Organic Chemistry I - 1343
CHEM 2452 Section 1
Summer Quarter, 2018

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Lecture: MTWRF 9:20 a.m. – 11:20 am (Boettcher Center Auditorium 101)

Office Hours: Open Door

Required Text: *Organic Chemistry, Sixth Edition*, by Marc Loudon and *Study Guide and Solutions Manual to Accompany Organic Chemistry, 6th Edition*, by Marc Loudon and Joseph G. Stowell.
The Help Center in the library has four other textbooks to provide you with a pool of problems to assist you understand the concepts taught in class. Check the textbooks out.

Recommended Model Kit: Molymod #62053 Organic Chemistry Molecular Model Set by Indigo Instruments or other similar kit (typically available on Amazon)

Course Goals:
Specific course goals have been developed in line with the mission of the chemistry department and the department's learning outcomes (see current university catalog).

Students at the end of this course will:

1) Understand and apply current chemical theories in the following areas:
    a. Use of the language and terminologies of organic chemist (nomenclature, concepts, and fundamental transformations).
    b. Use of fundamental concepts to understand and predict structures, properties, reactivity, and mechanisms of organic reactions.
    c. Use of molecular models and/or modeling software to explain reactivity, stability, and function.
2) Communicate understanding of organic principles
    a. In writing on exams, quizzes, and assignments.
3) Develop critical thinking skills by:

a. Appling your knowledge to new findings in chemical science.
b. Posing questions and answering question on multiple cognitive levels

4) Develop awareness of modern issues in chemistry by:
    a. Understanding the impact of organic chemistry in our daily lives and your professional development.
    b. Examining ethical issues which relate to applied organic chemistry.

Getting the most out of this class:

- Review your organic chemistry I notes and take the class reading seriously - preferable, read the whole chapter before class and solve problems after each class.

- Conduct searches after each class to find applications of the chemistry covered in class

- Solve as many problems as possible instead of memorizing. The concepts taught in class will be tested in the form of applied problems. So, solve problems to show you understand of the chemistry.

- Seek help early. Do not allow confusion on concepts to pile up

Lectures: The lectures will generally follow the textbook sequence and a lot of added materials for better understanding. Most lectures will be presented on the board. ***Attending every class and taking meaningful notes (or summaries) is incredibly important for this complex subject***. Staying up with the reading will help you to understand the lecture better and take more meaningful notes. We will solve problems during class. Working problems will be a pillar of your success in organic chemistry and by working through these together I hope to provide you with some insights and techniques on how analyze and solve organic chemistry problems.

Problems You should work as many of the text's problems as possible. The exams will focus on problems involving reactions, mechanisms and synthesis. The only way to prepare for these problems is to practice, practice, and practice. The recommended problems can be found in textbooks, in-class problems, and additional problems will be presented in class and during recitation (if applicable). These problems represent a bare minimum of problems to be completed.

The problems interspersed within the chapter will help you test your proficiency in the individual topics you read and should be solved as you review your lecture notes for the section. The end-of-chapter problems are used to pull the individual topics and concepts together. **A good strategy may be to do all of the odd-numbered problems initially, and then the even ones as part of your exam review**. Keep a dedicated notebook for all solved problems, it will come in handy for quick revision before exams.

Solving problems together can also be very helpful and I encourage you to go over solutions to problems in small groups after working the problems independently. Your

peers may have an alternate way of looking at a problem than you, which can add to your toolbox of problem-solving skills. Also, helping to teach the subject to your mates is one way to understand the material yourself.

Worksheets (WS): Worksheets are designed to help you practice standardized questions. It is essential that you complete the worksheets to assess your understanding of class material and apply your knowledge to solve challenging problems. Worksheets are worth 70 points – take them seriously.

Exams: There will be two midterm exams, worth 100 points each, and a final exam also worth 100 points. If your final exam score is higher than either midterm score, the lowest score will be switch with your final exam score. Note, every exam is equally important.

Class Summary: You are expected to submit a weekly summary, in your own words, of what you understand from all the lectures covered each the week. You should also construct a flow chart of your understanding, or of the reactions covered in class. Lastly, because the course is reaction and reagent intensive, you should include a list – in your summary – of the reagents covered in class; the reactants they transform, and the products these reagents give. Also, I expect you to build the following skill set: learn how to group reactions based on reagents and reaction conditions, know about reagents that perform similar reactions, and rank the strength of similar reagents.
One way of writing the class summary is to keep a daily summary, and then combine them at the end of the week. Note that the summary is worth 10 points each week.

