

**Chemistry 221**  
**Organic Chemistry Lab**  
**Fall 1998**

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**Instructor:**

Ms. Harmon  
Pierce 202  
784-8341

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**Required:**

Text: Campbell, B.N. Jr. and Ali, M.M., "Organic Chemistry Experiments, Microscale and Semi-Microscale". Brooks/Cole Publishing Company, Pacific Grove, California, 1994.

Bound carbon copy notebook with numbered pages  
Safety Glasses

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**Course Objectives**

Students enrolled in this course should gain an understanding of the fundamental theories and techniques of separation, purification, and identification of organic compounds. An emphasis will be placed on learning and understanding the need for safe laboratory practices.

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**Laboratory Notebook**

Bound carbon copy notebook with numbered pages.  
All data must be recorded in your notebook in permanent ink.  
All entries must be written in 3rd person.

**Notebook format:**

- \*Title
- \*Description and purpose of the technique
- \*Chemicals that will be used and their properties (obtain this information from the handbooks available in the lab or the library)
- \*Outline of the procedure (brief and in your own words - do not copy the procedure directly from the book)
- \*Drawing of experimental setup
- Observations (notes taken during the experiment & any changes in procedure)
- Results
- Discussion (theory behind the procedure and what was expected to happen)
- Conclusions
- Answers to assigned questions

\*The carbon copy of the items marked with an asterisk is due at the beginning of each lab session. The carbon copy of the rest of the lab write-up is due at the beginning of the next lab session.

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## Safety

Safety glasses and closed toed shoes must be worn in the laboratory. All long hair must be tied back and legs must be covered to the knee.

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## Formal Reports

Scientific reports will be required for the following experiments:

Caffeine Extraction	Exp 9A	Due 1:00 Fri., Oct 30
TLC	Exp 11	Due 1:00 Fri., Nov 13
Steam Distillation	Exp 7A	Due 1:00 Fri., Nov 27

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## Grading Criteria

10 Notebook laboratory reports (50 pts each)	500 pts
3 Formal reports (100 pts each)	300 pts
Lab practical	100 pts
Written lab final	100 pts

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Total	1000 pts
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\*\*Late notebook and formal reports will not be accepted.

Grades are normally assigned as follows:

93-100 A	77-79 C+
90-92 A-	73-76 C
87-89 B+	70-72 C-
83-86 B	67-69 D+
80-82 B-	60-66 D
	Below 60 F

## Chemistry 221 Lab Fall 1998

Week of:	Topic	Experiment	Assigned Reading
Aug 31	Melting Points	Exp 2	2.1A, 2.2D, 2.2E
Sept 7	<b>NO LAB</b>		
Sept 14	Recrystallization	Exp 3A	2.3A, B, C, D, E, G
Sept 21	Simple Distillation Boiling points	Exp 4A	3.1A, 3.2, 3.3, 3.4
Sept 28	Fractional Distillation	Exp 4C	3.1B
Oct 5	Extraction	Handout	4.1, 4.1C. 4.4A, D,G
Oct 12	<b>Fall Break!!!!</b>		
Oct 19	Caffeine Extraction Sublimation	Exp 9A	
Oct 26	Chromatography Column Chromatography	Exp10 A	4.2, 4.2A
Nov 2	TLC	Exp 11	4.2C
Nov 9	Gas Chromatography HPLC	Exp 12	4.2D
Nov 16	Steam Distillation HPLC	Exp 7A	3.6
Nov 23	<b>Lab Practical</b>		
Nov 30	<b>Written Lab Final</b>		