

Microscale Organic Chemistry Laboratory II
General Information

Instructor: W. Chain chain@hawaii.edu
Bilger 205B 808-956-5795

Office hours by appointment.

Course Objectives:

- To gain practical experience in manipulating organic compounds
- To learn how to purify, separate, prepare, and identify organic compounds using microscale laboratory techniques.

Prerequisite: Chem 272L (C grade or better) and Chem 273 (or concurrent). *There will be no exceptions to this policy.*

Textbooks: Chemistry 273 Organic Laboratory Procedures. Lab Manual and Supplement for Students, by William Chain, Thomas Hemscheidt, and Philip Williams Spring 2013 Edition (2013)

Safety:

- **Required:** 1. Safety goggles or glasses with side shields
- 2. Closed toe shoes
- 3. Long pants
- 4. Long hair must be tied back

No one will be allowed to work without this protection. No exceptions. Your cooperation is requested.

- While not required, students may wear additional protective clothing such as lab coats, rubber aprons, and heavy boots at their own discretion.
- No talking on cell phones or listening to music while working in the lab. Turn your phone off for the duration of lab. You will not receive a grade for talking on the phone!
- Do NOT use your cell phone as your calculator. Do NOT have your cell phone at your bench – this is the fastest way to transfer chemicals from your bench/hands to your face.

Notebooks:

- Students must provide two bound (no loose-leaf), hard cover laboratory notebooks.

Grading Scheme:

Lab notebooks/Handout questions (due every week):	50%
Quizzes (every week):	40%
TA evaluation (organization, preparation, technique):	10%

It is our custom to return work within 3 weeks of submission

General Policies:

- Quizzes will be given at the beginning of the lab. **Students who are late will not be able to make up quizzes.** Any missed quiz will be considered a zero.
- Missed labs cannot be made up. If you must miss a lab, you *must* discuss the problem with your TA *in advance*. ***There are no unexcused absences – a score of zero will be assigned for the quiz and lab report. If you miss more than two labs for any reason, you are encouraged to withdraw from the course. There will be no ‘incomplete’ grades.*** Students should inform the course instructor of any prearranged professional trips (conferences or varsity sports).
- Safety is of paramount importance! The smallest distraction can lead to an accident. If you are observed in the teaching laboratory with a cell phone or

walking around listening to headphones, you WILL be removed from the lab. If you are observed without the necessary protective clothing, you WILL be removed from the lab.

- All students are expected to conduct himself/herself with honesty and consideration of fellow students.

- **Any student caught cheating will automatically receive an F in the course and have their case referred to the appropriate review board for further disciplinary action**

Code of Conduct:

Academic honesty policies can be found at the following website:

http://www.studentaffairs.manoa.hawaii.edu/policies/conduct_code/

*Any case of academic dishonesty will result in an automatic grade of 'F' in the course and your case will be referred to the Student Conduct Administrator. **This document serves as your only warning, and there will be no second chances and no exceptions to this policy.***

Disabilities:

The University of Hawaii is an equal opportunity/affirmative action institution, dedicated to teaching all students and reaching all learners. It is our commitment to make our lectures and classrooms accessible to all students. If you have, or think you might have, a disability and have not voluntarily disclosed its nature and the support you need, you are invited to contact the UH KOKUA Program (<http://www.hawaii.edu/kokua/> or (808) 956-7511), or talk with the instructor in order to get any accommodation you might need to take the course. This information will be kept confidential. Please do this as early in the course as possible.

First lab meeting:

We will begin lab the week of January 7 with check-in and a safety lecture. Read pages 1-16 in your lab manual, and the ACS Safety Guidelines on laulima.

Chemistry 273 Laboratory Spring 2013 Schedule

Week	Date	Experiment	Reading
1	1/7-1/11	Check-in and Safety Lecture	1-17, App 1-3
2	1/14-1/18	Unknown Structure Determination - Group Problems	20-28
3	1/21-1/25*	Unknown Structure Determination - Group Problems	20-28
4	1/28-2/1	Unknown Structure Determination - Individual	20-28
5	2/4-2/8	Unknown Structure Determination - Individual with Chem	20-28
6	2/11-2/15	Unknown Structure Determination - Individual with Chem	20-28
7	2/18-2/22**	Esters - An introduction to combinatorial chemistry	30-34
8	2/25-3/1	Grignard	36-42
9	3/4-3/8	Friedel-Crafts	44-50
10	3/11-3/15	Sodium Borohydride Reduction of Cyclic Ketone	52-61
11	3/18-3/22	Diels-Alder	62-66
12	4/1-4/5	Wittig reaction and Chemiluminescence	68-74
13	4/8-4/12	Check-out (TWRF Labs)	
14	4/15-4/19		
15	4/22-4/26	Check-out (M Labs)	

* No laboratory meetings on Monday, 1/21 in observance of Martin Luther King Day.

** No laboratory meetings on Monday, 2/18 in observance of Presidents' Day.

Note 1: You will be conducting Experiment 1 (Unknown Structure Determination - Group Problems) during the second week of lab. Before you show up, you **must** read the Introduction section of the Lab Manual and complete your Pre-Lab for Experiment 1, and you **must** have received the safety lecture during the first week of lab.

Note 2: Unexcused absences from lab are not allowed. Contact the course instructor in case of a medical emergency. The attendance policy is detailed in the lab manual.

Note 3: Monday laboratories will follow the same sequence of experiments but complete the laboratory class on the week of April 22 due to Monday holiday observances.

Special Accommodations:

Any student who feels s/he may need an accommodation based on the impact of a disability is invited to contact me privately. I would be happy to work with you, and the KOKUA Program (Office for Students with Disabilities) to ensure reasonable accommodations in my course. KOKUA can be reached at (808) 956-7511 or (808) 956-7612 (voice/text) in room 013 of the Queen Lili'uokalani Center for Student Services.