar.niu.edu/academic_calendar

Common Sense Conduct: No cell phones, iPad or similar electronic devices allowed. All cell phones must be put in silent/vibrate mode and left on for emergency alerts only. Do not talk, text, etc. during class. Be quiet and respectful of the other students desire to learn. If repeated disturbances of my lecture occur, you will be required to leave class. **During exams all electronic devices are prohibited.**

Academic Dishonesty (cheating): Academic dishonesty includes (but is not limited to) looking at another student's exam during a testing session, allowing another student to copy your work, use of unauthorized materials (e.g., lecture notes, crib sheets, textbooks, prohibited electronic devices including smart phones, cell phones, I-pads or programmable calculators containing stored equations, formulas, or text) during exams. Violation of any of these terms will result in assignment of a score of zero for the exam, quiz or assignment in question. ***Academic dishonesty in any form will not be tolerated and may result in failure of the entire course.***

Student Code of Conduct: http://www.niu.edu/communitystandards/pdf/SCC.PDF

Study Groups: This will make your organic chemistry experience more enjoyable and you will learn the material better. Research shows that by teaching someone else you will learn the material better and you will get a realistic assessment for how well you know the material.

General Education Course Objectives
- Improve ability to think critically and logically
- Improve ability to reason quantitatively and to perform basic chemical computations
-Learn how to use the scientific method and theories to understand organic chemistry
-Develop an appreciation for the importance of the role of organic chemistry in everyday life
-Develop an understanding of the historical development of the field of organic chemistry

General Context and Outcomes Expected in a Two Semester Organic Chemistry Sequence (based upon ACS guidelines:
https://www.acs.org/content/dam/acsorg/about/governance/committees/training/acsapproved/degreeprogram/organic-chemistry-supplement.pdf)

"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.
This course will motivate students to appreciate the breadth of organic chemistry by facilitating an understanding of the principles, and the practice of applying them, to gain a working knowledge and appreciation of organic structure and reactivity."

Learning Outcome Expectations:
After this course, students should be able to: a) understand the structure and bonding of organic molecules b) understand the nomenclature of aliphatic and aromatic compounds c) understand conformational structures of alkanes d) recognize and assign stereo chemical designations of organic compounds e) predict products from reactions based on a mechanistic understanding and apply these reactions in multi-step syntheses

Conceptual Topics
- 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
- carbonyl chemistry, including nucleophilic addition, alkylation and condensation reactions
- oxidation and reduction
- nucleophilic substitution reactions

- addition and elimination
- acidity and basicity of organic compounds
- stereochemistry, as applied to the previous topics
- concepts and consequences of resonance and aromaticity
- spectroscopy at a basic level as applied to the previous topics

Preferred Gender Pronoun Statement
This course affirms people of all gender expressions and gender identities. If you prefer to be called a different name than what is on the class roster, please let me know. Please also inform me and feel free to correct me and your classmates on your preferred gender pronouns. If you have any questions or concerns, please do not hesitate to speak with me in person, or email me. The Gender and Sexuality Resource Center also has a webpage designed to help support people of all genders as they navigate NIU's system:http://niu.edu/gsrc/audience/trans.shtml .

Accessibility Statement
If you need an accommodation for this class, please contact the Disability Resource Center as soon as possible. The DRC coordinates accommodations for students with disabilities. It is located on the 4th floor of the Health Services Building, and can be reached at 815-753-1303 or drc@niu.edu.

Also, please contact me privately as soon as possible so we can discuss your accommodations. Please note that you will not be required to disclose your disability, only your accommodations. The sooner you let me know your needs, the sooner I can assist you in achieving your learning goals in this course.

Multilingual Student Statement
I am committed to making course content accessible to all students. If English is not your first language and this causes you concern about the course, please speak with me.

Student Sexual Misconduct Policy
Title IX prohibits sex discrimination to include sexual misconduct: harassment, domestic and dating violence, sexual assault, and stalking. If you or someone you know has been harassed or assaulted, you can receive confidential support and advocacy at the Counseling & Consultation Service's Advocacy Services, which can be contacted on at 815-753-1206, or in Campus Life Building-room 200. Alleged violations can be reported non-confidentially to the Affirmative Action & Equity Compliance Office in Lowden Hall-room 101, at 815-753-1118, or online at http://www.niu.edu/sexualmisconduct/help/form.shtml. Reports to law enforcement can be made to NIU Police & Public Safety at 815-753-1212. For an emergency, call 911. For more information about Sexual Misconduct Prevention & Resources, visit http://niu.edu/sexualmisconduct/index.shtml.
Note: As an instructor, one of my responsibilities is to help create a safe learning environment on our campus. I also have a mandatory reporting responsibility related to my role as an instructor and a faculty advisor to a student organization. I am required to share information regarding sexual misconduct or information about a crime that may have occurred on NIU's campus with the University. Students may speak to someone confidentially by contacting Counseling & Consultation Service's Advocacy Services at 815-753-1206, or in Campus Life Building-room 200.

*See Northern Illinois University Catalog for all other policies and guidelines.