

Chemistry 268 • Spring 2021

Instructor: Dr. Chris McDaniel (ISB 241F)

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Things to Note About Lab:

Before coming to lab, download and read the supplemental-to-the-lab-text experiment handout and any other necessary handouts from the Chemistry 268 course website. Based on all of this information, prepare a Prelab Outline. Downloads are found at our [Chemistry 268 website](#):

Before Coming to Lab Every Week:

1. See the Schedule of Experiments on course website to figure out which experiment we are doing that week.
2. Download and read the experiment handout and the lab text.
3. Prepare a pre-lab Outline (more detail on this below).
4. Go to the 2nd floor of ISB and wait by the sign with your assigned room.

This course utilizes an electronic lab notebook (ELN). It is simply Microsoft Word, which is available free of charge to all students enrolled in a UMass course. For a free Office365 download, see page 2 of this syllabus. **DO NOT USE GOOGLE DOCS** as an alternative to Word. Docs is not compatible with the chemistry drawing software.

Come to lab properly dressed (see '[Safety Dress Code and Consequences](#)' handout) and bring with you copies of handouts, your safety goggles, and your laboratory notebook, in which the Prelab Outline has been written. The required laboratory notebook is one in which a carbon copy of each page can be made and torn out. Before you may begin work, a carbon copy of the completed Prelab Outline, a copy of the experiment handout and any other prelab material for that experiment must be presented to your TA. If you fail to have an acceptable Prelab Outline, you will not be allowed to work in the lab and will consequently lose credit. Some references given in the Schedule of Experiments are to Loudon, which refers to the lecture text in CHEM-266. These references provide background information for some experiments.

Carefully read the information on this page as well as the information on **Safety and Waste**

Disposal on the [Chemistry 268 web page](#). These documents contain a great deal of important information. You are responsible for knowing the material and following the procedures provided in them. Review and refer to these documents throughout the semester. You must wear approved eye protection at all times while you are in the lab. Failure to do so will result in the loss of credit. Repeated failure to do so will result in expulsion from the course.

Make-up Labs: We do not grant make-ups for travel (exceptions can be made for delays and documentation is necessary). Any makeup work must be requested through the Google Makeup form on Moodle. One of the orgo lab staff will be in touch within 12 hours after filling out the form. Your TA cannot authorize a make-up lab.

COVID-19 Special Precautions – If you are feeling symptomatic, you must stay home. Make-up labs will of course be allowed. We have never penalized for an excused make-up lab. A doctor's note is not needed for any illness during the pandemic. You will be granted the necessary make-up labs, again without penalty, but you have to be flexible in available times as we are at extreme limited capacity this spring.

Lab Textbook. See email for Google drive link.

EMAIL. Email is the best way to get ahold of me or your TA. I will respond within 24 hours of your message. If you do not receive a reply, check the subject line (see instructions at the top of this page). Communications via email are essential. Be sure that your email address in SPIRE is correct, is one that you use regularly, and is one that you keep maintained. Manju, Amanda and I are not responsible for any missed electronic communication by the student.

Required Electronic Lab Notebook (ELN). Your notebook provides a permanent record of your laboratory work. We will be making use of electronic lab notebooks (ELN) in this lab. We will be using Microsoft Word (available free of charge with your UMass credentials). To download Microsoft Office 365 Education (includes Word and other programs), see: <https://www.umass.edu/it/software/microsoft-office-365-education>. On the Course Website are posted templates for non-formal and formal reports.

Gradescope: Grading and Submitting Reports. We will grade lab reports online using a program called Gradescope (rostering is automatic). You will convert your report to a pdf and upload directly to their site. You will be automatically added to the roster in Gradescope and notified when this takes place. To submit your reports, navigate to Gradescope.com, click on the chem-267

course, click on assignments, then click on the appropriate report and upload a pdf of your post-lab. Follow the Gradescope prompts on selecting the pages on which the sections are located. The rubrics for both non-formal and formal reports are posted on the website. You are strongly encouraged to have this at your side while preparing your post-lab report.

