

Chemistry 3830, Fall 2021 Lab Outline

Read sections A-C of the lab manual prior to the start of experiments (September 22).

Pre-labs

In the days before you start a new experiment, your group will have a short (10-15 minute) meeting with your instructor, during which you will hand in the completed pre-lab questions found in the lab manual for each experiment, and go over information pertinent to the experiment. Coming into the meeting, you will be expected to have read the procedure for the upcoming experiment, as well as the SDS's for the chemicals listed therein. Furthermore, your pre-lab assignment must have a reagent table for those chemicals, including a brief hazard assessment (special precautions regarding handling or exposure, as per the SDS's). Working with your partner(s) to complete the pre-lab exercises is permitted, but they are to be completed individually and in your own words.

Lab Work

In the schedule, notice that there is very little actual lab work to be completed in September. We will meet on September 14th/16th to check-in, assign groups, and allow you to familiarize yourselves with the equipment available. At this time we will also aim to choose which experiments you will do during the semester, so it is emphatically recommended that you READ THE LAB MANUAL prior to the check-in week so that you can choose as a group which experiments you would like to complete in a timely fashion.

You will be assigned a partner (or partners) with whom you will complete a total of 4 experiments (2 weeks each): One experiment from each of Parts II, III and IV, and one additional experiment of your choice from any section of the manual. Experiments 3 and 5 cannot be performed this semester due to inability to procure necessary reagents. Experiments 7 and 8 must be performed as a pair (1 week each), and together constitute 1 of the 4 experiments which must be completed.

Resources permitting, you can choose to complete the optional glassblowing course (Part I). You will have to schedule time (approximately three hours) with your instructor outside of the normal lab time if you wish to perform this section of the lab.

Evaluation

The lab is worth 30% of the total grade for Chem 3830. As with other chemistry courses, you must pass the lab and lecture independently in order to pass the course.

Marking Breakdown:

Lab Reports: (4 reports, 50 points each)	=	200 points
Pre-lab questions (4 sets, 10 points each)	=	40 points
Safety and Performance	=	20 points
Lab notebooks	=	<u>40 points</u>
Total	=	300 points

Pre-lab Assignments

Every experiment has an associated set of pre-lab questions that constitute an assignment that will be due at your pre-lab meeting with your instructor. There is no strict format for these assignments, except that they be typed. As with all of your written work for this class, it is expected that you provide references that you used in the course of answering the pre-lab questions.

Reports

Reports are due at the beginning of lab the week after the end of that experiment, preferably by email in a Word document. The reports must be written in double-column, ACS format. If you are unsure what this entails, ask your instructor. As with the pre-lab exercises, you are permitted to work on the reports together, but each group member must hand in his/her report individually. While the reports will use the same data, that data must be analyzed and discussed in one's own words. Plagiarism will not be tolerated.

For instructions and tips on writing reports and notebooks, refer to section A of the lab manual.

Notebooks

You are expected to keep a lab notebook throughout your work in this course. It must contain a table of contents, and each experiment is to include the date, a title for the experiment, pertinent reaction equations, a step-by-step of your procedure with observations, and a reagent table. If you are unsure what to include, the most important thing to keep in mind is that someone should be able to pick up your notebook and recreate your experiment without any other resources at hand.

Safety and Performance

Throughout the semester, your instructor will be evaluating your general performance and etiquette in lab. The basic criteria will be:

- Showing up to lab on time
- Working in a safe and considerate manner
- Cleaning up your work area at the end of your lab period

Late Policy

If your notebooks, pre-labs, or lab reports are handed in late, 20% will be deducted for the first 24-hour period that it is late, and an additional 20% will be deducted for the second 24-hour period that it is late. After 48 hours, your assignment will be awarded 0%. All assignments must be handed in, even if more than 48 hours past the due date, in order to pass the lab (and therefore the course).

Attendance

Absences with a valid excuse will be accepted with documentation, and you will be allowed to use your partner's data to write your lab report. A valid excuse is a certified medical note or other extenuating circumstance acceptable to the instructor. If a student is absent without a valid excuse, they will still be allowed to use their partner's data, but 20% will be deducted from the report mark for that experiment. Similarly, if a student misses a pre-lab meeting, 20% will be deducted from the pre-lab mark. Given the exceptional circumstances brought on by COVID-19, documentation will not be required for an absence

if you are symptomatic. In this case, please contact your instructor as soon as possible and explain the situation, and do not come to campus.