General
Chemistry 3719L is the laboratory course that complements 3719 lecture, Organic Chemistry I. As in General Chemistry, we will be studying the physical characteristics of compounds and their reactions to form new materials, however in Organic Chemistry we focus on the compounds containing carbon.

Equipment
• OSHA approved goggles for all laboratory work and these are to be worn **at all times in the lab** (points will be deducted if you consistently fail to comply).
• A lab coat is strongly recommended, as are a pair of heavy-duty dishwashing gloves.
• A lab notebook; a composition book is sufficient, the only types that are disallowed are spiral bound notebooks and loose paper.

Experiments and Grading
• Early experiments are to introduce you to typical procedures and results will be recorded on the handout and given to your TA for grading (see next page for schedule).
• “Synthesis” experiments will require a more formal lab report, the details of which will be given in the third week along with examples.
• There are 4 report sheets to be handed in worth 10 points each (see attached schedule).
• There are 2 report sheets to be handed in with synthetic samples worth 5 pts each.
• There are 5 synthesis reports due, which are worth 10 points each.
• Total for 3719L = 100 points, which are included in the 3719 grade (which is 600 points total including lab).
• You must get at least 65/100 in lab in order to pass 3719. You might get straight A’s in lecture, but if you get less that 65 in lab you get an automatic F for the course.
• You lose points in lab for being messy, being irresponsible and for being unprepared.

Academic Misconduct
Since the lab work assigned in Chemistry 3719L is to be carried out individually (except where expressly designated by the TA), there is to be no “communal” preparation of reports for handing in for grading. The instructor (Norris) will sit down with the TA’s and discuss grading of reports on a weekly basis, therefore reports of a suspicious nature will be found and dealt with accordingly.

In addition to the guidelines published in the University’s Student Code of Conduct, the following is a list of offenses that will at least result in a zero grade for the assignment and may result in disciplinary action at the University level. **This will include failing the class** and possibly expulsion from the University.

- No copying verbatim from the textbook under any circumstances.
- No sharing of data, unless expressly being allowed to do so by your instructor.
- No sharing of computer files for the “copying and pasting” of reports (this includes data tables).

Be careful, don’t jeopardize your entire career to save time when writing reports. If you submit a piece of work in any Organic Chemistry class at YSU that only has your name on it, make sure it is entirely your own work.
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<td>Chapter 1: Structure Determines Properties</td>
<td>Check-in; Review safety/equipment</td>
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<td><strong>Week 2</strong></td>
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<td>Chapter 1: Structure Determines Properties</td>
<td>Molecular Models; Computer Models</td>
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<td><strong>Week 3</strong></td>
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| Chapter 2: Hydrocarbon Frameworks; Alkanes | Solubility and Recrystallization  
*Hand in sheet (10 pts)* |
| **Week 4**          |                  |
| Chapter 3: Conformations of Alkanes and Cycloalkanes | Distillation and Boiling Points  
*Hand in sheet (10 pts)* |
| **Week 5**          |                  |
| Chapter 3: Conformations of Alkanes and Cycloalkanes | Extraction and Aqueous Workups  
*Hand in sheet (10 pts)* |
| **Week 6**          |                  |
| Chapter 4: Alcohols and Alkyl Halides | Free Radical Bromination of $p$-Toluic Acid  
*Synthesis report (10 pts)* |
| **Week 7**          |                  |
| Chapter 4: Alcohols and Alkyl Halides | Elimination: Synthesis of Cyclohexene  
*Synthesis report (10 pts)* |
| **Week 8**          |                  |
| Chapter 5: Structure and Preparation of Alkenes: Elimination Reactions | Makeup Week: Complete Experiments |
| **Week 9**          |                  |
| Chapter 6: Reactions of Alkenes: Addition Reactions | Addition: Epoxidation of Cholesterol  
*Synthesis report (10 pts)* |
| **Week 10**         |                  |
| Chapter 7: Stereochemistry | Stereochemistry: Molecular Models  
*Hand in sheet (10 pts)* |
| **Week 11**         |                  |
| Chapter 8: Nucleophilic Substitution | Substitution: 4-Methoxymethylbenzoic Acid  
*Synthesis report (10 pts)* |
| **Week 12**         |                  |
| Chapter 9: Alkynes | Diels-Alder: Butadiene/Maleic Anhydride  
*Synthesis report (10 pts)* |
| **Week 13**         |                  |
| Chapter 10: Conjugation in Alkadienes and Allylic Systems | Conjugation: Methyl Orange  
*Hand in sheet and sample (5 pts)* |
| **Week 14**         |                  |
| Chapter 11: Arenes and Aromaticity | Nitration of Methyl Benzoate  
*Hand in sheet and sample (5 pts)* |
| **Week 15**         |                  |
| Chapter 12: Reactions of Arenes: Electrophilic Aromatic Substitution | Cleanup and Checkout |

*School closed Mon 9/1; Tues 11/11; Thurs 11/27; Fri 11/28*
Week 1 – Check-in and Safety

Glass Kit
Some of the (unfamiliar) glassware that must be in your locker from Day 1:

As well as the pieces detailed above you should also have a microspatula, a regular spatula, a measuring cylinder (either 25 or 50 mL), a wire triangle, a 250 °C thermometer, and a black circular vacuum adapter.

If you are missing any of this equipment ask your TA for a replacement.