

CHEM 2124 Syllabus Spring 2018
University of Texas at El Paso
Department of Chemistry
Organic Chemistry Laboratory
(CRN 24182, 22301, 23513, 24183)
Room Number CCSB: 1.0506 & 1.0508

Instructor of Record: Dr. Saideh Mortazavi (ssmortazavi@utep.edu)
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Teaching Assistant:

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Textbook: Text: Experimental Organic Chemistry A Small-Scale Approach, 2nd Edition,
Wilcox & Wilcox

Required Materials: (You will be turned away and earn a zero in attendance for missing safety attire!)

1. The book
2. Goggles (**not safety glasses**) A seal should form around your eyes.
3. Pants (not shorts) Your legs must be covered.
4. Shoes (not sandals) Your feet must be completely covered.
5. A lab coat

Course Objectives:

1. Become familiar with basic organic chemistry methods and techniques
2. Learn how to comply with laboratory safety polices (Know the dangers of each laboratory including how to mitigate your risk.)
3. Read and understand all the chapter and not just the experimental procedure.
4. Maintain a proper laboratory notebook
5. Make sure that you can draw all structures and mechanisms for each lab.
6. Be able to apply a given mechanism to other reagents because we are not just cooks!
7. Understand which fundamental mechanism you are applying (Addition, Elimination or Substitution) including the stereochemical consequences.
8. Understand whether a reaction is an oxidation, reduction or not a net redox reaction.
9. Be able to calculate the yield of a reaction.
 - structure to formula conversion,
 - formula to molecular weight conversion,
 - ml to grams via density and vice-versa,
 - grams to moles,
 - what is the limiting reagents,
 - what is the stoichiometry of the reaction.
10. Understand why a particular procedure was followed.
11. Learn how to follow proper chemical waste disposal procedures
12. Remember that this semester, this lab is your job.

Course Drop Deadline: March 29, 2018. It is the student's responsibility to officially withdraw from a course.

Grading Policy:

Your grade consists of:

- a) Adherence to laboratory safety, good laboratory technique, and laboratory hygiene (1/3)
- b) Pre-Lab Quizzes (1/3) Quizzes
- c) Post-Lab Reports (1/3) Reports will

Grade Cutoff: A > 89.5 %, B > 79.5 %, C > 69.5 %, D > 59.5 %

Attendance:

No makeup Pre-Lab Quizzes and/or Post-Lab Reports for unexcused absences will be accepted. Students who miss a lab for an unexcused reason will lose 100% of the credit for that week. However, for an **excused absence** proper medical documentation or university sanctioned event proof should be provided. Then, your TA may offer the makeup lab at another time he or she runs a lab or offer the makeup lab in another section with another TA. You **must arrange** for the grading to be transferred to your section.

Pre-Lab Quizzes and Post-Lab Reports:

All students are expected to have read the information about each lab in the Wilcox/Wilcox text book in advance, so you should be fully prepared for the weekly Pre-Lab Quizzes and Post-Lab Reports and for the laboratory activity of that day (please see the detailed schedule below). Therefore, students are expected to know about the day experiment and the structures of the chemicals they are working with. On the first day you will be given access to your 2124 course moodle through <http://organic.utep.edu/moodle> to do your Pre-Lab Quizzes and Post-Lab Reports throughout the semester. Use your email address (username@miners.utep.edu) and student ID to enter the first time; then you can change your password.

Pre-Lab Quizzes open at 12 am the day before the lab and close the midnight before your lab day. Post-Lab Reports open the midnight of the lab day and close the midnight before the next lab so that students concentrate only on the lab at hand. Therefore, students will have 24 hours to do a Pre-Lab Quiz and 6 x 24 hours to do a Post-Lab Report. **If you miss a Pre-Lab Quiz or a Post-Lab Report, there is no way of making up for it.** Please keep in mind that this is the time to focus on earning a good grade by attending the labs, and doing the quizzes and reports **ON TIME**. At the end of the semester nothing can be done to improve your grade.

Important Safety Rules:

- The basic safety rule in this course is that:
SAFETY GOGGLES and LAB COATS MUST BE WORN IN THE LAB AT ALL TIMES
- If you do not have Goggles, or refuse to wear them, then you will **NOT** be allowed to participate in the course activities, or remain in the lab. Wearing goggles is a State law, and you do not have the choice to not comply.
- Know where the eye wash, safety shower, and fire extinguisher are located
- Always know the danger of the chemicals you are working with, e.g. sulfuric acid. You should research the safety and chemical reactivity of all reagents before coming to class and ask your TA if you have any further questions.
- Wear closed shoes (no rubber slippers or open sandals)
- Long hair must be tied back
- Wear long pants (no skirts or shorts)

- No hats
- No food/drink items are allowed in a chemistry laboratory
- Keep your work space clean!
- If there is a chemical spill, inform the TA immediately.
- If you are injured (a cut, inhalation of toxic gases, acid burn on skin, etc.) inform your TA immediately. We are required to file reports of all injuries, no matter how minor, and also to offer you the option to seek medical aid.

Important Waste Information:

- None of the waste can go down the drain.
- Organic solvent waste, aqueous waste, solid waste, and glass waste is collected separately and placed into designated waste containers.
- You are not permitted to leave the lab without properly disposing of chemical waste.

Note that hoods and benches are labeled and your group which is made of two students will always work in the same hood/bench. All chemical activities are done in the hood. The bench is for maintaining your notebook and supplies for your activity. Please make sure that labeled equipment remains in the hood or on the bench that matches that labeling.

Experiment & Date	Lab Activity (Chapter)	Quiz Scheduled	Lab Report Due
Experiment 1 (Jan 26)	Laboratory Safety and check in		
Experiment 2 (Feb 2)	Melting Points (8.4A)	Quiz 1	N/A
Experiment 3 (Feb 9)	Crystallization (8.4B or 8.4C, & 8.4D)	Quiz 2	LR 1
Experiment 4 (Feb 16)	Simple and Fractional distillation (5.4A & 5.4B)	Quiz 3	LR 2
Experiment 5 (Feb 23)	Extraction (9.7B) and Sublimation (8.3)	Quiz 4	LR 3
Experiment 6 (Mar 2)	Chromatography (10.7A and/or 10.7B and/or 10.7C)	Quiz 5	LR 4
Experiment 7 (March 9)	SN1 reaction (18.3C)	Quiz 6	LR 5
Spring Break - (No Classes)	3/12/2016-3/16/2016		
Experiment 8 (Mar 23)	Chemical Kinetics (20.4)	Quiz 7	LR 6
Experiment 9 (Mar 30)	Synthesis of Aspirin (49.2A)	Quiz 8	LR 7
Experiment 10 (Apr 6)	E1 Reaction (21.5A)	Quiz 9	LR 8
Experiment 11 (April 13)	Synthesis of Isopentyl Acetate (modified 30.2)	Quiz 10	LR 9
Experiment 12 (Apr 20)	IR spectroscopy (Read Chapter 13) NMR Spectroscopy (Read Chapter 15)	Quiz 11	LR 10
Experiment 13 (Apr 27)	Check Out	N/A	LR 11