

CHM2210 – Organic Chemistry I

Instructor: Dr. Laura Peterson
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Sections: O102(11193) and O105(11196)

Contact: Canvas message only ([how-to](#))
Allow up to 48 hours for a response, not counting weekends and holidays.

Course Information

Course Objectives: At the end of the semester, students will be able to recognize common organic functional groups and name organic molecules using IUPAC nomenclature rules, correlate molecular structure and properties, draw basic reaction mechanisms and use them to account for/predict the products or starting materials of reactions (addition, substitution, and elimination reactions of alkenes, alkynes, alkanes, alkyl halides, alcohols, ethers and epoxides), and propose multistep syntheses for organic molecules.

Prerequisites: CHM 2046 or CHM 2096 or CHM 2047 or CHM 2051

Classroom: Flint 50 ([map](#), [pictures and information](#) – remote option available, see Canvas)

Meeting Times: class #11193: MWF 4th period (10:40 AM–11:30 AM)
class #11196: T 4th period (10:40 AM–11:30 AM);
R 4-5th period (10:40 AM–12:35 PM)

Required:

Textbook: Brown, Iverson, Anslyn and Foote, Organic Chemistry, 8th Edition (physical copy or eBook, Cengage Learning; ISBN: 978-1305580350).

ALEKS Prep for Organic Chemistry: 11-week access code (McGraw Hill, ISBN: 978-1259664427).

Recommended:

Study Guide: Iverson, Organic Chemistry, Student Study Guide and Solutions Manual, 8th Edition (Cengage Learning, ISBN: 978-1305864504).

Molecular Model Set: A molecular model set is highly recommended. Links to specific modeling kits can be found on the E-Learning website.

Purchasing Options: This course is participating in UF All Access, the least expensive and fastest way to get access to your course materials for the semester. Please visit the Bookstore All Access Site to opt-in and purchase your required Connect code, which will provide access to the eBook and solutions manual of the Brown text.

E-Learning Website: All students will have access to the e-Learning website (Canvas): <https://elearning.ufl.edu/>. You will login with your GatorLink account username and password. General course information, lecture videos, important announcements, office hours, handouts, exam keys, and practice problems will be posted here. It is your responsibility to check Canvas often to make sure that you do not miss important announcements and to ensure that your gradebook is accurate. For computer assistance, visit <http://helpdesk.ufl.edu/>.

Computer Recommendations: Reliable access to a computer and the internet is recommended for this course. A student's computer configuration should include the: a video card capable of showing typical web-based video content (preferably in HD), speakers and a microphone or headphones with built-in microphone, webcam, broadband connection to the internet and related equipment (Cable/DSL modem),

Microsoft Office Suite installed ([provided by the university](#)) and a PDF viewer (e.g. Adobe Reader). You can find hardware recommendations [here](#).

Office Hours:

Dr. Peterson: Mondays and Wednesdays 12:30 PM–1:30 PM, Tuesdays 11:45 AM–1:30 PM.

Undergraduate TAs' (UGTA) Office Hours: schedule posted to Canvas.

The office hour schedule is subject to change. Some office hours will be held in person (Sisler Hall 340, CCB 203), and some via Zoom. Current office hour schedule and individual links to Zoom office hours will be posted to Canvas.

Recording Notice: Class meetings may be audio-visually recorded. Recordings will generally capture the lecture board and view of the instructor podium. Students who step into this space consent to being audio-visually recorded; students who participate orally are agreeing to have their voices recorded.

Assignments and Grading

Your grade will be based on the following items:

Syllabus Quiz	1%
ALEKS Prep Course:	3%
Four (4) Progress Exams:	70% (17.5% each)
Cumulative Final Exam:	26%
TOTAL:	100%

Your grade will be calculated based on the following grading scale:

A: 92-100	A-: 90-91.99		
B+: 87-89.99	B: 82-86.99	B-: 79-81.99	
C+: 75-78.99	C: 65-74.99	C-: 60-64.99	
D+: 55-59.99	D: 50-54.99	D-: 45-49.99	E: <45

The instructors reserve the right to change the grading scale at any point during the semester.

Grades will be assigned in accordance with University policy: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>.

Syllabus Quiz: An open-syllabus quiz will be given over the first two weeks of class via Canvas quizzes. The quiz will open on the first day of class (8/23/2021) and will be due on 9/5/2021 at 11:59 PM. You will be allowed unlimited attempts and unlimited time on this quiz.

