Course Objectives:
To experience the techniques practiced by the modern organic chemist

Required Materials:
2. OSHA approved eye protection.
3. Hard-backed, bound notebook (no spiral or loose-leaf).
4. Paper towels. YSU will not provide paper towels, you will need them!
5. Lab coat or apron.
6. Rubber (dish washing) gloves.

Rules:
1. OSHA approved eye protection must be worn at all times. Never wear contact lenses.
2. No work is allowed outside of regularly scheduled hours.
3. Report any accidents immediately to your teaching assistant.
4. Each student must clean their work area at the end of each lab period.
5. Report broken or missing equipment immediately, your TA will replace it.
6. Always lock your drawer before you leave at the end of the period.
7. Be sure that you dispose of chemical waste in the prescribed manner.
8. Laboratory grades will not be given to students with course grades of W or AU. If you are withdrawing from the lecture class, you must withdraw and check out of the lab.

Academic Honesty: Academic honesty and personal integrity are the foundation upon which a quality education is built. To maintain high scholastic standards and to ensure each student the right to obtain a quality education, the University cannot tolerate academic dishonesty, e.g. cheating or plagiarism. Any student who submits laboratory reports, pre lab write ups, laboratory results, or similar academic materials which were performed or prepared by someone else is committing plagiarism. The penalty for such an offense may include a failing grade for the experiment, a failing grade for the laboratory, disciplinary probation, suspension, or expulsion.

Lab Grades: Lab grades will be based upon the pre lab (20%), notebook (20%), results (10%), technique (10%), and reports (40%). The laboratory grades will be normalized to an average of 85% to ensure equity amongst laboratory sections.
### 3719 LAB SCHEDULE – Summer 2005

<table>
<thead>
<tr>
<th>Lab</th>
<th>Experiment (unless otherwise noted, the experiment will be in the lab text Introduction to Organic Laboratory Techniques; A Small Scale Approach)</th>
<th>Page(s)</th>
<th>Point Value</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Check In, Lab Rules, Safety, Notebook, Glassware, Balances, Heating Mantles, Hot Plates, Rotary Evaporator, Hot Water Baths.</td>
<td>558-591, 611-614, 643.</td>
<td></td>
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<tr>
<td>2</td>
<td>PC Spartan – Handout on Lab Web Page.</td>
<td>Handout</td>
<td>10</td>
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<td>5</td>
<td>Exp. 3 – Extraction – Part B, D. REPORT – Part B, D.</td>
<td>26-36, 698-719.</td>
<td>10</td>
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<tr>
<td>6</td>
<td>Exp. 5 Simple Distillation. REPORT – Distillation Curve p50. Note – each student will perform a simple distillation, no pairs.</td>
<td>46-51, 723-743</td>
<td>10</td>
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<tr>
<td>7</td>
<td>Thin Layer Chromatography – Handout on Lab Web Page.</td>
<td>819-831.</td>
<td>10</td>
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<td>8</td>
<td>Completion of Previous Experiments</td>
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<td>9</td>
<td>Exp. 23A - Synthesis of n-Butyl Bromide.</td>
<td>187-193.</td>
<td>10</td>
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<td>10</td>
<td>Exp. 23B - Synthesis of t-Pentyl Chloride.</td>
<td>187-193.</td>
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<td>11</td>
<td>Exp. 24 – 4-Methylcyclohexene.</td>
<td>193-197.</td>
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<td>12</td>
<td>Exp. 34C – Benzilic Acid (Note Change from previous)</td>
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<tr>
<td>13</td>
<td>Completion of Previous Experiments</td>
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<td>14</td>
<td>Check Out</td>
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</table>

**Pre Lab.** *(Written in the laboratory notebook)* The pre lab should include the following:
1. Title.
2. Balanced equations for all reactions, data on reactants, catalysts, and solvents (molecular weight, grams, moles, solvent volume, useful physical constants such as boiling point, melting point, density, etc.).
3. Product data (molecular weight, theoretical yield, literature value of melting point or boiling point).

**Laboratory Notebook.** The laboratory notebook should include the following:
1. An accurate account of all experimental procedures performed.
2. The exact weight or volume of reagent or solution used.
3. The exact time each task is performed.

**Technique Labs Report Format (Due 1 lab session after completion of the experiment)**
1. Follow the Report Format found in the laboratory text.

**Synthesis Laboratory Reports.** *(Due 1 lab session after completion of the experiment)*
1. There will be a Synthesis Laboratory Report Form on the Lab Web Page for each of the synthesis experiments.

**Laboratory Technique.** The laboratory technique grade will be decided on the following basis:
1. Preparedness for lab.
2. Cleanliness of work area, lab safety.