Advanced Organic Chemistry Chemistry 402 & 5402

**Syllabus** 

Spring 2011

<u>Professor</u>: Dr. Trent Selby **Office**: Hederman 407

Phone: (601) 925-7665

E-mail: selby@mc.edu (please put "Adv. organic class" in the

subject line).

Office Hours: Mon., Tues., Wed. & Thurs. 10:00-11:30

(or by appointment)

Class: Tuesday & Thursday 8:00-9:15, MCC 421 (required attendance)

<u>Textbook</u>: (required) "Perspectives on Structure and Mechanism in Organic Chemistry"

By Felix A. Carroll (Brooks Cole; 1<sup>st</sup> edition)

Other Reference Books: 1. "Advanced Organic Chemistry; Part A: Structure and Mechanisms"

by Francis A. Carey and Richard J. Sundberg. 2. "Mechanism and Theory in Organic Chemistry" by Thomas H. Lowry and Kathleen Richardson

<u>Attendance Policy:</u> Regular attendance at all lectures is expected.

Lab Reports: Lab reports will be worth 40 points each.

**Exams**: (tentative exam dates):

Exam 1 (150 pts): Thursday, Feb. 24
Exam 2 (150 pts): Thursday, March 31

Comprehensive Final (200 pts): **Tuesday, May 3** (8:00 a.m. – 10:00 a.m.)

**Grading**: (note: a grading curve may be used, at my discretion, to achieve a fair distribution of grades)

(as percentages of all points) 89.5-100% (A); 79.5-89.4% (B); 69.5-79.4% (C); 59.5-69.4% (D); below 59.4% (F).

## Tenative list of topics to be covered in this course:

⇒Resonance ⇒Thermochemistry

⇒MO Theory ⇒Kinetics

⇒Stereochemistry & Conformational Analysis ⇒Linear Free Energy Relationships

⇒Pericyclic Reactions ⇒H/D Isotope Effects ⇒Art of writing Organic Mechanisms ⇒Acid/Base Chemistry

⇒Free Radicals & Carbenes ⇒Solvent Effects

⇒Overview of Organic Photochemistry ⇒Named Organic Reactions

**Academic Integrity**: Mississippi College students are expected to be completely honest in all aspects of the course. Dishonesty, such as cheating or plagiarism, will not be tolerated and will be dealt with according to the stated policies of the university. For details, see the current *Mississippi College Undergraduate Catalog*, the *Tomahawk*, and Policy 2.19.

<u>Course description</u>: This course includes a study of selected topics in physical organic chemistry.

<u>Rationale</u>: This course will provide a fundamental understanding of organic chemical compounds and principles and how they are involved in everyday life as well as in advanced chemical studies, biochemistry, and medicine on a molecular level.

<u>Methods of Instruction</u>: Classes will consist primarily of lecture, problem solving and laboratory experiments. The text will be followed as far as the general topics, but current material will be added from other sources.

Students with disabilities: This department believes in reasonably accommodating individuals with disabilities and complies with university policy established under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (1990) to provide for equal access and opportunity. Please communicate with your professor as to your specific needs so appropriate arrangements can be made through the department. In order for a student to receive disability accommodations under Section 504 of the Americans with Disabilities Act, he or she must schedule an individual meeting with the Director of Student Counseling Services immediately upon recognition of their disability (if their disability is known they must come in before the semester begins or make an appointment immediately upon receipt of their syllabi for the new semester). The student must bring with them written documentation from a medical physician and/or licensed clinician that verifies their disability. If the student has received prior accommodations, they must bring written documentation of those accommodations (example Individualized Education Plan from the school system). Documentation must be current (within 3 years). The student must meet with SCS faceto face and also attend two (2) additional follow up meetings (one mid semester before or after midterm examinations and the last one at the end of the semester). Please note that the student may also schedule additional meetings as needed for support through SCS as they work with their professor throughout the semester. Note: Students must come in each semester to complete their Individualized Accommodation Plan (example: MC student completes fall semester IAP plan and even if student is a continuing student for the spring semester they must come in again to complete their spring semester IAP plan).