



CHEM 212: Organic Chemistry II

3 Credits

Spring 2020

Syllabus

Instructor: Kathryn Luderman, PhD

Contact Information:

E-mail: kathryn.luderman@gmail.com

Virtual Office Hours: Mondays and Wednesdays 8 – 10 pm (EST) or by appointment

Method of Communication: Electronic (email or Canvas)

Course Information:

Prerequisites: Organic Chemistry I or equivalent

Course Description: This course is the second of two covering Organic Chemistry, the chemistry of carbon-based compounds. The focus of the course will be reaction mechanisms of important classes of organic molecules (aromatics, amines, carbonyl compounds, etc.) Application of organic chemistry concepts to pharmacology, biochemistry, and medicine will be highlighted throughout.

Course Website (Canvas): <https://faes.instructure.com/courses/232>

This course is held entirely online via the Canvas site above. It is where you will find the course materials, videos, quizzes, assignments, exams, announcements, and the discussion board for questions and virtual office hours. It is in your best interest to check it often.

Required Text: D Klein. Organic Chemistry, 3rd edition. ISBN: 978-1119110477

The textbook is not available at the FAES bookstore. It is available as an e-book via the Wiley website, as an e-book or loose-leaf version via Amazon, or through other 3rd party vendors.

Course Goals: When you complete the course successfully, you will be able to:

1. Draw accurate organic compound structures (Lewis structures, bond line structures, from written name)
2. Correctly name organic compounds
3. Identify compounds based on spectroscopy
4. Diagram reactions, including movement of electrons
5. Predict products from a given reaction mechanism
6. Describe classes of organic compounds

Structure of the Course:

This course is held entirely online. The class will be broken up by week, beginning Sundays at 12:01 am and ending Saturdays at 11:59 pm (all times eastern). In general, each week will have a reading assignment, a quiz, online content including videos and/or demonstrations, practice problems, and a homework assignment. There will be one midterm exam and one cumulative final exam.

- Before Beginning Online Content:
 - Complete required readings (textbook, see course schedule) to become familiar with that week's topic
 - Take the brief online quiz covering the assigned chapter reading and the previous weeks' content
- Start Online Content:
 - Online content will supplement but not replace the reading assignment
 - Your participation will be required throughout this section! This may come in the form of discussions, quizzes, or other activities. Please be prepared to participate and provide feedback for your classmates.
- After Finishing Online Content:
 - Review material covered in class
 - Completed assigned practice problems and submit online
 - Assigned practice problems are due Saturdays at 11:59 PM (eastern)
 - Reach out and ask questions or for more help if you need it
- Graded Material (see Grading Policies for more information):
 - Weekly: Reading material quizzes, online participation (discussions, problem feedback, assigned homework problems)
 - Exams: Midterm and Final

The Learning Process:

The best way to learn chemistry is to practice, make mistakes, learn from those mistakes, and practice more. We will be focusing on practicing concepts and problems during our time together. This will work best if you read and think about the assigned chapter material prior to completing the online material. Expect to spend several hours beyond the online material to read the chapter, work through in-chapter examples, and complete assigned practice problems.

Simply reading the assigned chapters and clicking through the online content will not be enough to master this material. I strongly recommend you participate fully in the class: take notes, ask and answer questions, and participate in discussions. Focus on understanding the concepts we will be discussing, not memorization.

Important Dates:

Drop deadline: Friday, February 21

Midterm Exam Due By: Saturday, March 21 at 11:59 pm (eastern)

Audit and withdrawal deadline: Friday, April 10

Final Exam Due By: Saturday, May 9 at 11:59 pm (eastern)

Communication:

Reply to email and messages via Canvas: I will reply to emails within 24 hours and often sooner

Canvas Q&A Discussion Forum: Will be checked daily,
Virtual Office Hours Tuesday and Thursday 8-10 pm

Etiquette:

- Contact me *as soon as possible* for an excused class absence (see attendance policy)
- Be courteous to your fellow classmates

Policies:

Academic Policies

This course adheres to all FAES policies described in the academic catalog and student handbook, including the Academic Integrity policy listed on page 11 of the academic catalog and student handbook. Be certain that you are knowledgeable about all of the policies listed in this syllabus, in the academic catalog and student handbook, and on the FAES website. As a student in this program, you are bound by those policies.

Copyright

All course materials are the property of FAES and are to be used for the student's individual academic purpose only. Any dissemination, copying, reproducing, modification, displaying, or transmitting of any course material for any other purpose is prohibited, will be considered misconduct, and may be cause for disciplinary action. In addition, encouraging academic dishonesty by distributing information about course materials or assignments which would give an unfair advantage to others may violate the FAES Academic Integrity policy. Course materials may not be exchanged or distributed for commercial purposes, for compensation, or for any purpose other than use by students enrolled in the course. Distributions of course materials may be subject to disciplinary action.

