

CHEM 2153 Fundamentals of Organic Chemistry Lab - Spring, 2019

CHEM 2153 Lab Classes

Sec	Day	Time	Instructor	Location
01Z	M	2:00 pm - 4:50 pm	Mr. Boudreaux	CAV 227
02Z	T	2:00 pm - 4:50 pm	Mr. Boudreaux	CAV 227

Faculty Information

Mr. Kevin Boudreaux

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Office Hours: M-F 9:30-11, or by appointment

The first essential in chemistry is that thou shouldst perform practical work and conduct experiments, for he who performs not practical work nor makes experiments will never attain the least degree of mastery.

Jabir ibn Hayyan (Geber) (721-815)

Required Equipment

Safety Goggles

Prerequisite

You **MUST** have passed CHEM 1405 or 1411 to receive credit for this course!

Course Description

CHEM 2153 is the laboratory which accompanies the lecture course in Fundamentals of Organic Chemistry (CHEM 2153). This is a one-credit class which is *separate* from the lecture course; i.e., the lab grade is not included as a part of the lecture course grade.

Student Learning Outcomes

By the end of the semester the student should be able to:

- Understand how to safely work with chemicals.
- Perform several basic types of chemical purification procedures (distillation, recrystallization, etc).
- Understand the effect that the structure of a compound has on its physical properties.
- Perform several fundamental types of reactions involving organic chemicals.
- Be able to calculate theoretical and percent yields of chemical reactions.

Grading

There will be 13 experiments in this course. Each lab report will be worth 100 pts., including 5 points for lab performance and technique. The final grade will be obtained by averaging the scores from the individual labs. (The lowest score will be dropped.)

Labs

The procedures for each experiment will be made available on Blackboard the week before the scheduled date for the lab. It is your responsibility to download and print out the procedure and lab report forms for each lab.

Makeup policy

Labs which have been missed for valid reasons must be made up *no later than one week following the absence*.

Laboratory Dress

Beginning on the first day of lab, everyone **MUST** have approved goggles, long sleeves, long pants, and closed-toed shoes (no sandals, etc.). **Anyone not wearing the appropriate attire will not be allowed into lab.**

Cleanup Policy

Clean up your bench before leaving; make sure that the gas and water are turned off, and hotplates are unplugged. If the microscale kits are used, these kits must be returned with ALL of the glassware clean and dry. Five points will be deducted from the lab report grade for every piece of glassware which is missing, damaged, or dirty. **If the hoods and balances are left dirty at the end of the period, or reagents are left uncapped, lab performance points will be deducted from the entire class!**

Withdrawal from the course

Anyone dropping this class by **Thursday, March 28, 2019** will receive a grade of W. **No drops are allowed after this date.** If you need to drop the class, it is your responsibility to obtain the instructor's signature on any drop slip prior to that date.

Laboratory Schedule for CHEM 2153

This is the schedule of labs which will be performed this semester.

Week of:	Experiment
Jan 14	Lab Orientation and Safety Discussion
Jan 21	Experiment 1: Identification of an Unknown Solid by Melting Range
Jan 28	Experiment 2: Simple Distillation of an Organic Liquid
Feb 04	Experiment 3: Steam Distillation of Limonene
Feb 11	Experiment 4: Recrystallization of Acetanilide
Feb 18	Experiment 5: Isolation of Trimyristin from Nutmeg
Feb 25	Experiment 6: Paper Chromatography of Amino Acids
Mar 04	Experiment 7: Dehydration of Cyclohexanol
Mar 11	SPRING BREAK
Mar 18	Experiment 8: Nitration of Methyl Benzoate
Mar 25	Experiment 9: Reduction of Camphor to Isoborneol
Apr 04	Experiment 10: Preparation of Aspirin
Apr 08	Experiment 11: Preparation of Soap
Apr 15	Experiment 12: Polymers — Nylon and Slime
Apr 22	Experiment 13: Supercritical Carbon Dioxide — Limonene Revisited
Apr 29	Lab Cleanup