

CH 242 LABORATORY 2002

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Office hours
Tuesday, 10-11
Thursday, 2-3
and by appointment

as announced weekly,
and by appointment

GENERAL COMMENTS ABOUT THE LAB

One of the most important aspects of this semester's work is the development of independent thinking coupled with the ability to work with others in a less structured laboratory environment. This requires a great deal of responsibility and self-discipline on your part because it is easy to set work aside when the "deadline" seems far away. This format also requires a great deal from us, since either two or three unrelated projects will be in progress simultaneously during the last few weeks. We think the rewards of this approach are worthwhile, however, as long as every person does his or her best, with the idea that we are all a team. There should be excitement about doing multi-week projects. In addition to the hard work involved, they provide a valuable learning experience, a feeling of accomplishment, and, hopefully, a lot of fun. This overview and schedule should help you keep a perspective of the expectations for the semester.

This semester you will work with a partner for experiment #3 and the final project. The success of such a partnership will depend very much on both of you pulling your weight and working well together. **When you work with a partner, both members of the group will contribute to the writing of reports, and both will receive the same grade.**

At the beginning of class on February 11, the science librarian, Susan Cole, will speak to the class about searching the chemical literature using SciFinder Scholar, a program that provides access to Chemical Abstracts, the premier database in chemistry. It is important that you be able to use SciFinder Scholar, and other library resources, to do background research for one of the projects that you will be involved in toward the end of the semester. More information on the available research projects will be provided shortly. By February 18, you are expected to provide us with the name of your partner, and rank the projects according to your preference. **The write-up of your background research is due March 11, at the beginning of class.**

LAB GUIDELINES

In the interest of safety and the smooth operation of the lab, the guidelines provided last semester are reproduced below as a reminder.

- You must wear goggles at all times in the lab. Approved goggles are available at the bookstore.
- Of course, no eating or drinking is allowed in lab.
- Please leave your sweaters, coats, etc. outside the lab. Sandals (or open-toed shoes) without socks are not permitted.
- We will make sure that you are aware of any special precautions that should be taken with chemicals used in a particular experiment, but you should treat all chemicals as if they were hazardous.

- Special containers are provided for the disposal of waste; you should never dispose of anything down the lab sinks unless your instructor indicates that it is safe to do so.
- If you spill anything or break glassware, seek the lab instructor's advice for cleaning up.
- Your laboratory space and equipment are shared by others, so cleaning up after the experiment is as much a part of the lab as the experiment itself. You would not want to find dirty glassware or lab bench when you start an experiment, and neither does anyone else. So please remember to clean up your bench top area and the general use areas after you are finished.

PLEASE NOTE

- Laboratory experiments will be available on the web the Monday before the experiment is to begin. Most labs have a prelab assignment, so it is important that you download the experiment as soon as it is posted to give yourself ample time to complete the prelab (some require that you find information not provided in the handout itself). The most efficient method would be to write the prelab assignment in your laboratory notebook and turn in the carbon copy for grading. Prelab assignments will be due in class on the Friday before the new experiment is to begin. They will be graded and be available to you outside of the laboratory, Keyes 305, the following Monday morning. You may not use the data or assistance of other students in writing your prelab assignments or your laboratory reports.
- As mentioned earlier, you are expected to bring to lab your own written protocol for the experiment using the information given in the handout. Copying the handout is neither expected nor recommended, but you must be able to perform the experiment simply by following your own protocol. Thus, it is imperative that you read the handout and understand the procedures for each experiment before coming to lab. This protocol should be completed in your laboratory notebook and the carbon copy turned in at the beginning of your lab session.
- Unless indicated otherwise on the laboratory schedule, lab reports are due at the beginning of your particular lab section one week following the completion of the experiment. **These reports must be typed.** In preparing reports for experiment #3 and the research project, you may collaborate only with your designated lab partner.
- At the end of each lab session you will need to hand in the carbon copy pages from your notebook on which has been recorded the actual experimental details for the lab. This primary record of your experiment in progress will be attached to your laboratory report for each experiment and included in the grading scheme for that report. Notebook expectations are outlined below.

CH 242 LABORATORY NOTEBOOK EXPECTATIONS 2002

Your laboratory notebook is the primary record of all work done in the laboratory. Everything relevant to the experiments you perform should be entered into your notebook as you proceed. It is not appropriate to fill in your notebook after the fact; this would make your entries recollections, not a primary record. Your procedures should be complete enough so that someone with a comparable level of proficiency could repeat your experiment by following your notebook record only.

The following guidelines from last semester are provided as a reminder of what is expected:

- The notebook must be bound and have tear-out carbon copy pages.
- The dates you perform the experiments should accompany your entries.
- Pages should be numbered; a table of contents should precede your first experiment, and each experiment should be titled.

- All entries *must be permanent*, i.e. use ink not pencil.
- Keep all entries legible, even errors. Cross out mistakes so that the original entries are still easy to read.
- Acknowledge partners and anyone else who has supplied data to you. Cite references where appropriate.
- Detailed procedure, data (including units), graphs, calculations and conclusions should be in your notebook. It may be possible on occasion to photocopy spectra and sections of your notebook as part of your lab report.

CH 242 LABORATORY SCHEDULE 2002

WEEK OF		EXPERIMENT	LAB REPORT DUE WEEK OF
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February 11	#1	Diels-Alder Reaction	February 18
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Indicate partner and rank projects in order of preference - February 18 in class

February 18	#2	Friedel-Crafts Acylation	February 25
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February 25, March 4 and 11	#3	Classification and Identification of Unknowns	March 18
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Project background report due March 11 at 10:00 a.m. in class

March 18	#4	Grignard Reaction	April 1
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March 25 – 31		SPRING BREAK	
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April 1	#5	Wittig Reaction OR Solid Phase Peptide Synthesis	April 8
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Weeks of April 8, 15, 22 and 29		PROJECTS	May 6
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May 6		Laboratory Clean up	
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