

Introduction to Organic Chemistry
Chemistry 042 / 044
Spring 2021

Instructor: Adam Whalley, Ph.D.

Office: Innovation E336

Office Hours: MWF 11 – 12 or by appointment

Email: Adam.Whalley@uvm.edu

Lecture: MWF 9:40 – 10:30 am via Teams

Exam Period: W 6:40 – 9:40 pm

Course Objective

My goal is that by the end of this course a successful student will have developed an understanding of the basic principles of organic chemistry, including:

- bonding
- hybridization
- resonance theory
- isomerism
- conformations of cyclic and acyclic alkanes
- stereoisomerism
- chirality
- nomenclature, reactions, and mechanisms of functional groups

Students that can combine these skills will be the most successful, as this skillset will allow them to communicate with scientists in many other fields.

Lecture Format

Lectures will be held live on Microsoft Teams. I will be using a whiteboard application to write notes during lecture. There will be no PowerPoint slides, I do not find that they are conducive to learning organic chemistry. It is highly recommended that you write your notes in a notebook while following the lecture live. That being said, notes will be posted on the blackboard site daily following class. Similarly, I will be recording the lectures in Teams and these will be posted on the Teams site. Please do not record the lectures yourself.

To avoid bandwidth issues, I would appreciate if students could mute their microphone and video during lecture. I will be monitoring the chat on a separate device to answer any questions that arise during lecture. Feel free to ask questions within the chat on Teams, or for more complicated questions, students may turn on their microphone (and video if desired) after being acknowledged while “raising their hand” within Teams.

Required Materials

Text

“*Organic Chemistry: A Short Course*” 13th Edition; Hart, Hadad, Craine, Hart

Software

Microsoft Teams, available at <https://www.uvm.edu/it/kb/article/teams/>

Online Component

We will be using the Top Hat (www.tophat.com) learning platform for homework quizzes.

You can visit the Top Hat Overview (<https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide>) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system.

An email invitation will be sent to you by email, but if don't receive this email, you can register by simply visiting our course website: <https://app.tophat.com/e/566134>

*Our Course Join Code is 566134.

Top Hat may require a paid subscription, and a full breakdown of all subscription options available can be found here: www.tophat.com/pricing.

Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email (support@tophat.com), the in app support button, or by calling 1-888-663-5491.

Optional Materials

Molecular Structure Model Kit (very helpful for visualizing 3D structures)

Grading Breakdown

Online Quizzes	Best 10 of 11 @ 10 points each	100 points	12.5%
Midterm Exams	3 @ 100 points each	300 points	37.5%
Laboratory	10 experiments	200 points	25%
Final Exam	Comprehensive	200 points	25%
Total		800 points	100%

*CHEM 044 students will not have a lab component to their grade so will be graded out of 600 points

Online Quizzes

Once the material for each chapter is completed an online quiz will be available on Top Hat. There will be 11 of these quizzes and your top 10 scores will be counted. You will have five days to complete each quiz and each quiz will only take about 20 minutes so no excuses will be accepted for not completing a quiz. If you do not complete a quiz you will receive a grade of zero.

Midterm Exams

There will be three midterm exams given throughout the semester. The exams will tentatively take place on:

Exam 1: March 3, 2021

Exam 2: April 7, 2021

Exam 3: April 28, 2021

The material that will be covered for these exams is provided in a table at the end of this document. The grade that you receive on your final exam can be used to replace your worst midterm exam.

Any conflicts with an exam date or time **must be** resolved a week in advance. Alternate exam times must be prior to scheduled exam time, no late exams, no exceptions.

Review Sessions

I will hold review sessions in the exam block (Wednesday 6:40pm) in the week prior to each midterm exam on Microsoft Teams. These sessions provide an opportunity for you to ask any questions that may have come up while studying for the exam. Attendance is optional but highly recommended.

Laboratory

All experiments as individual PDFs will be posted on your lab section's blackboard website. You are responsible for printing out each one and bringing it with you to lab.

A carbon-less copy notebook is required. You can find these in the UVM bookstore.

Everyone must wear OSHA approved safety glasses or goggles while in the lab. Students not observing this rule will receive a zero for the experiment, warnings will not be given. Safety eyewear can be purchased at the UVM bookstore or at the Stockroom in Discovery.

