

CHEMISTRY 347
HONORS ORGANIC CHEMISTRY LABORATORY
Spring 2007

Instructor: Professor Paul B. Hopkins
Office: Bagley 109H
Phone: 206.543.1613; email: chair@chem.washington.edu
Office Hours: Thursdays, 2:00-3:00 pm or by appointment
(Professor Hopkins is not always available during regular office hours.)

Teaching Assist: Meghana Rawal (Sec. AA – Lab meets W/F 1:30-4:20 pm, CHB 127)
Office: CHB 218; Phone: 206. 616.8754
E-mail: rawal@u.washington.edu
Office Hours: Wednesdays, 2:00 – 6:00 pm
Dan Patel (Sec. AB – Lab meets W/F 12:30-3:20 pm, CHB 111)
Office: CHB 218; Phone: 206. 616.8754
E-mail: dgp2@u.washington.edu
Office Hours: Thursdays, 11:00 am – 12:00 pm

Weekly Lecture: Tuesdays, 10:30-11:20 am, BAG 261

Laboratory: Wednesdays/Fridays, 1:30-4:20 pm, CHB 127 (AA); 12:30-3:20 pm, CHB 111 (AB)

Required Text: *Introduction of Organic Laboratory Techniques, A Microscale Approach*, Fourth Edition, Pavia, Lampman, Kriz, and Engle (PLKE)

Exams/Quizzes: One comprehensive examination: Monday, June 4, 2007, 10:30 am

Grading:	2 reports for wet unknowns @ 70 pts each	140
	2 reports for spectroscopic unknowns @ 50 pts each	100
	Glucose Acetylation	20
	Sulfa drug	75
	Drug discovery lab	100
	Final Examination	100
	Teaching assistant evaluation	50
	Lab notebook	25
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	Total Points	610

LABORATORY SAFETY: All students in the laboratory are required by state law to wear Department-approved safety goggles at all times. Department policy states “undergraduates not wearing goggles may be dismissed from the laboratory immediately. A second infraction will result in dismissal for the remainder of the quarter. No make-ups will be permitted.” Approved safety goggles are available from the University Bookstore or the Chemistry Stockroom (Bagley 271). Students are only allowed to work in the laboratory during their scheduled sections and under the supervision of their assigned Teaching Assistant.

Laboratory Reports: In general, reports consist of a pre-lab due at the beginning of the lab period and a final report. The pre-lab portion should be written in your lab notebook and a photocopy or carbon copy is to be given to your Teaching Assistant at the beginning of the lab period. You will not be allowed to begin the experiment until the pre-lab is completed. Pre-labs for preparative should consist of balanced equations for the reactions, reagent tables, indications of possible side-reactions, summary of the experimental procedure (in your own words), and a schematic representation of the isolation/purification procedure. The pre-labs for the unknown analyses should contain a strategic plan for the day (ca. 1 page) listing the tests you plan to carry out on each of your unknowns. If you are making derivatives, write out balanced equations. Examples of pre-labs are given in your handout (see also PLKE pp. 558-565). The final reports will be in the form of a handout, except for the sulfa drug project where a typewritten report must be turned in.

Laboratory Notebooks: Purchase a BOUND notebook; spiral and three-ring notebooks are not acceptable. When performing an experiment, write down the procedure as you do it, note relevant observations, including your final results (mp, yield, etc.). A thorough description of the contents and organization of your notebook is given in the Chem 347 handout (see also discussion in PLKE pp. 558-565). There will be two spot-checks of your notebook during the quarter (see the Chem 347 Handout for grading guidelines).

Lab Policies: Failure to comply with lab policies will result in dismissal from the lab.

1. As described above, all students must wear approved safety goggles while in the laboratory. Wearing contact lenses in the laboratory is not recommended. Solvent fumes can become trapped between contact lenses and the eye causing irritation.
2. Dress appropriately for safety in the laboratory. Open-toed shoes or sandals are not to be worn in the laboratory. Lab coats are required.
3. You are only allowed to be in the laboratory during your scheduled lab period or by arrangement with your instructor.

Final Exam—Monday, June 4, 2007, 10:30-12:20 pm (comprehensive).

Note: If you are absent from the final examination, and you are ineligible for an incomplete according to UW regulations, then you will receive a course grade of 0.0. If an incomplete is given, you must take the final exam for the same course in the next regular academic quarter in which it is offered to remove the incomplete.

If you would like to request academic accommodations due to a disability, please contact Disabled Student Services, 448 Schmitz, (206) 543-8924 (V/TTY). If you have a letter from Disabled Student Services indicating you have a disability that requires academic accommodations, please present the letter to me so we can discuss the accommodations you might need for class.

Date	Activity	Subject	Reading	Report Due
March 27	Discussion	Introduction	Handout; Techniques 1-20, 22, 25, 26, 28	
28	Laboratory	Check-in Glucose Acetylation		
30	Laboratory	Sulfa Drugs		
April 3	Discussion	Sulfa Drugs Organic Qualitative Analysis	Handout, "Sulfa Drugs" PLKE pp. 388-396, 448-494; Appendix 1, 2	
4	Laboratory	Sulfa Drugs (cont'd)		Notebook; Glucose Acetylation
6	Laboratory	Sulfa Drugs (cont'd)		
10	Discussion	Organic Qualitative Analysis	PLKE pp. 448-494, Appendix 1, 2	
11	Laboratory	Practice Classification Tests		
13	Laboratory	Unknowns		
17	Discussion	Spectroscopy: IR	PLKE Technique 25	
18	Laboratory	Unknowns		Sulfa Drugs
20	Laboratory	Unknowns		
24	Discussion	Spectroscopy: NMR	PLKE Technique 26	
25	Laboratory	Unknowns		
27	Laboratory	Unknowns		
May 1	Discussion	Spectroscopy: MS	PLKE Technique 28	
2	Laboratory	Unknowns		Wet Unknown 1
4	Laboratory	Unknowns		
8	Discussion	Spectroscopy: Combined	Handout	
9	Laboratory	Unknowns		Wet Unknown 2
11	Laboratory	Unknowns		
15	Discussion	Drug Discovery	Handout, "Drug Discovery"	
16	Laboratory	Unknowns		Spectroscopic Unknown 1
18	Laboratory	Drug Discovery lab		
22	Discussion	Chemical Literature	Handout pp. 32-37	
23	Laboratory	Drug Discovery lab (cont'd)		Spectroscopic Unknown 2
25	Laboratory	Drug Discovery lab (cont'd)		
29	Discussion	Catch-up		
30	Laboratory	Drug Discovery lab (cont'd)		
June 1	Laboratory	Lab check-out		Drug Discovery; Notebook
4	FINAL EXAM			