

ORGANIC CHEMISTRY LABORATORY I
(CHEM 117) 2.0 CREDITS
Summer 2022

Instructor: Dr. Ron Davis, Jr.
voice: 202-687-3566
email: rbd34@georgetown.edu
AIM: OChemNinja
Course Website: <http://cndls.georgetown.edu/blackboard/>

Text: Required: Chem 117 course pack (available at Georgetown University Bookstore)
Recommended: McMurray, Organic Chemistry (Lecture Text, on reserve in 103 Basic Science)

Teaching Assistant

Name: _____ Contact: _____

Course Objectives:

By the end of this course, the student should be able to:

- understand and follow common safety practices when working in a synthetic organic chemistry laboratory
- select, design and execute an appropriate purification strategy for a variety of organic chemical mixtures
- produce proper in-lab documentation of experiments
- draw and use professional quality reaction schemes and mechanisms using electronic applications
- explore the chemical literature using a variety of modern search and retrieval tools
- locate, read, cite and produce professional quality chemical literature
- execute and report on a simple synthetic organic chemistry experiment

Course Policies

Course safety and administrative policies are outlined in separate documents. Please be sure read all of the following documents (available in the 'Course Documents' section of Blackboard and in the pages of this lab companion) to be sure that you fully understand all course policies:

- Safety Contract
- Course Policies
- Online Report Submission Instructions
- Waste Handling
- Report Writing Guidelines.

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Semester Schedule
(Tue meetings in classroom, Wed-Fri meetings in lab)

Tues, June 7	-Introductory Lecture -Melting Points and Recrystallization Lecture -Boiling Points and Distillation Lecture	Davis (1 – 4)	None	
Wed, June 8	Check In, Lab Equipment Intro and Safety Tour			None
Thurs, June 9	Recrystallization Experiment		CHEM117-01	
Fri, June 10	Distillation Experiment		CHEM117-02	
Tues, June 14	-Thin Layer Chromatography Lecture -Liquid-Liquid Extraction Lecture	Davis (5 – 6)		Write-up 1&2 due
Wed, June 15	TLC experiment		CHEM117-03	
Thurs, June 16	Acid-Base Extraction Experiment		CHEM117-04	
Fri, June 17	Acid-Base Extraction Experiment (<i>continued</i>)		CHEM117-04	
Tues, June 21	- Column Chromatography Lecture - Chiral Separations and Polarimetry Lecture - Literature and Drawing Lecture	Davis (6 – 9)		Write-up 3&4 due
Wed, June 22	Separation of Plant Pigments Experiment	<i>supplemental</i>	CHEM117-05	
Thurs, June 23	Optical Activity Experiment <i>Intro to Polarimetry</i>	<i>supplemental</i>	CHEM117-06	
Fri, June 24	Literature and Drawing	<i>handout</i>	CHEM117-07	Take Home
Tues, June 28	- SN1 Reaction Lecture - E1 Reaction Lecture	TBA		Write-up 5&6 due
Wed, June 29	Substitution Reaction: Solvolysis of <i>t</i> -butyl bromide		CHEM117-08	Assignment 7 due
Thurs, June 30	Elimination Reaction: Alkenes from Alcohols		CHEM117-09	
Fri, July 1	Make Up Session			
Tues, July 5	Lab Exam			Reports 8 & 9 due
Wed, July 6	University Closed			
Thurs, July 7	Check Out			

Grading Scale:

Online Lab Safety Quiz:	3%
6 Laboratory Worksheets/Write-ups:	48%
Literature and Drawing Assignment	8%
2 Laboratory Reports:	26%
Lab Final Exam:	15%
Total	100%