ALEKS: You must complete 100% of the ALEKS Prep course by 9/10/2021 (11:59 PM) to receive full credit for this assignment (3% of the final grade). Students who complete less than 100% by 9/10/2021 will receive zero (0) points; there will be no partial credit for the ALEKS assignment.

Progress Exams: There will be four (4) 100-point progress exams given on campus in assembly (8:20 PM–9:50 PM). Progress exams will be cumulative but will emphasize material covered following the previous exam. Exam dates are listed in the course schedule(s) at the end of this syllabus.

Final Exam: A cumulative final exam will be given on Saturday, Dec. 11, 2021 (8:00 PM–10:00 PM).

Exam Absence Policy: This course administers all conflicts with scheduled exams in accord with the University policy (<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>). University recognized conflicts include, but are not limited to, religious observances, participation in official university activities, military obligations, and court-imposed legal obligations. Students will be given the opportunity to take a *conflict exam*, which will be given shortly *before* the scheduled exam provided that the conflict

is a) properly documented and b) disclosed to the Instructor **at least one week before** the scheduled exam.

Unpredicted Absences due to medical or sudden family emergencies are not covered under the above conflict exam policy. A student who is absent for an exam due to one of the reasons listed above must contact the instructor as soon as they are able, and must submit documentation to the Dean of Students Office (<https://care.dso.ufl.edu/instructor-notifications/>). Once the instructor is satisfied with the validity of the documentation, a make-up exam will be scheduled after a reasonable amount of time, *i.e.*, before the end of the semester. If the student's documentation is deemed insufficient to excuse the absence, a score of zero will be assigned for the missed exam. Exams missed without any documentation will be assigned a score of zero.

Exam Regrades: If you have a question concerning the grading of an exam, you may submit it for regrading. Once submitted, the **entire exam** will be regraded to ensure accuracy, and your score may increase or decrease accordingly. All regrade requests must be submitted in writing to Dr. Peterson by the student no later than 5 school days after the date that the exams are returned to the class. Staple the cover sheet (regrade request form) provided on Canvas to the exam and briefly describe the perceived grading error. Questions regarding grades/grading are not accepted by email or Canvas message. Please note that your exams may be photocopied prior to being returned to you.

Other Information and Policies

Practice Problems: Practice problems will be assigned from the questions at the end of each chapter (EOC) and instructor worksheets/workbook. These homework assignments will not be collected or graded. However, completion and understanding of the practice problems will be of critical importance to succeeding in this course. Do not turn to the solutions manual immediately! Understanding a given solution does not teach you any problem-solving skills. Keep up with the course and you will be in good shape. Try and allow at least 2 hours **per day** (6 days a week) to study, work the problems and read the book chapters.

Questions? Just Ask! This term we will be using *Piazza* for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, TAs, and instructors. You can even ask questions anonymously! Do not send questions *via* email or Canvas message. If you have any problems or feedback for the developers, email team@piazza.com.

You can find a link to our Piazza class page on the e-Learning website.

Contacting the Instructor/Office Hours: Canvas messages are for administrative purposes only, and *not for distance-instruction*. All academic inquiries must be made during office hours or on Piazza (see below). Be prepared before attending office hours, bring specific questions and your previous work. Questions about grades will not be discussed during office hours due to privacy regulations.

For private or grade-related questions, direct your questions directly to the instructor using the Canvas message function. **Do not email outside of Canvas to your instructor's email**; you will be asked to resend the query through Canvas.

Attendance and Classroom Etiquette: Although attendance will not be taken, students are expected to come to class and be there on time. Please be respectful of others and adjust your cell phone so that it does not ring during class. If you arrive late on exam days you will not be given additional time.

Netiquette: All members of the class are expected to follow [rules](#) of common courtesy in all email messages, threaded discussions, and chats. When attending Zoom meetings, please come prepared. Mute your audio whenever you are not speaking. Be presentable: clothing is not optional. Make sure not to show any personally identifiable information and/or other items that you do not wish others to see. Let others finish what they are saying and only speak when it is your turn. Be present: you can check your

email and work on other tasks after the meeting. Turn off all notifications and make sure your cell phone does not ring.

Advising Issues: Visit or contact one of the chemistry undergraduate advisors.

Website: <https://www.chem.ufl.edu/undergraduate/advising/>

Email: advising@chem.ufl.edu

Accommodations for Students with Disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://disability.ufl.edu/>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodations.

