Pre-requisites
College credit for general chemistry lab II; concurrent with or after organic chemistry lecture I

Instructor
DR. CHRISTINE DIMEGLIO  christine.dimeglio@yale.edu
Office: 213 SCL    Office hours daily, after lecture and before/after lab

TAs
DR. JENNY MARTINEZ  jenny.martinez@yale.edu
Office:      Office hours daily, after lecture and before/after lab

Room
Organic lab room 233 SCL (3rd floor of Sterling Chemistry Lab). Student lockers are located in the hallway outside lab room for backpacks, etc. Purchase a lock to secure belongings.

Lab sections
Tuesday and Thursday, 12:30 pm until 4:30 pm, beginning Tuesday, May 28.

Required materials

1. **Course Packet**: Course information: experimentation schedule, due dates, grading guidelines, writing instructions, course policies, safety information, experimental procedures. It’s free at Canvas/Modules. Purchase a hardcopy from TYCO: [https://www.tycoprinting.com/](https://www.tycoprinting.com/)


   Lab Notebook: Reuse a notebook from another lab class if 1) it is capable of making copies for your TA and 2) there are plenty of pages remaining! **One example: ISBN-13: 978-0716739005**

   Rent/buy your materials online or at the Yale Bookstore.

3. **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](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.

4. **LOCK for student lockers**: Backpacks and other personal items are not permitted in lab. Lockers are located in the hallways outside of the lab rooms. Protect your belongings from thieves! YSS
students are the only people using lockers during summer, so you can use a locker with a lock to store lab appropriate clothing and shoes for the term.

5. **Proper Clothing**: pants that cover legs and ankles (no shorts, skirts or Capri pants), shoes that cover the ENTIRE foot (no sandals, flip flops or ballet type), no earbuds or head phones.

   **Important: we strictly enforce our dress code!**
   If you come to lab improperly dressed, you will need to leave, change and return. The running around is 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.

6. Thick Sharpie Markers® for writing on glassware.

**Additional 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.

**SCHEDULE OF EXPERIMENTATION AND DUE DATES (TENTATIVE)**
See the course packet for full information and assigned readings

KEY: EP = experimental plan; PL = post lab assignment; MP = melt point; IR = infrared; SN = nucleophilic substitution.

**Tu 5/28**  **Lab 1: Orientation, Check-In and Safety**
Safety lecture; tour of facilities; check-in; orientation to chemical ventilation hood; hazard analysis and preparing chemical information tables using safety data sheets (SDS)

**Lab 2: Exploration for Experimentation**
Demos and practice of techniques using the separatory funnel, vacuum filtration apparatus and melt-point instruments; exploring solubility of organic solids; preparing solutions, weighing materials and setting up the hood workstation for Lab 3.

Assigned: Read Course Packet through Lab 2 (due 5/28 by noon)

   Chemical Tables (in lab assignment)

**Th 5/30**  **Lab 3: Separation by Extraction**
Assigned: Quiz Safety Policies and Procedures (in lab, 20 points)

Assigned: EP-3 (due by noon 5/30, 10 points)

**Tu 6/4**  **Lab 4: Purification by Recrystallization/MP Analysis**
Assigned: EP 4 (due 6/4 by noon, 10 points)
**Th 6/6**  
**Lab 5: Thin Layer Chromatography (TLC) and Column Chromatography**  
Assigned: EP 5  
(assigned due 6/6 by noon, 10 points)  
PLA (Labs 1-5)  
(due 6/10 by 5 pm 100 points)

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**Tu 6/11**  
**Lab 6: IR Spectroscopy**  
Assigned: EP 6  
(due 6/11 by noon, 10 points)  
IR Worksheet  
(in lab, 50 points)  
Quiz on Functional Groups And Chromatography  
(in lab, 20 points)

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**Th 6/13**  
**Lab 7/8: Synthesis of an Ether by an S_N1 Mechanism**  
Assigned: EP 7/8  
(due 6/13 by noon, 10 points)

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**Tu 6/18**  
**Lab 9: Synthesis of an Ether by an S_N2 Mechanism**  
Assigned: EP 9  
(due 6/18 by noon, 10 points)  
Response 9  
(in lab, 20 points)

**Th 6/20**  
**Lab 10: Synthesis of Camphor**  
Assigned: EP 9  
(due 6/20 by noon, 10 points)  
PL B (Labs 6-10)  
(due 6/21 by 5 pm, 100 points)

**Th 6/20**  
**Exam Review @ 4:30 pm following Lab 10**

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**Tu 6/25**  
**Check-out, followed by exam**  
Assigned: Exam  
(in lab, 150 points)

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**Grades**  
Grades are calculated as (total points earned – penalties) / (total points available), and letter assigned at the end of the term by the instructor.

**Lab Penalties (Point Deductions)**  
- Late work: 5% per day, beginning the day the assignment is due.  
- Experimental Plan: if a student has not turned in an EP by lab time, the penalty is 10 points, nonrefundable. The student will prepare an EP before proceeding.  
- Unexcused absence: deduction of 20 points  
- Refusal to assist in lab housekeeping and safety practice – 5 points per refusal.
**Attendance**
Attendance at scheduled lab sessions is mandatory in summer session. Bring issues that hinder your ability to meet course responsibilities to instructor’s attention immediately.

**ACADEMIC INTEGRITY in O-Chem Lab**
The Chemistry Department Teaching Staff is committed to your personal and professional growth as a scientist. We hope that your future includes higher level teaching labs, research internships, graduate school and medical school. With these hopes in mind, we compose assignments with intention.

We need your help. Academic misconduct undermines our goals, derailing our intentions. When you know and follow the rules for your personal conduct, bench work and assignments, you become a partner in our work to deliver a quality course.

We will hold the line and defend academic integrity by reporting suspected academic misconduct to the executive committee for further review. **It is our goal to report no one from this course!** Help us meet our goal.

- **Work independently** in the lab and on lab assignments unless specifically instructed to work with others. This includes experimental plans, experimental notes, product data and spectra, reports and any other graded assignment.
- Do not divide the workload among peers using Google Docs, or any other system.
- Do not fabricate or falsify data. Discuss how to handle poor data or lack of data with the instructor.
- Do not copy and paste material into an assignment as if it were your own work, by any means. This includes material from course packets, textbooks, websites, another student’s work, past or present,
- Do not jeopardize another student’s academic integrity by asking that person to give you information or by giving a student your work to copy.
- DO NOT make your graded material available to another student or to a website for people who want to cheat.
- Cite sources appropriately. Identify people with whom you collaborate, and the nature of that collaboration. The section of the course packet called Citing Sources gives full instruction on these topics.
- Refrain from providing or asking for information about the content of lab exams or quizzes. The course is scaled; you hurt yourself and your section-mates when other students have such advantages.
- Two mantras: ACCEPT the LATE PENALTY. SAY NO WHEN ASKED.
- Visit the Yale Writing Center if you need more help understanding plagiarism.