To preserve the formatting of your MS Word document, you must print as a pdf, not save as a pdf. Chemical structures do not translate to a pdf when it is simply “saved as” that file type.

Notes on the Prelab Outline. Before coming to lab, you must carefully read the weekly handout and prepare an outline of the procedure **in your ELN (simply MS Word)**. See the prelab example on the general handouts page of the course website. You will follow this procedure in the lab. Information gained from the handout and the lab text should be incorporated into the outline. The outline should be written in your own words, in outline form, and in *enough detail so that you could do the experiment by following the outline only*. You may be required to follow only your outline at a random point in the semester. The outline should be short, but complete, and in a form that is easy to follow as you work. A well-prepared outline will allow you to carry out the lab work efficiently and effectively. The outline must also include a summary of safety considerations and waste disposal procedures for chemicals used in that experiment. A test of a good outline is to read it over and see if you could actually carry out the experiment using only the outline. If the TA deems that the outline is poorly prepared, you will lose credit (points lost is up to the TA) and will be required to leave the lab, returning only after you have rewritten the outline in a way that is acceptable to your TA. In such a case the remaining lab time will likely be insufficient to complete the experiment, resulting in the loss of additional credit. A poorly prepared lab worker is a danger to everyone in the lab and will not be allowed to work in the lab.

An example of an outline is shown in the Chemistry 268 course website file: “How to keep your notebook.”

In-Lab Observations. On the same regular paper as your pre-lab, enter what you do differently in the lab from the actual procedure as the work is being done. **Feel free to bring your computer and enter observations directly into the report template, but keep in mind we cannot be held liable for any damage while in the lab.** Procedures actually carried out (this may differ somewhat from procedures in the Prelab Outline), detailed observations, data obtained, and calculations. Items such as detailed procedures, physical data of compounds isolated (e.g., melting points (MPs) and boiling points (BPs)), and

weights/volumes of reagents are entered at this time. **Before you leave the lab you must check with your TA or you will lose all points for in-lab technique.**

On your post-lab report in your ELN, you must record these observations there (see template on course website).

Final letter grades. The final grade will consist of the following: Lab Reports (100%).

Experiment Handouts. In addition to the experimental procedures in the lab text (see 'schedule of experiments' on the course website), you are required to download copies of experimental guidelines for each lab. These handouts are found on the Chemistry 268 web site.

For most experiments, besides the "Experiment Handout," the web site will provide additional information, such as photos of apparatus set-ups and procedures. Downloading handouts well in advance will lessen the likelihood of running into last minute computer problems. Make sure to use the handouts from spring 2021.

Limited-Use Lab Hours. The Organic Lab will be open during scheduled hours on certain days of the week. The hours and days will be posted on the web and at the lab. During these hours, the only lab operations that may be done are the determination of melting points and weighings. This time may also be used to consult with the TA on duty. Under no circumstances can make-ups be done during these hours.

Due Dates. See Gradescope. Know the due dates of each lab report. Late submissions result in the loss of 1 point per day (including weekends). Occasionally a sample needs time to dry. In such a case its weight and melting point (MP) may be obtained during limited-use lab hours. See website for current schedule. **Late reports are only accepted 3 days past the original due date.** One point per any part of a day that it is late, including weekend days.

Students Registered with Disability Services - The University of Massachusetts Amherst is dedicated to providing equal opportunity/accommodations and access for every student. If you would like to request such accommodations because of a physical, mental, or learning disability, please contact your instructor or the Office of Disability Services, DS, (161 Whitmore Administration Building) within the first two weeks of class. Their phone number is 413.545.0892.

"Any student with a disability who needs a classroom accommodation, access to technology or other academic assistance in this course should contact Disability Services (ds@educ.umass.edu) and/or the instructor. DS serves students with a wide range of disabilities including, but not limited to, physical disabilities, sensory impairments, learning disabilities, attention deficit disorder, depression, and anxiety." You cannot have time extensions on a lab experiment. We have neither the space nor resources or capability for a student to stay after the lab period ends. **Late reports are only accepted 3 days past the original due date.** Any student registered with, and has requested services of, DS will not incur a late penalty (this is the accommodation for extended time on assignments).