

CHEM 3381 Organic II Majors Lab Syllabus, Fall 2021

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Requirements for Covid-19

As a matter of public health and safety due to the pandemic, all members of the CU Boulder community and all visitors to campus must follow university, department and building requirements and all public health orders in place to reduce the risk of spreading infectious disease. Students who fail to adhere to these requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policy on classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please follow the steps in the "Accommodation for Disabilities" statement on this syllabus.

As of Aug. 13, 2021, CU Boulder has returned to requiring masks in classrooms and laboratories regardless of vaccination status. This requirement is a temporary precaution during the delta surge to supplement CU Boulder's COVID-19 vaccine requirement. Exemptions include individuals who cannot medically tolerate a face covering, as well as those who are hearing-impaired or otherwise disabled or who are communicating with someone who is hearing-impaired or otherwise disabled and where the ability to see the mouth is essential to communication. If you qualify for a mask-related accommodation, please follow the steps in the "Accommodation for Disabilities" statement on this syllabus. In addition, vaccinated instructional faculty who are engaged in an indoor instructional activity and are separated by at least 6 feet from the nearest person are exempt from wearing masks if they so choose.

Students who have tested positive for COVID-19, have symptoms of COVID-19, or have had close contact with someone who has tested positive for or had symptoms of COVID-19 must stay home. In this class, if you are sick or quarantined, you may request an excused absence from your TA for up to 2 experiments. In this case, the entire experiment will be dropped from your grade, and your grade will be out of fewer points. In addition, if you're enrolled in an in-person section, you may choose to perform up to 2 additional experiments remotely. (If CU requires all classes to be held remotely for any part of the semester, these will not count against your limit of 2 remote experiments. Also, the first and last meeting for the semester will be remote, and these will also not count against you.) Note that this does not apply to the Multistep Synthesis Project. Performing an experiment remotely will involve watching a 10–15-minute video of a TA performing the lab, then writing up a lab report based on the TA's data.

List of Sections

Section	Day	Time	Location	TA	TA Email
401	TR	10:20 AM-1:10 PM	EKLC M1B35	Shaofeng Huang	Shaofeng.Huang@colorado.edu

Experiment Schedule

Dates	#	Experiment
Tue Aug 24		No labs
Thu Aug 26		Syllabus & NMR review (remote)
Tue Aug 31	7	Check-In & Recrystallization
Thu Sep 2	8	Distillation
Tue Sep 7	27	Advanced Spectroscopy
Thu Sep 9	28	Chemical Literature
Tue Sep 14	29	Computational Chemistry
Thu Sep 16	13	Oxidation of Alcohols
Tue Sep 21	14	Epoxidation of Cholesterol

Thu Sep 23	17	Microscale Column Chromatography
Tue Sep 28	15	Diels-Alder Reaction
Thu Sep 30	18	Identification of Unknowns day 1
Tue Oct 5	18	Identification of Unknowns day 2
Thu Oct 7	16	Electrophilic Aromatic Substitution
Tue Oct 12	31	Large-Scale Column Chromatography
Thu Oct 14	19	Reduction of Ketones
Tue Oct 19	20	Wittig Reaction (Start preparing for Multistep Synthesis Projects)
Thu Oct 21	21	Grignard Dyes (Prepare for Grubbs)
Tue Oct 26	36	Grubbs Metathesis (Project proposal & materials request due)
Thu Oct 28	37	Palladium Coupling
Tue Nov 2	22	Liquid Crystals
Thu Nov 4	23	Fischer Esterification
Tue Nov 9	42	Multistep Synthesis Project, day 1
Thu Nov 11	42	Multistep Synthesis Project, day 2
Tue Nov 16	42	Multistep Synthesis Project, day 3
Thu Nov 18	42	Multistep Synthesis Project, day 4
Tue Nov 23		No labs
Thu Nov 25		No labs
Tue Nov 30	42	Multistep Synthesis Project, day 5
Thu Dec 2	42	Multistep Synthesis Project, day 6
Tue Dec 7	42	Multistep Synthesis Presentations; checkout
Thu Dec 9		Final quiz (remote)

Canvas: This course will use Canvas, which can be accessed at canvas.colorado.edu. All assignments will be handled through Canvas in order to minimize transmission risk through paperwork. Grades will be posted here, as well as a complete list of assignments and the points value for each. You can check the grades of individual items against your own records to make sure they're correct, but your course total might not reflect any excused absences or curves.

Your due dates for assignments will be set based on your lab section; most assignments are due at either the start of the end of your scheduled lab period. If you switch sections at any point, Canvas might not update your due dates properly. In this case, you are responsible for contacting OIThelp@colorado.edu, letting them know which section you have recently swapped into, and asking them to update your due dates in Canvas. Any late penalties you incur due to incorrect due dates will not be removed except in extenuating circumstances.

