

Spring 2008
Brief Organic Chemistry Laboratory; CHE 215-01
Lab: Tuesdays 8:30-10:20 am in BL 312 then BL 432

Instructor: Dr. Edie J. Banner

Office: BL 411B; 809-6626 **Research Lab:** BL 411D

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Office Hours: 10:30 – 11:30 MTWF; or by appointment.

“Open Door Policy”: if the door’s open, stop by.

I. Title: Organic Chemistry Laboratory (1 cr.)

II. Catalog Description: Two hours of laboratory per week to accompany CHE 210 which is a co-requisite.

III. Purpose: To become familiar with properties of organic compounds and techniques of working with them.

IV. Course Objectives: To acquire experience with basic laboratory techniques in organic chemistry and to develop an understanding of the physical and chemical properties of organic compounds.

V. Content Outline: Laboratory Schedule:

Date	Lab
Jan 15	Introduction; lab safety; check in
Jan 22	Melting point
Jan 29	Distillation
Feb 5	Thin-layer chromatography
Feb 12	Physical Properties
Feb 19	Recrystallization
Feb 26	Extraction
Mar 4	Test 1 (6 Techniques)
Mar 11	Stereochemistry
Mar 18	No Class – Spring Break
Mar 25	Electrophilic aromatic substitution
Apr 1	Nucleophilic substitution
Apr 8	Alcohols and phenols
Apr 15	Aldehydes and ketones
Apr 22	Synthesis of Aspirin
Apr 29	Test 2 (6 Experiments)

Check-out. Note: a \$25.00 fee will be charged to students who do not check out of the lab on the last day of lab.

VI. Instructional Activities: Prelab lectures and laboratory experiences.

VII. Field, Clinical and/or Laboratory Experience: 2 hours of laboratory per week:

Check in: January 15, 2008: Assignment of an individual locked chemistry supply cabinet. You must check in at the first lab meeting scheduled, otherwise you **will not** be allowed to continue with the class.

Weekly lab experiences: The appropriate section in the lab manual must be read prior to coming to pre-lab lectures given in BL 312. During the pre-lab period additional information pertaining to that week's experiment will be discussed, after which you will proceed to BL 432 to carryout the procedure. Unless otherwise notified, you will work individually.

Safety: To comply with safety regulations all students are **required** to wear approved safety goggles during lab periods. Shorts and open toe shoes cannot be worn in the labs. Goggles are usually available for purchase in the hall outside the Chemistry Office.

Check out: April 29, 2008: Students **must** check out during the last lab period scheduled. Failure to check out at the designated time will result in a fee of \$25.00. **If you drop the class you still must check out on or before the final lab period.**

VIII. Resources: Lab Manual, handouts and **“Blackboard”** on the MSU website.

Laboratory resources: Individual locked chemistry supplies cabinet.

Cabinets/Shelves in lab contain additional supplies and equipment.

Chemistry Stockroom: Materials may be signed out from the stockroom during the lab period.

Your student I.D. may be required.

IX. Grading Procedures:

The laboratory grade will be based upon lab reports and tests.

Lab reports: There will be 12 lab reports which consist of a written report of that week's laboratory experience. The lab reports are to be **turned in at the end of each lab period unless otherwise notified.** The grading of the report takes into account your laboratory performance as well as your written observations and results.

Quizzes: Quizzes will be given promptly at the start of the pre-lab meeting. These will be based on the previous lab and will contain at least one question about that day's lab.

Lab tests: There will be 2 one-hour laboratory tests which will evaluate your understanding of the procedures utilized in the previous experiments, the applications of such procedures and subsequent interpretation of the data obtained.

Safety: Safety is a critical factor in the chemistry laboratory. Your points allotted for safety awareness will be “docked” for each safety violation.

Grade determination will be based on the following point scale:

Lab reports	12 at 15 points each	180 points
Quizzes	12 at 10 points each	120 points
Tests (1 hour)	2 at 100 points each	200 points
Safety		<u>30 points</u>
	Total	650 points

Letter grades will be assigned based on the percentage of total points earned as follows:

A = 90-100%; **B** = 80-89%; **C** = 70-79%; **D** = 60-69%; **E** = 59% or below.

X. Attendance Policy: Attendance is **required** for the pre-lab and laboratory portions. Make up labs will not be allowed due to logistical problems and additional safety hazards when they are carried out while the class is performing other scheduled experiments. For additional information refer to the attendance policy outlined in the current *MSU Undergraduate Bulletin*.

XI. Academic Honesty Policy: The academic honesty policy outlined in the current *MSU Undergraduate Bulletin* will be followed. The definition of academic dishonesty from that policy is provided here for your convenience.

“Academic Dishonesty: Cheating, plagiarism (submitting another person’s material as one’s own), or doing work for another person which will receive academic credit are all impermissible. This includes the use of unauthorized books, notebooks or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers or the presentation of unacknowledged material as if it were the student’s own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place.”

XII. Text and References:

Lab Manual: Brief Organic Chemistry Laboratory by D. E. Turner (**required**)

Other References: The current CHE 210 textbook or other short organic chemistry textbook.

XIII. Prerequisites: CHE 210, which is a co-requisite

XIV. Statement of Affirmative Action and Equal Opportunity: *Murray State University does not discriminate on the basis of race, color, national origin, sex, religion, marital status, age or disability in employment, admission, or the provision of services, educational programs and activities, and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities an equal opportunity to participate in all programs and activities. For information regarding nondiscrimination policies contact the Office of Equal Opportunity, 270-809-3155.*