Syllabus
CHEM 273L
S'18

Instructor: T. Hemscheidt
Bil 321B
hemschei@hawaii.edu

This lab is a continuation of CHEM 272L and will be done in two parts.

Part I is going to introduce you to the methods of structure determination by analysis of spectroscopic data (IR, MS, ^{1}H-NMR and ^{13}C-NMR). We will try and hopefully succeed in teaching you a methodical approach to determining or, better, proposing a chemical structure after analysis of such data. This part we will do in a lecture room setting (specific locations for individual sections to be announced via Laulima).

Part II will introduce you to some of the major reactions of the carbonyl group, such as esterification, reduction, addition of an organometallic, and the Wittig reaction, as well some chemistry of aromatic rings. For this second half of the class all sections will be meeting Bilger Addition 206.

Each lab day will start off with a brief quiz dealing with aspects of the day's lab or the lab that you completed the week before and, possibly, the week before that. The TA will then give a brief introduction and then it is your opportunity to shine. Your level of preparation for the lab, your independence in performing the experiments/analyzing the data, your compliance with safety rules as outlined in the lab manual, will be evaluated by the TA and will be reflected in the co-called TA points. The most significant portion of your grade is determined by the lab report for "wet labs" or homework for the structure part. Your TA will give you instructions on what he/she expects. The point is not to write a long document, but to demonstrate that you understand what you observed and how you interpreted your observations. The TA will be appreciative for a clear, concise account of your work with a clear logical thread running through it. Think before you write, not as you write!

The TA may require, at his or her discretion, that you prepare a pre-lab to ensure that you actually have read and understood the lab manual.

The attached schedule of experiments and labs has 12 entries, 11 labs and one structure "exam". Should you miss the "Ester & Safety" lab it will be your responsibility to attend the safety lecture in another section. You will not be

allowed to participate in any "wet chemistry" lab without having attended the CHEM 273L safety lecture. No exceptions for *any* reason.
It is longstanding CHEM department policy that if you miss more than two experiments for any reason (and I mean any), that you will not earn a passing grade. In any case, you need your absence excused and it is the instructor and not the TA who grants excused absences. No-shows will result in a score of ZERO for a given lab.

> ➔If you wish to be granted an excused absence retroactively you have exactly two lab periods from the day you missed to make your case and be granted an excused absence.➔

THERE ARE NO MAKE-UP LABS, FOR ANY REASON. You have chosen a day for the lab, it is your responsibility to schedule yourself that you can attend lab. It is not my responsibility to accommodate your "busy life".

Be aware that we take plagiarism very seriously. Don't copy material from the internet, from your friends, your lab partner, or anybody else for that matter. When I determine that material has been plagiarized you will lose, at a minimum, all points for the lab in question. At my discretion, in egregious cases the punishment will not stop there.

The grading will be as follows:

11 Labs @ 50 points each = (550 pts.) + 1 structure problem (50 pts.)= 600 pts. total.

A+ to A-	85% and above	(510 pts +)
B+ to B-	75% to 84%	(450 pts +)
C+ to C-	65% to 74%	(390 pts +)
D+ to D-	55% to 64%	(330 pts +)

Note that it may be possible that the scores from the different sections need to be curved, should there be major discrepancies in score distribution between sections. If you are unsure at mid-semester as to where you stand talk to me or to the TA.

Laboratory Schedule CHEM 273L for Spring 2018

	M	T	W	R	F
01/08/18 - 01/12/18	No Lab	No Lab	No Lab	No Lab	No Lab
01/15/18 - 01/19/18	MLK Day*	Structure I	Structure I	Structure I	Structure I
01/22/18 - 01/26/18	Structure I	Structure II	Structure II	Structure II	Structure II
01/29/18 - 02/02/18	Structure II	Structure III	Structure III	Structure III	Structure III
02/05/18 - 02/09/18	Structure III	Structure IV	Structure IV	Structure IV	Structure IV
02/12/18 - 02/16/18	Structure IV	Structure V	Structure V	Structure V	Structure V
02/19/18 - 02/23/18	Presidents Day*	Structure exam	Structure exam	Structure exam	Structure exam
02/26/18 - 03/02/18	Structure V	Safety & Ester	Safety & Ester	Safety & Ester	Safety & Ester
03/05/18 - 03/09/18	Structure Exam	Grignard	Grignard	Grignard	Grignard
03/12/18 - 03/16/18	Safety & Ester	Friedel-Crafts	Friedel-Crafts	Friedel-Crafts	Friedel-Crafts
03/19/18 - 03/23/18	Grignard	Reduction	Reduction	Reduction	Reduction
03/26/18 - 03/30/18	Spring Recess	Spring Recess	Spring Recess	Spring Recess	Spring Recess
04/02/18 - 04/06/18	Friedel-Crafts	Diels-Alder	Diels-Alder	Diels-Alder	Diels-Alder
04/09/18 - 04/13/18	Reduction	Wittig	Wittig	Wittig	Wittig
04/16/18 - 04/20/18	Diels-Alder	No Lab	No Lab	No Lab	No Lab
04/23/18 - 04/27/18	Wittig	No Lab	No Lab	No Lab	No Lab
04/30/18 - 05/04/18	No Lab	No Lab	No Lab	No Lab	No Lab

* = Non Instructional Days