

Syllabus O-Chem Lab I

CHEM 222

Summer 2017

DR. CHRISTINE DIMEGLIO
Office: 213 SCL

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M-F, directly after lecture class/before lab class/after lab class

ORGANIC LABS: Room 233 SCL

LAB SECTIONS: Monday and Wednesday, 12:30 pm until 4:30 pm
Lab begins, Monday, May 29, Memorial Day with a mandatory Safety Lecture and Tour of Facility

REQUIRED MATERIALS

1. **Course Packet:** Contains all necessary course information: experimentation schedule, due dates, grading, all directions for lab notes and experimentation and policies on attendance, academic honesty and safety. It's free at Canvas/Mosules. A hardcopy can be purchased from TYCO. Notification of its availability will be sent via Canvas messaging.
2. Lab textbook: **Techniques in Organic Chemistry**, Jerry Mohrig, *et al.*, W.H. Freeman and Company, 4th edition, ISBN: 9781464134227. Buy online or at the **Yale Bookstore**.
3. Lab Notebook: Reuse a notebook from another lab class if it is capable of making copies for your TA and if there are plenty of pages remaining! **One example: ISBN-13: 978-0716739005**
4. **Long Lab Coat: It must go to the knee! THIS IS NOT AN OPTION.** Buy it at the Yale Bookstore or from an online vendor. **Do not buy short lab coats.**

Unisex size chart: <http://www.allseasonsuniforms.com/fssize.htm>
Unisex, 40 inch, knee length, long sleeve, 65% poly/35% cotton, lab coat – example brands are White Swan and Dickies.
5. **LOCK for backpack/coat lockers.** Backpacks and coats are not permitted in lab. The lockers are located in the hallways outside of the lab rooms. Protect your belongings from thieves! However, you must remove your lock and your belongings at the end of lab. Locks that remain on the lockers are cut off.
6. Thick Sharpie Markers® for writing on glassware.
7. **Proper Clothing:** pants that cover legs and ankles (no shorts, skirts or Capri), shoes that cover the ENTIRE foot (no sandals, flip flops or ballet type), no earbuds or head phones. **If you are in lab with improper clothing you will need to leave, change and walk back up the hill. Good for the waistline, but bad for finishing lab on time! Please bring extra clothes and leave them in your locker so that you never forget!**

ADDITIONAL REQUIRED COURSE MATERIALS- We will provide the following:

1. Lab safety glasses/goggles
2. Nitrile gloves
3. Loner lab coats – if you are waiting for yours to arrive or spill something on yours during lab.

Readings, assignments and experimental procedures associated with the schedule below are given in the course packet.

(Tentative) Schedule of Experimentation and Due Dates

EP = experimental plan; PL = post lab assignment

- M 5/29 Lab 1: Safety Lecture; Tour of Facilities; Safety Agreement; Bench Assignments
Assigned: Read Course Packet through Lab 4
- W 5/31 Lab 2: Check In to Bench Drawers; Chemical Table for Labs 2, 3 and 4 (Canvas Upload); Demos and Practice with separatory funnel and vacuum filtration; Prepare solutions for Lab 3; Prepare Experimental Plans (EP) for Labs 3 and 4 (Canvas Upload); Set up hoods for Lab 3.

Due by Wed 5/31, at 11 pm by Canvas upload Chemical Table for Labs 2, 3, 4 (10)
Due by Fri 6/2 at 11 pm by Canvas upload **EP 3*** (10), EP 4 (10)
Due by Mon 6/5 at 12:30 pm by Canvas upload Chemical Table for Labs 5 and 6 (10)
- M 6/5 Lab 3: Separation by Extraction 12:30 – 3 pm and Lab 4: Purification by Recrystallization/Mp Analysis 3pm -4 30
- W 6/7 Lab 5: Column Chromatography and Finish Up Labs 3 and 4

Due by Wed 6/7 at 12:30 by Canvas upload EP 5 (10)
Due by Sat 6/10 at 11 pm by Canvas upload PLA (Labs 2, 3 and 4; 100points)
- M 6/12 Lab 6: IR lecture (1 hour) and Lab with Worksheet (2 hours) Chemical Table 7,8 9

Due by Mon 6/12 at 12:30 pm EP6 (10)
Due by Mon 6/12 at end of lab period IR worksheet and spectra (50) hardcopy
Due by Tue 6/13 at 11:00 pm by Canvas upload Chemical Tables 7, 8, 9 (10)
- W 6/14 Lab 7: Synthesis of Vanillin Alcohol

