

## CHEM 3422: Organic Chemistry II

**Spring 2007: Section 01**  
**MWF 1:25 – 2:20 PM; TLC 1301**

**Instructor:** Dr. Partha Ray: Office: TLC 2123; Phone: (678) 839-6023; email: [psray@westga.edu](mailto:psray@westga.edu)

**Required Textbook:** "Organic Chemistry" by John McMurry, 6<sup>th</sup> Edition and the Study Guide and Solutions Manual.

**Highly Recommended:** "Preparing for Your ACS Examination in Organic Chemistry: The Official Guide"

**Course Objective:** The goal of this course is for you to use and build on the fundamental principles and concepts of Organic Chemistry learned in CHEM 2411 (Organic Chemistry I) and use them to solve problems.

Test	Date	Chapters/Topics covered/Homework Questions
1	Feb 2	<b>13:</b> Nuclear Magnetic Resonance Spectroscopy (30-33,39-43,45,46,48-51,55,56,59-61) <b>15:</b> Benzene and Aromaticity (19-21,25,30, 32-36, 38,39) <b>16:</b> Chemistry of Benzene: Electrophilic Aromatic Substitution (29-41,47,48-53,61, 69,70,73)
2	Feb 26	<b>17:</b> Alcohols and Phenols (26,31-37,40,41,44,47,52,57,59) <b>18:</b> Ethers and Epoxides; Thiols and Sulfides (25-31,37,38,40,41,52) <b>19:</b> Aldehydes and Ketones: Nucleophilic Addition Reactions (28,32-34,36,39-41,46,49,50,52,55)
3	Apr 2	<b>20:</b> Carboxylic Acids (20,23-27,33-36,38,39,43,45-49,53) <b>21:</b> Carboxylic Acid Derivatives and Nucleophilic Acyl Substitution Reactions (32,35-44,47,52,54,56,63,64) <b>22:</b> Carbonyl Alpha-Substitution Reactions (21-24,26-30,32,34-39,44)
4	Apr 20	<b>23:</b> Carbonyl Condensation Reactions (27-30,38-46,52,54,57,60) <b>24:</b> Amines (29-41,44,46,49,59)

Review for final: Apr 23

**Final: May 4; 11:00 AM – 1:00 PM**

The final will be an American Chemical Society Organic Chemistry exam, which consists of 70 multiple choice questions. It is a comprehensive exam, which will include material from CHEM 2411.

**Grades:** A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: 0-59.

**Final Grade:** The final grade will be based on the average from the final exam and the three highest test scores. No make up tests will be given. If you miss a test for any reason that is the one you will drop. No extra time will be given if you arrive late for a test, so please arrive on time.

**Suggested problems:** No homework will be collected. However, it is expected that you will attempt to solve all the assigned problems above. It is highly recommended that you first attempt to solve the problems without the use of the solution manual, and refer to the manual to check your answer. The best way to make sure that you have understood the material covered in class is to work through the appropriate problems on a *regular* basis.

**Attendance/Curve Policy:** In order to be considered for a curve for a particular test (if a curve is given for that test) you must demonstrate that you have attended all my classes (by signing the attendance sheet for every class) prior to that test. No more than one unexcused absence will be allowed per test. Excused absences must be in writing accompanied by documented proof (such as a doctor's note).

**Some Advice:** This class demands your time and attention. If you hope to do well in this class you must at the very least attend class, pay attention during class and spend at least twelve hours per week of quality time reading the notes and working the problems (outside of class time).

Unsocial behavior such as talking during class, or being disruptive will not be tolerated and you will be asked to leave the class.

All communications outside of class should be via campus mail (myUWG), and you are expected to check your mail regularly.

**Office hours:** MWF 8:30 – 10:00 AM & 2:30 – 3:30 PM; T: 8:30 – 11:00 AM

## Learning Outcomes

1. Reason and think analytically in solving problems and making decisions in matters involving organic chemistry. Attainment of this learning outcome will be reflected by the students ability to:
  - Select reagents to accomplish appropriate functional group transformation.
  - Draw the product of a chemical reaction.
  - Indicate the appropriate stereochemistry of organic molecules.
2. Apply a basic understanding of the systematic methods of scientific inquiry, principles and procedures to investigate problems. Attainment of this learning outcome will be reflected by the students ability to:
  - Describe the mechanism of particular organic reactions.
  - Analyze IR, NMR and Mass Spectral signals to determine the structure of unknown organic molecules.
3. To communicate organic chemistry with clarity.

Successfully complete written and oral assignments, and examinations.