
CHEM 2422L/3422L: ORGANIC CHEMISTRY II LAB

Spring 2008

Section 1: Monday, 2 - 5 PM;

TLC 3107

Dr. Ray, TLC 2123, 678 839-6023

psray@westga.edu

Office Hours: MWF 8:30 AM - 11:00
AM & 12:00 PM - 1:00 PM

Course Material: Required Text: *Macroscale and Microscale Organic Experiments*, Williamson, 5th Edition

A hardcover notebook with sewn pages is required

Safety Glasses are required to be worn at all times and can be purchased from the [Chemistry Club](#).

Objectives: To apply the knowledge obtained in Chem 3422 lecture to problem solving in the laboratory. To develop good laboratory techniques; work safely; take data carefully; record relevant observation; use time effectively; assess the efficiency of your experimental method; plan for the isolation and purification of substances you prepare; and characterize substances you prepare by physical and spectroscopic means and synthesize organic substances.

Tardiness / Missed Lab: Lab attendance is mandatory. Unexcused absences will result in a grade of zero. No make-up labs will be permitted. At the beginning of each laboratory we will discuss the laboratory. You must be present. Lateness will be penalized by deduction from the grade for that lab.

Policies: Read all laboratory material before coming to lab. The labs will require preparation and careful work to complete in the allotted time. After completion of the lab, the reports are due the following lab period. The format of these reports will vary and will be discussed in lab. Late reports will incur a 10% penalty for each day the report is late.

Academic Misconduct: Honest in reporting results is one of the essential characteristics of your laboratory work. Little of your grade depends on getting "good" quantitative results. You will be more severely penalized for misrepresenting results than for honestly reporting "poor" results. Copying lab reports (any part) shall be considered academic misconduct and as a result, will be penalized to the fullest extent possible.

Grades:

Instructor points: 10%, Experiments: 70%, Lab Final: 20%

Instructor points: your instructor will assign points based upon your efficiency, pre-lab preparation, cooperation, attitude, performance, and cleanliness.

Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, <59 F

Learning Outcomes

1. To communicate organic chemistry with clarity. Attainment of this learning outcome will be reflected by the students' abilities to:
 - Follow oral and written instructions to successfully complete laboratory assignments.
 - Work with other student in assigned group projects.
 - Maintain a laboratory notebook.
 - Write formal laboratory report as chemists write.

2. Apply available information technology to conduct library research in the field of chemistry. Attainment of this learning outcome will be reflected by the students' abilities to:
 - Using references sources, ascertain the physical properties, hazards and handling precautions of all reagents and products used.
 - Conduct library search on projects as assigned.

3. Demonstration of a working knowledge of organic synthesis and characterization.
Successfully completing laboratory assignments.

LABORATORY SCHEDULE:

Week of	Experiment	Report
Jan 14	Check in & Chapter 50: p-Terphenyl by the Diels Alder reaction	Data sheet
Jan 28	Chapter 29. Preparation of 1,4-di-t-butyl-2,5-dimethoxybenzene (Friedel-Crafts alkylation)	Data sheet
Feb 4	Chapter 28. Nitration of methyl benzoate	Data sheet
Feb 11	Chapter 26: Sodium borohydride reduction of 2-methyl cyclohexanone	Data sheet
Feb 18&25	Chapter 38. Grignard Synthesis of triphenylmethanol	Formal report + data sheet
Mar 3	Chapter 39. Synthesis of trans-9-(2-phenylethenyl)anthracene(Wittig reaction)	Data sheet
Mar 10	Chapter 36. Derivative formation of aldehydes and ketones	Data sheet
Mar 17	Spring Break	
Mar 24	Chapter 40. Esterification: Synthesis of benzylacetate	Formal report + data sheet
Mar 31	Honors Day Week. No Lab	
Apr 7	Chapter 37. Dibenzalacetone by the aldol condensation	Data sheet
Apr 14	Chapter 44. Synthesis of 2-iodobenzoic acid. Sandmeyer reaction	Data sheet
Apr 21	Check out and final exam.	