U Matter, We Care: Your well-being is important to the University of Florida. The U Matter, We Care initiative (<http://www.umatter.ufl.edu/>) is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Faculty Evaluations: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

In-Class Recording: Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Copyright Notice: All handouts used in this course are copyrighted and may not be copied without the instructors' expressly granted permission. 'Handouts' include all materials generated for this class, which include but are not limited to syllabi, exams, problems, in-class materials, review sheets, problem sets, or other materials. Tutors and tutoring services are expressly forbidden from copying any or all of these materials without prior written permission. Only students currently enrolled in the class may make a single copy of this material for their personal use.

The UF Student Honor Code

UF students are bound by The Honor Pledge which states:

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Honor Code violations include, but are not limited to, copying on an exam (or helping another student to copy), submitting someone else's work as your own, having another person complete assignments for you, and unauthorized collaboration.

Any student found responsible for an academic honesty violation will receive a zero (0) for the compromised exam or assignment.

The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. [Click here to read both the Honor Code and the Conduct Code](#). If you have any questions or concerns, please consult with the instructor.

Tentative Course Schedule – Class #11193 (MWF)

Date	Chapter(s): Topics
M, 8/23	Introduction
W, 8/25	1: Line-Angle Formulas, Functional Groups
F, 8/27	1: Resonance
M, 8/30	1: Intro to MO Theory
W, 9/1	1: Hybridization, Hybridization for Atoms with Lone Pairs
F, 9/3	4: Conjugate Acid-Base Pairs, Brønsted-Lowry Bases, Acid Strength, Acid-Base Equilibria
M, 9/6	Holiday (no class)
W, 9/8	4: Mechanisms of Acid-Base Reactions, Factors Affecting Acid Strength, Lewis Acids and Bases
F, 9/10	Exam #1 (Chapters 1 and 4) – no class
M, 9/13	2: Alkane Intro and Nomenclature, Structural Isomers
W, 9/15	2: Conformational Analysis of Alkanes
F, 9/17	2: Intro to Cycloalkanes, Cycloalkane Nomenclature
M, 9/20	2: Conformational Analysis of Cycloalkanes
W, 9/22	3: The Concept of Chirality, Chiral Atoms and Molecules, Types of Stereoisomers
F, 9/24	3: Naming Chiral Centers (Assigning <i>R/S</i>), CIP Rules, Acyclic Molecules with 2 Stereocenters
M, 9/27	3: Acyclic Molecules: <i>meso</i> Compounds, Fischer Projections
W, 9/29	3: Cyclic Molecules with 2 Stereocenters, Optical Activity, Enantiomeric Excess, Resolution
F, 10/1	Review
M, 10/4	Exam #2 (Chapters 2 and 3) – no class
W, 10/6	5: Alkene Intro and Nomenclature, Alkene Reactions Primer
F, 10/8	Homecoming (no class)
M, 10/11	6: Addition of Hydrogen Halides to Alkenes, Carbocation Stability
W, 10/13	6: Regioselectivity and Stereochemistry of Hydrohalogenation, Carbocation Rearrangements
F, 10/15	6: Acid-Catalyzed Hydration, Addition of X ₂ to Cyclic Alkenes
M, 10/18	6: Addition of X ₂ to Acyclic Alkenes, Halohydrin Formation (Addition of HOX to Alkenes)
W, 10/20	6: Oxymercuration-Reduction, Hydroboration-Oxidation
F, 10/22	6: Oxidation, Reduction and Stability of Alkenes
M, 10/25	7 Alkyne Intro and Nomenclature, Acidity and Alkylation of 1-Alkynes, Alkynes from Alkenes
W, 10/27	8 Electrophilic Addition to Alkynes, Hydration and Reduction of Alkynes, Organic Synthesis
F, 10/29	Review, Synthesis Examples
M, 11/1	Exam #3 (Chapters 5–7) – no class
W, 11/3	8: Structure of Haloalkanes, Regioselectivity and Energetics of Free Radical Halogenation
F, 11/5	8: Radical Mechanism, Energetics of Chain Propagation Steps, Hammond's Postulate
M, 11/8	8: Allylic Bromination, Radical Addition of HBr to Alkenes 9: Overview of Substitution and Elimination
W, 11/10	9: S _N 2 Intro, Mechanism and Details
F, 11/12	(no class)
M, 11/15	9: S _N 1 Reaction, E1 Reaction, E2 Reaction
W, 11/17	9: Stereochemistry of E2 Reaction, Examples (S _N 2/E1/S _N 2/E2)
F, 11/19	10: Alcohol Intro and Nomenclature, Alkoxide Formation, Conversion to Alkyl Halides
M, 11/22	10: Formation of Alkyl/Aryl Sulfonates, Acid-Cat. Dehydration, Pinacol Rearrangement, Oxidation
W, 11/24	Holiday (no class)
F, 11/26	Holiday (no class)
M, 11/29	Review, Synthesis Examples
T, 11/30	Exam #4 (Chapters 8–10) – no class
W, 12/1	(no class)
F, 12/3	11: Ether Structure and Nomenclature, Preparation and Reactions
M, 12/6	11: Preparation and Reactions of Epoxides
W, 12/8	(no class)
F, 12/10	Reading Day (no class)
S, 12/11	Cumulative Final Exam (Chapters 1–11)