Guidelines for Disability Accommodations

FAES is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact Dr. Mindy Maris, Assistant Dean of Academic Programs.

Dropping the Course

Students are responsible for understanding FAES policies, procedures, and deadlines regarding dropping or withdrawing from the course or switching to audit status.

Course Policies:

- All dates on the course calendar will be followed as closely as possible but are subject to change.
- All course announcements will be sent to your email address and posted to the Canvas site

- **Attendance:**
 - You are expected to complete the online weekly modules by Saturday of the given week at 11:59 pm (eastern)
 - Be aware that by not completing the online activities, you will miss key information important for your own learning, the exams, and credit for your grade.
 - Weekly modules will open at 12:01 am on Sundays. The activities for grading will close at 11:59 pm on Saturdays, unless otherwise excused.
 - Makeup exams, quizzes, and other online activities will only be given for excused absences *with proper documentation*
 - Please contact me *as soon as possible* to arrange these
 - **This must be arranged within two weeks of the absence**
 - Examples: Illness, unanticipated circumstance, official NIH/work event, religious holiday
 - Lab work is *not* a reason for an excused absence
 - What to do if you must arrange for an absence:
 - Contact me (email, Canvas) as soon as possible.
 - Check your syllabus and the course website for required assignments
 - Please provide your proper documentation at least by the end of the week, if not sooner

Grading Policies:

- Grading Scale:
 - 100 – 90%: A
 - 89 – 80%: B
 - 79 – 70%: C
 - 69 – 60%: D
 - 59% and below: F
- There is no extra credit given in this course and no curve.
- All assignments and exams will be graded within one week of the due date
- You are responsible for checking the accuracy of your grade as posted on the course website
 - All makeup work and grade discrepancies must be addressed within 2 weeks of the due date or date the grade is posted. Please contact me with any questions.
- Grade Breakdown:
 - Class Participation: 10%
 - Quizzes: 10%
 - Homework: 20%
 - Mid-Term: 30%
 - Final Exam: 30%
- Class Participation—10%
 - *Mastering chemistry requires a lot of practice*, both in and out of class. Participating in practice questions and problems will only help you

- Each week you will need to submit answers to ungraded practice problem(s) and participate in a discussion with your classmates via the Canvas site regarding the problem(s)
- Participation points will be awarded following this rubric, per practice problem:
 - No submission, No discussion posts: Zero Points
 - Submission of either a solution or a discussion post: 1 Point
 - Submission of a solution and a discussion post: 2 Points
 - Submission of a solution and multiple discussion posts: 3 points
 - Submission of a solution and multiple, substantive discussion posts: 4 points
- Quizzes—10%
 - A brief quiz will assess your comprehension of the reading material. This quiz must be completed before accessing the rest of the week's content.
 - Quizzes will be based on the reading assignments and on material covered in past lectures
 - Make-up quizzes, etc. will only be given for excused absences (see Attendance Policy)
 - Your two lowest quiz scores will be dropped
- Homework—20%
 - Assignments will cover the chapter being discussed that week in class
 - Submit assignments online. Due Friday at 11:59 pm
- Exams—30% each for the midterm and final exam
 - The exams will test your comprehension and understanding of the course material. Be prepared for multiple choice, short and long answer type questions.
 - The midterm exam will be held the week of March 15, closing Friday March 21 at 11:59 pm (eastern)
 - The final exam will be held the week of May 3, closing Friday May 9 at 11:59 pm (eastern).
 - This exam will be comprehensive.
 - Make up exams will only be given for excused absences (see Attendance Policy)
 - If you need accommodations for an exam, please see me *as soon as possible*

Course Schedule:

- This is the course schedule we will follow.
- Any changes will be announced in class and via the course website and email.
- Please read the assigned chapter(s) *before* starting the online content

Week	Module Open Date	Topic(s)	Chapter Reading Assignment
1	2/3	Organic Chemistry I Review	
2	2/9	Infrared Spectroscopy and Mass Spectroscopy; Nuclear Magnetic Resonance Spectroscopy	14, 15
3	2/16	Conjugated Unsaturated Systems and Pericyclic Reactions	16
4	2/23	Aromatic Compounds	17
5	3/1	Aromatic Substitution Reaction	18
6	3/8	Aldehydes and Ketones	19
7	3/15	Midterm Exam	
8	3/22	Carboxylic Acids and Their Derivatives	20
9	3/29	Alpha Carbon Chemistry: Enols and Enolates, Part I	21
10	4/5	Alpha Carbon Chemistry: Enols and Enolates, Part II	21
11	4/12	Amines	22
12	4/19	Carbohydrates; Amino Acids, Peptides, and Proteins	24, 25
13	4/26	Real World Examples	
14	5/3	Final Exam	