

## DEPARTMENT OF CHEMISTRY

### CHEM 3110 (MM1) --- Fall 2015

**Lecture:** Tuesday/Thursday - 12:00 pm – 12:50 pm PCS 362  
**Lab:** Tuesday/Thursday - 1:00 pm – 4:50 pm PSC 357

**Texts:** **GSU CHEM 3110 Lab Manual** (included in the price of supply card).  
**Experimental Organic Chemistry**, by Wilcox and Wilcox.  
**Organic Chemistry**, by John McMurry (8<sup>th</sup> Edition)

**Instructor:** Dr. Jeremiah D. Harden (E-mail: jharden@gsu.edu)

**Office:** PSC 301; Tel.# 404-413-5560

**Office hours:** Monday 9:30 – 11:30  
Thursdays 9:00 – 11:00

**Any other time by appointment.**

|                        |  |                |
|------------------------|--|----------------|
| <b>Grading Scheme:</b> | Final Exam*                                  | 100 pts        |
|                        | Final Report*                                | 100 pts        |
|                        | Homework, Notebook,<br>quizzes, preprn. *,** | <u>100 pts</u> |
|                        | <b>Total Pts</b>                             | <b>300</b>     |

#### **Tentative Letter Grades:**

|           |   |          |
|-----------|---|----------|
| <b>A+</b> | = | 96%      |
| <b>A</b>  | = | 90%      |
| <b>A-</b> | = | 87%      |
| <b>B+</b> | = | 84%      |
| <b>B</b>  | = | 80%      |
| <b>B-</b> | = | 77%      |
| <b>C+</b> | = | 73%      |
| <b>C</b>  | = | 70%      |
| <b>C-</b> | = | 66% etc. |

\*Must be submitted to receive a passing grade

\*\*Notebooks must be picked up within **TWO WEEKS** after final grade deadline (after which time they will be discarded)

|                     |                        |   |
|---------------------|------------------------|---|
| <b>Impt. Dates:</b> | Aug. 25 <sup>th</sup>  | Lab begins  |
|                     | Sept. 11 <sup>th</sup> | <b>Last day to withdraw with grade “W”</b>                            |
|                     | Oct. 6 <sup>th</sup>   | <b>Last day of lab, checkout Final Exam<br/>(8:00 am - 10:00 am),</b> |
|                     | Oct. 8 <sup>th</sup>   | <b>Submission of final report and<br/>notebook BY NOON.</b>           |

## NOTES:

1. Attendance to **lecture** and **lab** will be recorded (sign-in/out of lab required). Absences can result in loss of points and lower grades
2. Bound Lab notebooks are required the first day of lab. All entries **MUST** be made in ink at the time the experiment is being carried out. Notebooks must be submitted with the Final Report.
3. **Safety glasses/goggles:** These may be purchased at the GSU bookstore, the Georgia Bookstore, and most hardware stores. Students who are unable or forget to bring their glasses may **buy** a pair from the Lab Coordinator by filling out a breakage form in the lab. Students who obtain glasses in this manner will pay for them at the time they check-out of the lab. Safety glasses/goggles must be worn at all times. Students will not be allowed into the lab without their glasses/goggles.
4. **Students must bring safety glasses/goggles and closed toe shoes on the first day as synthesis will begin immediately after check-in.**
5. Failure to follow safety procedures will result in expulsion from that lab session with no make-up allowed and loss of credit.
6. **No make-up for Final Exam**

## **Chemistry Departments Student Integrity Policy:**

The Department of Chemistry follows the University policy on academic honesty published in the "Faculty Affairs Handbook" and the "On Campus: The Undergraduate Co-Curricular Affairs Handbook". All tests taken must represent the student's individual, unaided effort. Any suspected offense may be referred to the Department's Chairman for appropriate action.

All tests taken must represent your individual, unaided efforts. To receive or offer information during any examination is cheating. The use of unauthorized supplementary materials during tests is also cheating. All laboratory work performed during this course must reflect your individual effort. Only original data obtained by your own laboratory experimentation are permitted to be used, except when specifically authorized by your laboratory professor. Data from supplementary sources (handbooks, reference literature, etc) must be clearly referenced (title, author, volume, page(s), etc). Falsification or destruction of data constitutes cheating.

## **POLICY FOR WORKING IN THE LABORATORY:**

Students in 3110 lab classes have permission to be in the laboratory other than their regularly scheduled lab period only when the lab is officially open and only to perform IR or Melting Point Determinations. No experiments are to be done outside of the scheduled lab time. Experiments which require over-night heating may be turned off, allowed to cool and then secured [work-up (lab work) will not be allowed].

### Laboratory Schedule

| <b>Lecture &amp; Lab Dates</b> | <b>Tentative Lecture Emphasis (labwork)</b>  | <b>Reading Assignments (Read before lecture) pp. Wilcox &amp; Wilcox</b> |
|--------------------------------|--|--|
| August 25 <sup>th</sup>        | Safety Video, Objectives of course (check-in; begin lab = chalcone preparation)            | 3-24   |
| August 27 <sup>th</sup>        | <b>Quiz 1</b> , Recrystallization of chalcone, purity (m.p), Yield, Lit. Search            | 84-102 and lab manual  |
| September 1 <sup>st</sup>      | Overview of synthetic routes (Epoxide and/or dibromide preparation)                        |  |
| September 3 <sup>rd</sup>      | <b>Quiz 2</b> , Overview continued; structure proof (Epoxide and/or dibromide preparation) | 234-253 (IR)   |
| September 8 <sup>th</sup>      | Structure proof continued (Isoxazole preparation)  | 263-288 (NMR)  |
| September 10 <sup>th</sup>     | <b>Quiz 3</b> ; UV Spectroscopy (Complete preparations and purifications)                  | 254-262  |
| September 15 <sup>th</sup>     | UV Spectroscopy continued; Optional procedures ( Begin optional procedures)                |  |
| September 17 <sup>th</sup>     | <b>Quiz 4</b> ; Optional procedures continued  |  |
| September 22 <sup>nd</sup>     | <sup>13</sup> C NMR (Synthesis of optional compounds continued)                            | 263-288  |
| September 24 <sup>th</sup>     | <b>Quiz 5</b> ; <sup>13</sup> C NMR continued (Synthesis of optional compounds continued)  |  |
| September 29 <sup>th</sup>     | Synthesis of optional compounds continued  |  |
| October 1 <sup>st</sup>        | <b>Quiz 6</b> ; Format of Final Report; Format of Final Exam; (Clean –up, check-out)       |  |
| October 6 <sup>th</sup>        | <b>Final Exam</b>  |  |
| October 8 <sup>th</sup>        | <b>Paper and Notebook DUE BY NOON</b>  |  |

**\*Deviations from this syllabus may be required.**