Chemistry 2325
Organic II Chemistry Lab
Fall 2017

Instructor: Dr. Don Davies
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Location: TY 377
Time: Mon.1:30- 4:30 p.m.
Office hours: MTWF 10:00 - 11:00 a.m.

Materials:

Chemistry 2325 lab Manual, Lloyd/Beishline/Davies (required)
Safety goggles (required)

Outcomes:

- Determination of chemical hazards and description.
- Perform reactions involving reflux, gas traps, and moisture sensitive compounds.
- Compound purification using chromatography, recrystallization and distillation.
- Use of spectroscopy to identify unknown organic compounds.

Laboratory Description

Pre-Lab	55 points (5 points/each)
Data & Post Lab	220 points (20 points/each)
Lab Final	30 points
Total	305 points

Pre-Lab

Pre-labs are designed to make you aware of hazards each experiment may present and to give you an overview of what the lab entails. Therefore, they are due at the **beginning** of the lab period, and will **not be accepted late**. If you choose to consult other students in a group, you must have complete ownership of any answers recorded in your pre-lab, and answers should be recorded in your own words. Never show your lab report to another student.

Data and Post Lab

Shown below is a schedule of experiments to be conducted this semester. **Notice the order of experiments does not coincide with the order they are listed in the manual**. Experiments are due at the end of the lab period of the day listed in the schedule below. **Late work will be subject to a 3 point deduction for each lab period after the due date.** If you must miss a lab, notify me as soon as possible. If the reason is acceptable and backed with evidence, you may make up the lab within one week of the scheduled lab.

Date	Experiment & Description	Due
8/28	Check in and introduction	
9/4	**No Lab - Labor Day**	
9/11	Experiment 11: NMR spectroscopy Begin Experiment 13: Diels - Alder reactions (Part A) Pre-lab is not due until 9/18	9/18
9/18	Finish Experiment 13: Diels - Alder reactions	9/25
9/25	Experiment 12: Chromatography	10/2
10/2	Experiment 14: Preparation of 2-(4-methylbenzoyl)benzoic acid	10/16
10/9	Experiment 17: Luminol	10/16
10/16	Experiment 15: Aldehyde and ketone semicarbazide derivatives	10/30
10/23	Experiment 16: Preparation of benzoic acid from Grignard reagent	11/6
10/30	Experiment 19: Preparation of Aspirin	11/6
11/6	Experiment 20: Preparation of Soap	11/13
11/13	Experiment 22: Identification of unknown aldose	11/20
11/20	Experiment 18: Aldol Condensation / **Check out**	11/27
12/4-12/8	Lab Final	

Lab Final

A comprehensive lab final will be given during finals week and will be administered in the testing center. There will be at least 1 question related to each experiment conducted throughout the semester. To prepare for this exam I would recommend that you review the pre-lab and post-lab of each experiment.

Minimum letter grade assignments are as follows:

A: 92 - 100%	B: 80 - 83.9%	C: 68 - 71.9%	D: 56 - 59.9%
A-: 88 - 91.9%	B-: 76 - 79.9%	C-: 64 - 67.9%	D-: 52 - 55.9%
B+: 84 - 87.9%	C+: 72 - 75.9%	D+: 60 - 63.9%	E: 0 - 51.9%

Safety

Preparedness

Come to lab properly dressed with safety goggles, closed shoes, long hair pulled back, no loose clothing. Long pants are encouraged. Nylon and polyester clothing is not advised since organic solvents tend to dissolve these materials. Come to lab knowing safety hazards associated with each chemical used (pre-lab). Having a basic understanding of each experiment beforehand will enhance the meaning of the lab for you and also will help you complete each lab in a timely manner, and acquire the necessary data.

Awareness

Be alert at all times. You may listen to music but headphones or ear buds are not allowed. Turn off your cell phones and keep them in your backpacks so they will not be a distraction.

Cleanliness

Cleanliness is essential to laboratory safety. Correctly clean up any spills immediately, especially in public work areas such as the reagent bench, sinks and hoods. Never sit on lab bench tops. Failure to clean work area before leaving will also result in a 3-point deduction from your lab score. Thoroughly wash hands before leaving lab.

General Information

Fees for this course are used to defray the cost of chemicals and other expendable laboratory materials, as well as for the purchase, maintenance and repair of laboratory equipment.

To help minimize lab fees, students should (are expected to) exercise careful use of chemicals, glassware, and laboratory equipment.