Quizzes: Quizzes cover assigned reading, procedures, and Experiment Manual study questions. They are due on Canvas at the starting time for your lab, but you can complete them at any point before then. The study questions from the Experiment Manual are designed to help you prepare for the quizzes, and they have answers posted on the course website. You don't need to turn in the answers to study questions in your lab reports but they are helpful for studying.

Regrades: Please keep all of the graded work that is returned to you so that it can be checked in the case of a discrepancy with your TA's grade records. If you notice a missing or erroneous grade on a quiz or lab, you must bring it to your TA's attention within two lab periods of the graded document being returned to the class, whether you are there to receive it or not. After this point, no regrades will be accepted.

Late work: If you turn in any item late, you will lose 10% of the maximum possible points per day or partial day. For instance, a 20-point assignment will have 2 points deducted for each day that it is late. In order to submit final grades on time, no late work will be accepted after the final quiz is due for the course.

Curving: At the end of the semester, if the average grade for your lab section (excluding the students who have at least one zero grade) is below 85%, the average will be curved up to 85%. There is no guaranteed number of A grades, B grades, etc. per section. Your final letter grade will be based on the following standard scale: 93% and up is an A, 90-92.99% is an A-, etc. Grades near a cutoff will not be bumped up except in extenuating circumstances, at the discretion of the Lab Director.

Course Policies

Lab Safety Rules: You are required to follow the lab safety rules at all times or risk being expelled from the lab for the day and taking an unexcused absence. These rules are given in Chapter 1 of the Lab Handbook; additional rules will be explained by your TA.

Lab Drawers: You are accountable for the contents of your lab drawer throughout the semester. Further information is given on the lab drawer check-in sheet you will use during the first lab session.

Pregnancy and Chemical Exposure Notice: Pregnant students should be aware that there are risks associated with the development of the embryo and fetus from exposure to certain chemicals. Likewise, students with certain medical conditions could also experience an adverse effect from exposure to chemicals. The Department of Chemistry recommends that you discuss the Organic Chemistry chemical list, procedures, and required safety precautions with your physician. The Department of Chemistry will work with you to discuss possible options regarding meeting the requirements of the course. Please contact the instructor of your course to discuss these options and any questions you may have.

Required Texts and Supplies:

- Approved safety goggles and lab coat (if in an in-person lab section)
- Organic chemistry model set

To make them more available to students who are remote, the lab manual and handbook will be available as PDFs in Canvas, so you won't need to purchase them. Also, since all lab reports will be turned in as PDFs in Canvas, you do not need to record your experimental observations in a carbon-copy lab notebook; any notebook will work.

Organic modeling kits from various different manufacturers are available for lower cost online, but whichever kit you purchase, you should make sure it has at least 10–15 carbon atoms (they are usually the ones made of black plastic).

Prerequisites and Corequisites: Students enrolled in CHEM 3381 must also be enrolled in CHEM 3331 or 3471, or BCHM 3491, unless they have already passed one of these courses. They must also have passed both Organic Chemistry 1 lab and lecture (either majors or nonmajors), with a grade of C– or better in both courses. Failure to meet this requirement will result in being administratively dropped from the course. Exceptions will be determined by the Lab Director.

Add/Drop: Students who do not attend the first laboratory session may be automatically dropped from the lab or the lecture to make room for people on the wait list. It is your responsibility to know your schedule and to make changes accordingly. Information regarding drop/add deadlines can be found at <http://www.colorado.edu/registrar/students/academic-calendar/registration-calendar>.

Email Policy: Announcements from your TA or Lab Director will occasionally be sent to your official CU email address, via the roster emailing system, or through Canvas announcements. It is your responsibility to check your CU email account and Canvas frequently. You may set up email forwarding from your CU account to another email address if you prefer, but you do so at your own risk. If you suspect your email account is not working properly, you must contact CU's tech support at help@colorado.edu and make sure it is in order. Missed email will not be considered a valid excuse for missing or incorrect assignments. See the [Student Email Policy](#) for more details.

Classroom Behavior: Both students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote or online. Those who fail to adhere to such behavioral standards

may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. For more information, see the policies on [classroom behavior](#) and the [Student Conduct & Conflict Resolution policies](#).

Accommodation for Disabilities: If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

Preferred Student Names and Pronouns: CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

Honor Code: All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu); 303-492-5550). Students found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation: The University of Colorado Boulder (CU Boulder) is committed to fostering an inclusive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, or protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#). Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, dating and domestic violence, stalking, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

Religious Holidays: Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, absences for religious reasons will be handled the same way as any other excused absence. See the [campus policy regarding religious observances](#) for full details.