
Chemistry 305 Laboratory Spring 2014

Lab Room: Cowley 460

Professor: Nicholas McGrath, Ph. D.

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Office: 4009 Cowley Hall

Time: T/Th 7:45-10:50 AM

Phone: 608-785-8287

Office Hours: Mon. 9:00-10:30

Tue. 11:00-12:30

Lab Materials

- ❖ Lab Goggles: Available in the Chemistry Stockroom for ~\$5
- ❖ Text: Pavia, Lampman, Kriz, and Engel, Introduction to Organic Laboratory Techniques, A Small Scale Approach, Third Edition, 2013.
- ❖ Carbon Copy Lab Notebook: Keeping a quality notebook is essential for success in this course. You will be able to use your notebook on the exams, which should add motivation to keep a thorough notebook.
- ❖ Lab Handouts: A lab handout comprised of background information and complete experimental procedures will be given out during the lab period preceding any new experiment. Each experiment also has associated reading in the lab text (Both background reading and New Techniques). This additional reading will be listed in the lab handout and should be completed prior to each experiment. You will be responsible for all pre-lab reading at the start of each lab period.

Graded Work:

1. Notebook Pages (60 Points)

You will turn in the carbon-copy notebook pages for each experiment that you perform in lab. Each experiment will be worth 5 points and the score will be determined by various criteria including but not limited to: content (including each section outlined in the notebook handout), organization, and neatness.

2. Summary Pages (120 Points)

Each experiment will have an associated summary page including post-lab questions that will be used to highlight the main calculations and results from each experiment. This summary page will be handed out during the experiment and should be attached as a cover page for the notebook pages that you turn in after each lab. The summary page for each experiment will be worth 10 points.

3. General Lab Practices (40 Points)

Throughout the semester, your general lab technique will be evaluated. This will include wearing goggles at all times during lab, properly locking your drawers after lab, demonstrating the ability to properly set-up a reaction apparatus as detailed in the lab handout, and following all the lab safety practices as outlined in the lab safety handout.

4. Pre-Lab Quizzes (60 Points)

At various points during the semester you will be given a pre-lab quiz at the start of lab to ensure that you are keeping up with pre-lab reading and are prepared for lab prior to each experiment.

5. Exams (120 Points)

There will be a midterm (60 pts) and final exam (60 pts) covering the experiments from the semester. The midterm will cover the first 6 experiments and the final exam will cover the final 6 experiments.

Total Course Points: 400 pts.

Lab Grades Breakdown:

A	93-100
AB	90-92
B	86-89
BC	80-85
C	70-79
D	60-69
F	59 and below

Absences

Attendance to every scheduled lab period is mandatory. If you are unable to attend lab due to illness or an emergency, you must contact me before the start of the lab period. In emergencies when this is not possible, you need to contact me within 24 hours of the start of your scheduled lab time. Any missed work for unexcused absences will not be accepted for credit. Missed work for excused absences will need to be made up by the student in a timely fashion.

Academic Dishonesty

You are expected to maintain a high level of academic honesty and integrity, and any indication that these standards are not being met will be confronted. **Plagiarism, cheating, and copying the work of fellow (past or present) students will invoke severe penalties and may lead to dismissal from the University.** For complete details of UW-L's policy on student conduct, please refer to the following website: http://www.uwlax.edu/studentlife/academic_misconduct.htm.

Disabilities

Any student with a documented disability (e.g., physical, learning, psychiatric, vision, hearing, etc.) must contact the instructor and the Disability Resource Services (DRS) office in 165 Murphy Library at the start of the semester to arrange for any reasonable accommodations. Students who are currently using the DRS will have a copy of a contract that verifies they are qualified students with disabilities who have documentation on file in the DRS office

Schedule of Experiments

Date	Experiment
1/28	Introduction, safety, notebooks, glassware, check-in
1/30, 2/4	Preparation of Acetylsalicylic Acid (Aspirin)
2/6, 2/11	Nitration of Methyl Benzoate
2/13, 2/18, 2/20	Preparation and Addition of Phenyl Grignard to Benzophenone
2/25, 2/27	Simple and Fractional Distillation of Soluble Liquids
3/4, 3/6	(+)-Limonene Isolation
3/11, 3/13	Chlorophyll and Carotenoid Pigments from Spinach
3/18, 3/20	SPRING BREAK
3/25	MIDTERM EXAM
3/27, 4/1	Isolation of the Components of an Excedrin Tablet
4/3, 4/8	Sodium Borohydride Reduction of Benzil to Hydrobenzoin
4/10, 4/15	Pinacol Coupling of Benzaldehyde
4/10, 4/17	Synthesis and Identification of Unknown Esters
4/22, 4/24	Synthesis and Identification of Unknown Chalcones
4/29, 5/1, 5/6	Separation and Identification of a Binary Mixture
5/8	Catch-up and Check-out of Drawers
5/14	FINAL EXAM (7:45-9:45 PM)