Due by Wed 6/14 at 12:30 pm by Canvas upload EP 7 (10)
Due by Sat 6/17 at 11 pm by Canvas upload PLB (Labs 5, 6 and 7; 100 points)
- M 6/19 Lab 8: Synthesis of Salicylic Acid

Due by Mon 6/19 at 12:30 by Canvas Upload EP 8 (10)
- W 6/21 Lab 9: Synthesis of Benzhydryl Ether

Due by Wed 6/21 at 12:30 pm by Canvas Upload EP 9 (10)
- TH 6/22 “Loose-ends” day; Exam Review
- M 6/26 Check Out; Exam (150); Notebook check (50)

Grades

Grades are calculated as (total points earned – penalties) / (total points available). Letter grades are assigned at the end of the term by the instructor. **Late Assignments** will be penalized at 5% per day.

Lab Penalties (Point Deductions)

- Late work: 5% per day, beginning the day the assignment is due.
- Experimental Plan: if a student is not prepared for an experiment by lab time the penalty is 15 points.
- Addressing lab safety or housekeeping issues: deduction of 5 points each time after 1st warning
- Unexcused absence: deduction of 20 points

Attendance: Attendance at scheduled lab sessions is expected and in the summer it is very difficult to manage makeup labs. Issues that impact one's ability to meet course responsibilities should be brought to Dr. DiMeglio's attention immediately so that unique, individual needs can be addressed.

Academic Integrity and EXCOMM

The Chemistry Department Education Staff is here to support your personal and professional growth. Assignments are designed with this goal in mind. Breaches in academic integrity undermine our goals. Applying the rules of academic integrity to your conduct, bench work and written submissions is integral to your advancement as a scientist.

Work independently in lab and on lab assignments unless specifically instructed to work with others. Perform your own experiments and record your actual results. Do not fabricate or falsify data. Discuss how to handle poor data or lack of data with the instructor. Independently compose all assignments, including pre-lab plans, experimental notes, product data and spectra, reports and any other graded assignment. Do not divide the workload among peers. Do not copy, by any means, material from course packets, textbooks, websites, and paste such material into an assignment as if it were your own work. Do not copy, by any means, material from another student's work, past or present, and paste such material into an assignment as if it were your own work. Do not create a Google Docs, or any other system, in order to divide an assignment among several friends. Do not jeopardize another student's academic integrity by asking that person to give you information you have been specifically instructed to acquire on your own. **ACCEPT THE LATE PENALTY.** Do not permit another student to copy any of your work that will be or has already been submitted for grading. When you are finished with this course **DO NOT** make your graded material available to another student or website for students. **SAY NO WHEN ASKED.** Use properly referenced quotes and paraphrases that support your arguments and ideas. Provide proper references for any material that is not your own work, including personal communications. Students must identify people with whom they collaborate, and the nature of that collaboration. This Course Packet gives complete information on proper referencing.

Refrain from providing or asking for information about the content of lab exams.

Students should be aware that: Assignments are submitted electronically. We may randomly employ the use of plagiarism detection tools during the term. All matters involving academic honesty are **immediately** referred to the Executive Committee of Yale College. It's a heart break all around so please, take the late penalty and don't cheat to make a deadline or lighten the load.

<http://ctl.yale.edu/writing/using-sources/understanding-and-avoiding-plagiarism/what-plagiarism>

Summary of Assignments

Work on Chemical Tables during lab time with lab-mates

| | | |
|--------------------|--------------|------|
| Chem Table 2,3,4 | 10 | 5/31 |
| EP 3 | 10 | 6/2 |
| EP 4 | 10 | 6/2 |
| Chem Table 5, 6 | 10 | 6/5 |
| EP 5 | 10 | 6/7 |
| PLA | 100 | 6/10 |
| EP 6 | 10 | 6/12 |
| IR Worksheet | 50 (in lab) | 6/12 |
| Chem Table 7, 8, 9 | 10 | 6/13 |
| EP 7 | 10 | 6/14 |
| PLB | 100 | 6/17 |
| EP 8 | 10 | 6/19 |
| EP 9 | 10 | 6/21 |
| Notebook Check | 50 (in lab) | 6/26 |
| Exam | 150 (in lab) | 6/26 |