

CHEM 3361 Organic I Majors Lab Syllabus, Spring 2020

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Experiment Schedule

Days	#	Experiment
Tue Jan 14	1	Check-in/Lab Safety & IR Spectroscopy
Thu Jan 16	2	NMR Spectroscopy
Tue Jan 21	3	Modeling Conformations, ChemDraw & Excel
Thu Jan 23	4	Practical NMR
Tue Jan 28	5	Thin Layer Chromatography and Melting Point
Thu Jan 30	6	Extraction
Tue Feb 4	7	Recrystallization
Thu Feb 6	8	Distillation
Tue Feb 11	17	Microscale Column Chromatography
Thu Feb 13	25	Recrystallization of an Unknown
Tue Feb 18	18	Identification of Unknowns day 1
Thu Feb 20	18	Identification of Unknowns day 2
Tue Feb 25	26	TLC of Reactions
Thu Feb 27	27	Advanced Spectroscopy
Tue Mar 3	28	Chemical Literature
Thu Mar 5	29	Computational Chemistry
Tue Mar 10	9	Isolation of Limonene
Thu Mar 12	10	Modeling Chirality & Cycloalkanes
Tue Mar 17	11	Stereochemistry of Alkene Additions
Thu Mar 19	30	Isolation of Natural Products
Tue Mar 24		No labs (Spring break)
Thu Mar 26		No labs (Spring break)
Tue Mar 31	13	Oxidation of Alcohols
Thu Apr 2	19	Reduction of Ketones
Tue Apr 7	20	Wittig Reaction
Thu Apr 9	21	Grignard Dyes
Tue Apr 14	22	Liquid Crystals
Thu Apr 16	23	Fischer Esterification
Tue Apr 21		Checkout & final quiz
Apr 23-30		No labs

List of Sections

Section	Day	Time	Location	TA	TA Email
301	TR	10:00 AM-12:50 PM	EKLC M1B35	Brianna Callahan	Brianna.Callahan@colorado.edu
311	TR	1:30 PM-4:20 PM	EKLC M1B35	Garrett Cairo	Garrett.Cairo@colorado.edu

Grading

Canvas: This course will use Canvas, which can be accessed at canvas.colorado.edu. Grades will be posted here, as will 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.

Lab Reports: For directions on how to write lab reports, see Chapter 4 in the Handbook and the example lab report on the course website. Lab reports will be graded according to the rubric which is posted on the course website. You should make sure to attach a copy of the rubric to the front of each lab report you turn in. During the spring and fall semesters, lab reports are due one week after you perform the experiment.

Quizzes: Quizzes cover assigned reading, procedures, and Experiment Manual study questions. They are given out during the first fifteen minutes of each lab; if you arrive late, you might not be given the full amount of time, or you might not be given the quiz at all. Study questions from the Experiment Manual 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. This applies to each day, not just weekdays, since even on the weekends you still have extra time to work on the assignment that your classmates did not get. You can turn in late items to your TA's mailbox. If you need to turn in a late report during a time when you cannot access the mailboxes (for example, on weekends), you can email an electronic copy to your TA and then turn in a hard copy as soon as you have access to the building again. In this case, the assignment will be dated from the time you send the email. In order to submit final grades on time, no late work will be accepted after the final quiz 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 As, Bs, etc. per section. Your final letter grade will be based on the 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.

Excused Absences and Make-up Labs: All make-up labs and excused absences must be arranged through the Makeup Lab Scheduler at www.orgchemboulder.com/Labs/Makeup.shtml. Further information is included on this page. Note that your TA cannot excuse absences! If your absence is not input into the Makeup Lab Scheduler, then it will count as unexcused and you will be given a grade of zero for the lab you missed.

Cleanup Points: In the organic chemistry teaching labs you are expected to take care of the equipment and lab space that you use. Each lab period that involves a wet lab (using chemicals, not just model kits or paperwork) has 5 cleanup points associated with it, and lab checkout has 10 cleanup points associated with it. Those points are awarded to the whole class as a group. If the lab is left in disarray after your lab section, you and everyone else in your section will lose points for each violation of the cleanup requirements. These requirements are posted at www.orgchemboulder.com/Labs/Cleanup.shtml. Each section's cleanup points will be posted on this page on a regular basis. Although it is not required, you can greatly increase your chance of getting full points by assigning cleanup to two or three students per class meeting. A sheet will be passed around during the first week to help you organize this.

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:

- *Handbook for Organic Chemistry Lab, 12th Edition*
- LabArchives membership
- Approved safety goggles
- Organic chemistry model set

All of these items are available at the campus bookstore, and the handbook is also on reserve at the library. Please note that due to the large number of recent changes to the organic labs, **older versions of the handbook and experiment manual are not acceptable substitutes.**

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).

The website for this course is www.orgchemboulder.com. This website also contains a large amount of supporting information including photos and videos of lab techniques being performed, and is a useful supplement to the Handbook.

Prerequisites and Corequisites: Students enrolled in CHEM 3361 must also be enrolled in CHEM 3451 or CHEM 3311, unless they have already passed one of these courses. They must also have passed both lecture and lab for Foundations of Chemistry, 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. It is your responsibility to check your CU email account 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 full details at <http://www.colorado.edu/policies/student-e-mail-policy>.

Accommodations 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 (www.colorado.edu/disabilityservices/students). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see Temporary Medical Conditions under the Students tab on the Disability Services website.

Classroom Behavior: Students and faculty each have responsibility for maintaining an appropriate learning environment. 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 (<http://www.colorado.edu/policies/student-classroom-and-course-related-behavior>) and the Student Code of Conduct (<http://www.colorado.edu/osccr>).

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 (<https://www.colorado.edu/osccr/honor-code>).

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation: The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, intimate partner abuse (including 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 (<http://www.colorado.edu/institutionalequity>). Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, 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. For each class, check with your faculty member in advance so that you are aware of their specific requirements for accommodating religious observances. See the campus policy regarding religious observances (<http://www.colorado.edu/policies/observance-religious-holidays-and-absences-classes-andor-exams>) for full details.