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.
### Semester Schedule

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

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Notes</th>
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| Tues, June 2 | - Introductory Lecture  
- Melting Points and Recrystallization Lecture  
- Boiling Points and Distillation Lecture | Davis (1 – 4)  
None |
| Wed, June 3 | Check In, Lab Equipment Intro and Safety Tour | None |
| Thurs, June 4 | Recrystallization Experiment | CHEM117-01 |
| Fri, June 5 | Distillation Experiment | CHEM117-02 |
| Tues, June 9 | - Thin Layer Chromatography Lecture  
- Liquid-Liquid Extraction Lecture | Davis (5 – 6)  
Write-up 1&2 due |
| Wed, June 10 | TLC experiment | CHEM117-03  
Write-up 1&2 due |
| Thurs, June 11 | Acid-Base Extraction Experiment | CHEM117-04 |
| Fri, June 12 | Acid-Base Extraction Experiment (continued) | CHEM117-04 |
| Tues, June 16 | - Column Chromatography Lecture  
- Chiral Separations and Polarimetry Lecture  
- Literature and Drawing Lecture | Davis (6 – 9)  
Write-up 3&4 due |
| Wed, June 17 | Separation of Plant Pigments Experiment | supplemental  
Write-up 3&4 due |
| Thurs, June 18 | Optical Activity Experiment  
*Intro to Polarimetry* | supplemental  
CHEM117-06 |
| Fri, June 19 | Literature and Drawing | handout  
CHEM117-07  
Take Home |
| Tues, June 23 | - SN1 Reaction Lecture  
- E1 Reaction Lecture | TBA  
Write-up 5&6 due |
| Wed, June 24 | Substitution Reaction: Solvolysis of *t*-butyl bromide | CHEM117-08  
Write-up 5&6 due |
| Thurs, June 25 | Elimination Reaction: Alkenes from Alcohols | CHEM117-09  
Assignment 7 due |
| Fri, June 29 | Make Up Session | Reports 8 & 9 due |
| Tues, June 30 | Semester Review | Lab Exam  
Take Home |
| Wed, July 1 | Lab Exam | Chec Out  
Reports 8 & 9 due |
| Thurs, July 2 | Check Out | |

A tentative standard rubric of 90.0-80.0-70.0-60.0 will apply to the grades

+/- cutoffs will be determined at the end of the term, but will not exceed +/- 3.0%

Canvas website Grade Book calculations will be considered official

Rounding of final scores will be done at the discretion of the instructor

### Grading Scale:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Online Lab Safety Quiz:</td>
<td>3%</td>
</tr>
<tr>
<td>6 Laboratory Worksheets/Write-ups:</td>
<td>48%</td>
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<tr>
<td>Literature and Drawing Assignment</td>
<td>8%</td>
</tr>
<tr>
<td>2 Laboratory Reports:</td>
<td>26%</td>
</tr>
<tr>
<td>Lab Final Exam:</td>
<td>15%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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