Course Syllabus

Course Identification:

Course Number: CH5410  
Course Name: Advanced Organic Chemistry-Reaction Mechanism  
Class Time & Location: W (3:00-5:00PM), F (4:00-5:00PM), Chem Sci 104A  
Prerequisites: CH2420

Instructor Information:

Course Instructor: Dr. Lanrong Bi  
Office Location: 620A Chemical Sciences Building  
Telephone: Office: (906)-487-1868  
E-mail: Lanrong@mtu.edu  
Office Hours: By appointment, designed to fit your schedule

Course Description:

CH5410 will not be a typical lecture course. Class time will be spent on student-led problem solving, discussion and presentations. We will use selected topics, textbooks and the primary literature to guide us. Topics will include reaction mechanism, reactive intermediates and synthesis.

Educational Goals:

(a) To learn how to study and apply the principles of organic chemistry to synthesis, with particular attention to their mechanism; (b) To learn how to organize, understand and present complex information; (c) To improve your reading and writing and presentation skills.

Background:

CH5410 is intended for first-year graduate students and advanced undergraduates. Students should be familiar with the fundamentals of organic chemistry: Nomenclature, structure and bonding, reaction mechanisms and stereochemistry.

Reference Books:

- The Logic of Chemical Synthesis,(1989) by E. J. Corey and X.-M. Cheng  

Just a few Web Resources:  
A great site for organic mechanism problems  
http://evans.harvard.edu/problems/index.cgi  
For a nice link to Comprehensive Organic Chemistry  
http://www.chem.wisc.edu/areas/organic/index-chem.htm  
Hans Reich “Advanced Organic Chemistry”  
http://www.chem.wisc.edu/areas/reich/chem547/index.htm

Specific Topics:

During the course of the semester we'll try to cover some the following topics using problems and the current literature. Specific topics include: Conformation, Nucleophilic Additions,

**Mini-review Papers:** There will be 2 mini-review papers due during the semester.

**Oral Presentations:** Each of you will give five oral presentations (20-30 minute) on the assigned topics.

**Grading Policy:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Quizzes (50 points each)</td>
<td>300</td>
</tr>
<tr>
<td>1 Final Exam</td>
<td>300</td>
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<tr>
<td>2 Papers @ 150 point each</td>
<td>300</td>
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<tr>
<td>Oral Presentations</td>
<td>100</td>
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<tr>
<td>Total</td>
<td>1000</td>
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**MTU Grading system:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Points</th>
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<tbody>
<tr>
<td>A</td>
<td>930-1000 pts</td>
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<tr>
<td>AB</td>
<td>880-929 pts</td>
</tr>
<tr>
<td>B</td>
<td>820-879 pts</td>
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<tr>
<td>BC</td>
<td>760-819 pts</td>
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<tr>
<td>C</td>
<td>700-759 pts</td>
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**No make-up quizzes will be given.**

No make-up exams will be given for unexcused absences.

Official MTU excused absences are granted by the Office of Student Affairs (OSA).

**Collaboration/Plagiarism Rules:**

Standards of academic conduct are set forth in the MTU Academic Integrity Code [http://www.studentaffairs.mtu.edu/dean/judicial/policies/academic_integrity.html](http://www.studentaffairs.mtu.edu/dean/judicial/policies/academic_integrity.html). When you registered for this course, you acknowledged your awareness of the Academic Integrity Code and you are obliged to become familiar with your rights and responsibilities as defined by this Code. Violations of the Code will result in disciplinary actions. Examples of violations include plagiarism or receiving inappropriate assistance on homework, quizzes, and/or exams.

**Cell phones, Blackberries, iPods, PDAs, or any other electronic devices are not to be used in the classroom.**

Please make sure to bring a standard calculator with you to class. Note: graphing calculators are not permitted for use during exams. Calculators on other devices are strictly prohibited. Information exchanges on these devices during class are also prohibited and violate the Academic Integrity Code of Michigan Tech. Cheating is a very serious academic offense. Therefore, allegations of cheating will be referred to the Dean of Student Affairs for appropriate action. Please see me if you have any questions about academic violations as described in the Code or as they relate to particular requirements in this course.

**University Policies:**

If you have a disability that could affect your performance in this class or that requires an accommodation under the Americans with Disabilities Act, please see me as soon as possible so that we can make appropriate arrangements. The Affirmative Action Office has asked that you be made aware of the following: Michigan Tech complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. If you have a disability and need a reasonable accommodation for equal access to education or services at Michigan Tech, please call the Dean of Students Office, at 487-2212. For other concerns about discrimination, you may contact your advisor, department head or the Affirmative Action Office, at 487-3310.
Academic Integrity:  
http://www.studentaffairs.mtu.edu/dean/judicial/policies/academic_integrity.html

Affirmative Action:  
http://www.admin.mtu.edu/aaof

Disability Services:  
http://www.admin.mtu.edu/urel/studenthandbook/student_services.html#disability

Equal Opportunity Statement:  