Tentative Course Schedule – Class #11196 (TRR)

Date	Chapter(s): Topics
T, 8/24	Introduction
R, 8/26	1: Line-Angle Formulas, Functional Groups 1: Resonance
T, 8/31	1: Intro to MO Theory
R, 9/2	1: Hybridization, Hybridization for Atoms with Lone Pairs 4: Conjugate Acid-Base Pairs, Brønsted-Lowry Bases, Acid Strength, Acid-Base Equilibria
T, 9/7	4: Mechanisms of Acid-Base Reactions, Factors Affecting Acid Strength, Lewis Acids and Bases
R, 9/9	(no class)
F, 9/10	Exam #1 (Chapters 1 and 4)
T, 9/14	2: Alkane Intro and Nomenclature, Structural Isomers
R, 9/16	2: Conformational Analysis of Alkanes 2: Intro to Cycloalkanes, Cycloalkane Nomenclature
T, 9/21	2: Conformational Analysis of Cycloalkanes
R, 9/23	3: The Concept of Chirality, Chiral Atoms and Molecules, Types of Stereoisomers 3: Naming Chiral Centers (Assigning <i>R/S</i>), CIP Rules, Acyclic Molecules with 2 Stereocenters
T, 9/28	3: Acyclic Molecules: <i>meso</i> Compounds, Fischer Projections
R, 9/30	3: Cyclic Molecules with 2 Stereocenters, Optical Activity, Enantiomeric Excess, Resolution Review
M, 10/4	Exam #2 (Chapters 2 and 3)
T, 10/5	(no class)
R, 10/7*	5: Alkene Intro and Nomenclature, Alkene Reactions Primer
T, 10/12	6: Addition of Hydrogen Halides to Alkenes, Carbocation Stability
R, 10/14	6: Regioselectivity and Stereochemistry of Hydrohalogenation, Carbocation Rearrangements 6: Acid-Catalyzed Hydration, Addition of X ₂ to Cyclic Alkenes
T, 10/19	6: Addition of X ₂ to Acyclic Alkenes, Halohydrin Formation (Addition of HOX to Alkenes)
R, 10/21	6: Oxymercuration-Reduction, Hydroboration-Oxidation 6: Oxidation, Reduction and Stability of Alkenes
T, 10/26	7: Alkyne Intro and Nomenclature, Acidity and Alkylation of 1-Alkynes, Alkynes from Alkenes
R, 10/28	8: Electrophilic Addition to Alkynes, Hydration and Reduction of Alkynes, Organic Synthesis Review, Synthesis Examples
M, 11/1	Exam #3 (Chapters 5–7)
T, 11/2	(no class)
R, 11/4	8: Structure of Haloalkanes, Regioselectivity and Energetics of Free Radical Halogenation 8: Radical Mechanism, Energetics of Chain Propagation Steps, Hammond's Postulate
T, 11/9	8: Allylic Bromination, Radical Addition of HBr to Alkenes
R, 11/11	Holiday (no class)
Video Lecture	9: Overview of Substitution and Elimination, S _N 2 Intro, Mechanism and Details
T, 11/16	9: S _N 1 Reaction, E1 Reaction, E2 Reaction
R, 11/18	9: Stereochemistry of E2 Reaction, Examples (S _N 2/E1/S _N 2/E2) 10: Alcohol Intro and Nomenclature, Alkoxide Formation, Conversion to Alkyl Halides
T, 11/23	10: Formation of Alkyl/Aryl Sulfonates, Acid-Cat. Dehydration, Pinacol Rearrangement, Oxidation
R, 11/25	Holiday (no class)
T, 11/30	Exam #4 (Chapters 8–10) – no class
R, 12/2*	11: Ether Structure and Nomenclature, Preparation and Reactions
T, 12/7	11: Preparation and Reactions of Epoxides
R, 12/9	Reading Day (no class)
S, 12/11	Cumulative Final Exam (Chapters 1–11)

*4th period only.