CHEM 3422L: ORGANIC CHEMISTRY II LAB
Summer 2018

Section 1: MW: 2-5 PM
TLC 3107
Dr. Ray, TLC 2123, 678 839-6023
psray@westga.edu
Office Hours: MW 10-11 AM & 5-6 PM

Course Material:

- You must purchase the UWG Organic Chemistry II Laboratory Manual for CHEM 3422L from the university bookstore.

- Safety glasses are required to be worn at all times and can be purchased ($5) the first day of lab.

- A composition notebook to take notes during the pre-lab lecture and record laboratory data.

Objectives: To apply the knowledge obtained in Chem 3422 lecture to problem solving in the laboratory. To develop good laboratory techniques; work safely; take data carefully; record relevant observation; use time effectively; assess the efficiency of your experimental method; plan for the isolation and purification of substances you prepare; and characterize substances you prepare by physical and spectroscopic means and synthesize organic substances.

Tardiness / Missed Lab: Lab attendance is mandatory. Unexcused absences will result in a grade of zero. No make-up labs will be permitted. At the beginning of each laboratory we will discuss the laboratory. You must be present. Lateness will be penalized by deduction from the grade for that lab.

Policies: Read all laboratory material before coming to lab. The online prelab homework is due by 10 AM on the day of the lab. The labs will require preparation and careful work to complete in the allotted time. After completion of the lab, the reports are due the following lab period. The format of these reports will vary and will be discussed in lab. Unexcused late reports will not be accepted.

Academic Misconduct: Honest reporting of results is one of the essential characteristics of your laboratory work. Little of your grade depends on getting "good" quantitative results. You will be more severely penalized for fabricating results rather than for honestly reporting "poor" results. Copying lab reports (any part) shall be considered academic misconduct and as a result, will be penalized to
the fullest extent possible.

**Grades:**

Instructor points: 5%, Online Prelab Homework: 20%, Lab Reports: 50% Lab Final: 25%

Instructor points: your instructor will assign points based upon your efficiency, pre-lab preparation, cooperation, attitude, performance, and cleanliness.

Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, <59 F

**Learning Outcomes**

1. To communicate organic chemistry with clarity. Attainment of this learning outcome will be reflected by the students' abilities to:

   - Follow oral and written instructions to successfully complete laboratory assignments.
   - Work with other students in assigned group projects.
   - Maintain a laboratory notebook.
   - Write formal laboratory report as chemists write.

2. Apply available information technology to conduct library research in the field of chemistry. Attainment of this learning outcome will be reflected by the students' abilities to:

   - Using references sources, ascertain the physical properties, hazards and handling precautions of all reagents and products used.
   - Conduct library search on projects as assigned.

3. Demonstration of a working knowledge of organic synthesis and characterization. Successfully completing laboratory assignments.

**All Students Please Note!**

For important policy information, i.e., the UWG Honor Code, Email, and Credit Hour policies, as well as information on Academic Support and Online Courses, please review the information found in the Common Language for Course Syllabi documentation at [http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf](http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf). Additions and updates are made as institution, state, and federal standards change, so please review it each semester.
LABORATORY SCHEDULE Section 1, MW (Summer 2018):

<table>
<thead>
<tr>
<th>Date</th>
<th>Lab</th>
<th>Experiment</th>
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<tbody>
<tr>
<td>6/4</td>
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<td>Check in (You must attend)</td>
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<tr>
<td>6/6</td>
<td>1</td>
<td>Diels Alder Reaction</td>
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<tr>
<td>6/11</td>
<td>2</td>
<td>Friedel-Crafts alkylation</td>
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<td>6/13</td>
<td>3</td>
<td>Nucleophilic Aromatic Substitution</td>
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<td>6/18</td>
<td>4</td>
<td>Hydride Reduction of Ketone</td>
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<td>6/20</td>
<td>5</td>
<td>Grignard Reaction</td>
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<tr>
<td>6/25</td>
<td>6</td>
<td>Grignard Reaction Continued</td>
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<td>6/27</td>
<td>7</td>
<td>Wittig reaction</td>
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<tr>
<td>7/2</td>
<td>8</td>
<td>Derivative formation of aldehydes and ketones</td>
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<tr>
<td>7/9</td>
<td>9</td>
<td>Esterification: Synthesis of benzylacetate</td>
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<td>7/11</td>
<td>10</td>
<td>Dibenzalacetone by the aldol condensation</td>
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<tr>
<td>7/18</td>
<td>Final</td>
<td>Check out and Final Exam</td>
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