

**Citrus College
Course Syllabus**

**O. Chem. 211L
Fall 2010**

Prof. Badieh Farahani

Office: PS 206 **Phone:** (626) 914-8729 **Office Hours:**

E-Mail: bfarahani@citruscollege.edu

Website: www.citruscollege.edu/academics/courses/farahani

Text: Macroscale and Microscale Organic Experiments; Williamson, Masters; 6th edition, 2011

Supplement: Available on the website.

Grading: 90%⁺ = A 80-89% = B 65-74% = C 50-64% = D

Evaluation	10%
Final Exam	20% (F. 12/10 – 8:10-9:30 am)
Pre-Lab	30%
Lab Report	40%

Evaluation: Following safety rules, punctuality, organization, cleaning work area.

Final Exam: Open books and notes.

Pre-Lab: A write up of the experiment is due at the start of the lab period in a laboratory notebook (with copy). You will use your copy to perform the experiment. No lab text is allowed in the lab. Pre-lab for a two-week experiment is due the first week. No late pre-lab is accepted.

Format of the pre-lab: The following order must be followed to get full credit!

1. Name and date
2. Experiment title
3. Equations for the reactions (see page 3)
4. Table of physical properties (see page 3)

<u>MW</u>	<u>BP</u>	<u>MP</u>	<u>Density</u>	<u>Solubility</u>	<u>Weight</u>	<u>Mole</u>
Reactants						
Products						Theoretical Yield
Solvents						

5. Procedure: must be detailed and in your own words (a copy of the text is not accepted). Waste disposal must be included.

6. Diagram (figures) of the experimental set-up. All parts must be labeled (see page 2)

Lab Report: A formal (typed) write-up of the experiment is due one week after the completion of the experiment. No lab report is accepted without doing the experiment. No late lab report is accepted.

Format of the lab report: The following order must be followed to get full credit.

1. Name and date
2. Experiment title
3. Data: names and quantities, and physical properties (mp, bp, color, state,...) of reactants and products.
4. Calculations

5. Discussion: A one page discussion of the experiment (procedure is not acceptable). Lab Report must include definitions, reagents, solvents, products, techniques used, work-up (purification), equations, and mechanism.
6. IR labeled.

Important Notes:

1. Two absences from the lab will result in drop from the class.
2. All products must be placed in a vial – labeled with your name, the name of the product, date, and turned in to me!
3. All work submitted with your name on it is assumed to be original (your own work). Any deviation will be dealt based of the “Citrus Community College Code of Conduct Rule”.

Lab Schedule – O. Chem. 211L – Fall 2010

Date	Chapter	Experiment	Reading Pages	Figures
9/10	1, 2	Safety Rules, Lab Procedure, Check-in	1-40	none
9/17	3, Sup.*	Melting Point Determination (Sup)	41-53	none
9/24	4, Sup.	Crystallization (Sup)	67-77, 83-84	4.7, 4.8, 4.21
10/1	7, Sup.	Liquid-Liquid Extraction (Sup)	131-141	7.2
10/8	5	Simple & Fractional Distillation (#4, #5)	86-92, 96-100	5.10, 5.11
10/15	8	Thin Layer Chromatography (#1)	164-183	8.6, 8.7, 8.10
10/22 & 10/29	Sup.	Synthesis of Butyl Methyl Ether (Sup)	Sup.	16.2
11/5	17	Nucleophilic Substitution Reactions in Alkyl Halides (#1, #2)	318-325	none
11/19	19, Sup.	Preparation of Cyclohexene (#2) Distinguishing between Alkanes & Alkenes	334-339 Sup.	19.2
12/3	20	Purification of Cholesterol (#2, #4)	340-345	4.21
12/10	-	Final Exam, Check-out		

Sup.* = Supplement (on the website)

You Must Wear Goggles at All Times in the Lab!



The most important aspect of safety is prevention
 In case of spill wash with plenty of water.
 In case of fire get out!

<u>Experiment</u>	<u>Remarks</u>	<u>Table of Physical Properties</u>
Melting Point	No Rxn.	Table 1. (Sup)
Crystallization	No Rxn.	Benzoic Acid, Water
Liq-Liq Extraction	No Rxn	Adipic acid, Water, Ether
Distillation	No Rxn.	Toluene, Cyclohexane
TLC	No Rxn.	All structures and their names on page 176
Ether Synthesis	Rxns. In the Sup.	Methanol, Sodium, 1-bromobutane Buthyl Methyl Ether
Nucleophilic Substitution Reactions	No Rxn.	Structure of all reagents, and their names on page 323, & 324
Cyclohexene Synthesis	Rxn. Synthesis	Cyclohexanol, Cyclohexene
Purification of Cholesterol	Rxn. Synthesis	Cholesterol

Alexander William Williamson (1824-1904) was born in London of Scottish parents. As a child he lost an arm and use of an eye. He was midway through his medical education when he changed his mind and decided to study chemistry. In 1849 he became a professor of chemistry at University College, London