

CHE 310-L-015
ORGANIC CHEMISTRY LABORATORY
Fall 2004 Tues; 9:25-12:25 Room SC 465

Prerequisite: CHE 121 and 121L
Pre or Co-requisite: CHE 310 Lecture

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Office Hours: *by appointment*

Text: "Experiments in Organic Chemistry," J. S. Nimitz
"Organic Chemistry I Laboratory Supplement"
Equipment: Safety glasses
Laboratory research notebook

LABORATORY SCHEDULE

| DATE | EXPERIMENT | Pgs. | TEXT |
|-------------|---|-------------|-------------|
| 08/24 | Check in / Melting Point | 1-28 | 1 |
| 08/31 | Recrystallization | 1-30 | 1.1 |
| 09/07 | Unknown-Purification and Identification | 1-33 | 1.3 |
| 09/14 | Fractional Distillation | 34-44 | 2.1 |
| 09/21 | Acid-Base Extraction | 45-61 | 3.1 |
| 09/28 | Thin-Layer Chromatography | 63-71 | 4.1 |
| 10/05 | Column Chromatography | supplement | |
| 10/12 | MID-TERM EXAM | | |
| 10/19 | Fall break; no lab | | |
| 10/26 | Molecular Modeling | supplement | |
| 11/02 | Election day; no lab | | |
| 11/09 | Nucleophilic Substitution (S _N 1) | 120-124 | 11.1 |
| 11/16 | Bromination/Stereochemistry | 95-101 | 8.1 |
| 11/23 | Dehydrohalogenation | supplement | |
| 11/30 | Carbocation Rearrangement | 246-252 | 23.2 |
| 12/07 | FINAL EXAM (covers entire semester) / Check out | | |

Note: During quizzes and exams calculators may be used, but not shared.

Copying information (answers to questions, mechanisms, etc.) from a current or former student's lab report is a violation of the Honor Code.

THERE ARE NO MAKE-UP LABS

ORGANIC LABS

GRADING SYSTEM

It is expected that each student enter the lab with a very good understanding of the theory behind the lab experiment and sufficient knowledge of the procedure so that he or she can begin working immediately.

Each student is also expected to know how to set up and perform the basic techniques in organic chemistry lab (melting points, distillation, extraction, and recrystallization). The instructor will, in general, not answer questions about these techniques **once they have been performed**.

The pre-lab lecture will consist of a brief review of the theory behind the experiment, safety features, and changes in the experimental procedure, if any.

Grading of your lab reports will be based on your write-ups (completeness, clarity, brevity, sentence structure, style, and format), observations, conclusions, calculations, and yield and purity of products. These lab report grades will represent about 45% of your final grade. A written mid-term and final exam will be given. These tests will represent about 40% of your final grade. Pre-lab quizzes will be given occasionally. They will represent about 15% of your final grade. In the past, students who have obtained greater than *ca.* 83% of the total points in the lab have received an **A**; between *ca.* 71-83% **B**; between *ca.* 56-71% **C**; less than *ca.* 56% **D**; less than *ca.* 48% **F**.

Note: Lab write-ups are due at the end of every lab; lab supplement data sheets are due at very beginning of the following lab period.

This Syllabus Subject to Change