Final Exam

Your final exam date / time will be announced in class and on blackboard as soon as it is posted by the registrar. The final exam will be cumulative.

Course Etiquette

Organic chemistry has a scary reputation. It is best thought of as a new language or skill. As with any skill some people can become skillful faster than others. All of you are capable of successfully completing this course with the right attitude and determination.

Recommendations:

1. Attend lecture with a clear and inquisitive attitude.
2. While in lecture focus on understanding the material. Do NOT text, read reddit, or check your email. This is a waste of your time and money. I know everyone gets distracted at times but fight the urge!
3. After class review the material and read the sections in the textbook. Try the textbook problems and schedule a time to talk to me with any problems you are unable to solve.
4. All course materials (both yours and mine) are protected by copyright. I cannot copy or post your written material and you cannot post any course materials such as blanks of the exam, reviews or notes online. Lectures may not be recorded without permission.
5. All students are expected to honor the UVM codes of conduct and academic integrity.
6. Work hard and have fun!

Accommodations

Student Learning Accommodations Statement

"In keeping with the University policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. ACCESS works with students to create reasonable and appropriate accommodations via an accommodation letter to their professors as early as possible each semester." Contact ACCESS: A170 Living/Learning Center; 802-656-7753; access@uvm.edu

Policy on disability certification and student support

<http://www.uvm.edu/~uvmppg/ppg/student/disability.pdf>

Academic Integrity

Any issues adhering to plagiarism, fabrication, cheating, or collusion will be subject to the following policy.

<http://www.uvm.edu/policies/student/acaintegrity.pdf>

Code of Student Rights and Responsibilities

<http://www.uvm.edu/policies/student/studentcode.pdf>

Center for Health and Wellbeing

<http://www.uvm.edu/~chwb/>

Counseling and Psychiatry Services (CAPS)

<http://www.uvm.edu/~chwb/psych/>

If you are concerned about a UVM community member or a specific event, we encourage you to contact the Dean of Students Office at 802-656-3380.

If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at:

<http://www.uvm.edu/~saffair>

The Green and Gold Promise

The Green and Gold Promise clearly articulates the expectations that UVM has for students, faculty, and staff to remain compliant with all COVID-19 recommendations from the CDC, the State of Vermont, and the City of

Burlington. The Code of Student Conduct outlines the policies related to violations of the Green and Gold Promise. Sanctions for violations include fines, educational sanctions, parent notification, probation, and suspension.

Tentative Course Schedule

Dates	Chapter(s)	Assignments
2/01 – 2/08	1 – Bonding and Isomerism	Quiz 1 (Top Hat) Homework: Chapter 1 end of chapter problems
2/10 – 2/15	2 – Alkanes and Cycloalkanes	Quiz 2 (Top Hat) Homework: Chapter 2 end of chapter problems
2/17 – 2/24	3 – Alkenes and Alkynes	Quiz 3 (Top Hat) Homework: Chapter 3 end of chapter problems
3/03	1 – 3	Exam 1 (6:40 – 9:40pm)
2/26 – 3/05	4 – Aromatics	Quiz 4 (Top Hat) Homework: Chapter 4 end of chapter problems
3/08 – 3/15	5 – Stereoisomerism	Quiz 5 (Top Hat) Homework: Chapter 5 end of chapter problems
3/17 – 3/31	6 – Nucleophilic Substitution and Elimination Reactions	Quiz 6 (Top Hat) Homework: Chapter 6 end of chapter problems
4/07	4 – 6	Exam 2 (6:40 – 9:40pm)
4/02 – 4/07	7 – Alcohols, Phenols, and Thiols	Quiz 7 (Top Hat) Homework: Chapter 7 end of chapter problems
4/09 – 4/16	8 – Ethers and Epoxides	Quiz 8 (Top Hat) Homework: Chapter 8 end of chapter problems
4/19 – 4/23	9 – Ketones and Aldehydes	Quiz 9 (Top Hat) Homework: Chapter 9 end of chapter problems
4/28	7 – 9	Exam 3 (6:40 – 9:40pm)
4/26 – 5/03	10 – Carboxylic Acids and Derivatives	Quiz 10 (Top Hat) Homework: Chapter 10 end of chapter problems
5/05 – 5/10	11 – Amines, Amides, and other N-containing Compounds	Quiz 11 (Top Hat) Homework: Chapter 11 end of chapter problems