Final Grade: Your final grade will be determined out of the 400 available points on exams, class summaries, and worksheets (plus all earned extra points).
There will be no makeup exams. If you miss an exam for any reason, that exam will be dropped and the final will count for 200 points. The final exam is not optional.

Grade	Range	Grade	Range
A	**100 – 94 %**	**C-**	**<74 – 70%**
A-	**<94 – 90%**	**D+**	**<70 – 67%**
B+	**<90 – 87%**	**D**	**<67 – 64%**
B	**<87 – 84%**	**D-**	**<64 – 61%**
B-	**<84 – 80%**	**F**	**<60 – 0%**
C+	**<80 – 77%**		
C	**<77 – 74%**		

Note: Final grades and percentage ranges are subject to change by the instructor

Extra Credit: If you want extra credit, keep a dedicated notebook of all your solved problems**.** This notebook can be used to negotiate 12 extra points, that is, if you have solved numerous problems including all the in-class problems and your name appears about 80% on the quiz sheet at the end of the quarter. Every lecture will have multiple quiz questions, and those that get the correct answers will write their names on the yellow quiz sheet provided in class.

Cell Phone and Electronic Device Policy:
While I understand that mobile devices have become integral to our lives, they are disruptive to the learning environment. Therefore, I request that all electronic devices be turned off (not muted) during class (that is, please don't text or Facebook during class). If an emergency arises, and you need to contact the outside world during our lecture or recitation time, I request that you quietly leave the room and conduct your conversation outside. Additionally, most all of our lectures will require far too much structural drawing for effective notes to be taken on a laptop so please leave these devices off during lecture.

Lecture and Testing Accommodations:
I will make every effort to accommodate students diagnosed with a learning disability. I will do this in complete confidence. I do, however, request that any student requiring these accommodations inform me the first day of class. For further information, please see the University Disability Services' website at http://www.du.edu/disability/dsp/index.html.

Academic Integrity:
While I advocate collaborative learning and teamwork, I also firmly believe that each individual should maintain the highest ethical standards. As such, I support and will strictly enforce the Honor Code of the University of Denver. www.du.edu/honorcode.

Honor Code Statement.
All members of the University of Denver are expected to uphold the values of *Integrity*, *Respect*, and *Responsibility*. These values embody the standards of conduct for students, staff, faculty, and administrators as members of the University community. These values are defined as:

Integrity: acting in an honest and ethical manner;
Respect: honoring differences in people, ideas, and opinions;
Responsibility: accepting ownership for one's own conduct.

Pioneer Pledge.
As a University of Denver Pioneer I pledge…

- to act with INTEGRITY and pursue academic excellence;
- to RESPECT differences in people, ideas, and opinions and;
- to accept my RESPONSIBILITY as a local and global citizen;

Because I take pride in the University of Denver I will uphold the *Honor Code* and encourage others to follow my example.

Topics to be covered: Tentative Course Schedule – Subject to Change

	Date'18	Topic/Reading	Reading	Due
Wk1	7/9	**Chemistry of Alcohol and Thiol**	Ch 10	
		Ethers, Epoxides, Glycols and Sulfides	Ch 11	
		Chemistry of Alkynes	Ch 14	
	7/13	Exam 1		*WS1&CS1*
Wk2	7/16	**Introduction to Spectroscopy** **IR and Mass Spectroscopy** **UV-Vis Spectroscopy**	Ch 12	
		Nuclear Magnetic Resonance Spectroscopy	Ch 13	
	7/20	**Exam 2 (cumulative)**		*WS2&CS2*
Wk3	7/23	**Dienes, Resonance, and Aromaticity**	Ch 15	
		Chemistry of Benzene and its Derivatives	Ch16	
	7/27	**Final Exam (cumulative)**		*WS3&CS3*

C**anvas and Class Notes:**
Most lecture information will be presented on the board, however, when PowerPoint slides are used they will be posted on Canvas. Suggested problems and worksheets will also be posted on Canvas.