

Advanced Organic Chemistry III

Spring 2014 Syllabus

Course Description: Designed for organic graduate students, Chem 522 covers aromatic and heterocyclic chemistry, concerted reactions and cycloadditions, photochemistry and organometallic chemistry.

Instructor: Dr. Qianli (Rick) Chu

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Required Textbook: Francis A. Carey and Richard J. Sundberg, *Advanced Organic Chemistry Part A and B*, 5th edition, Springer, New York, 2007.

Lectures: T&Th, 5:00-6:15 pm, UND, Abbott Hall, Rm 115

Office Hours: After lecture or by appointment

Number of Credits: 3 credits

Prerequisite: Chem 520 or Chem 521; a grade of C or higher in these classes are recommended.

Withdrawals: Students wishing to drop the course must do so by April 11.

Attendance: In accord with the University policy, attendance is expected for all lectures but will not be used as a grading criterion. The students who were absent from a lecture are responsible for learning the discussed material and discovering if any announcements were made during the lecture.

Blackboard: Students can check their scores on Blackboard: <http://online.und.edu/Bb6/>. Announcements, syllabus, lecture slides, assignments, other pertinent documents and information will be available on Blackboard.

Reading Assignments and Presentations: As we go along in the course, reading assignments on current research articles relevant to the topics we cover in the class will be announced. Students will also be asked to give three 25 minute presentations during the semester based on these topics. A description of the presentation format will be posted on Blackboard together with an evaluation form.

Assignments: Assignments will be announced in the lecture and posted on Blackboard. The problems are designed to increase understanding of the subject material. The same or similar problems will appear in the exams.

Intraterm Exams: Three intraterm examinations will be 60 min in length. These exams will primarily emphasize material covered in the lectures and assignments. An absence from an examination may be excused only in the event of a verifiable illness, family emergency, or similar reason. Excused students will get his/her course average for the missed exam. Students cannot miss more than one intraterm exam. Any conflict with the scheduled exams must be brought to the instructor's attention at least 1 week prior to the exam. The dates for the exams will be announced about 1-2 weeks ahead.

Final exam: The final examination will be in Abbott Hall, Rm 115 from 7:45-9:45 pm on May 12 (Monday). This is comprehensive exam covering all topics in Chem 522.

Grading: Your grade for the course will consist of the following parts.

Midterm exams:	3 x 100 pts	300 pts
Presentation:	3 x 100 pts	300 pts
Final Exam		200 pts

Total: 800 pts

87.5 – 100% A	75.0 – 87.4% B
62.5 – 74.9% C	50.0 – 62.4% D
0 – 49.9 % F	

Academic Dishonesty: Students being scholastically dishonest will be assigned a grade of F and dismissed from the course. Dishonesty will not be tolerated in this class.

Students with Disabilities: Individuals who have any disability, either permanent or temporary, please contact the Disability Support Services Office (MacCannel Hall, Phone: 777-3425) and me as soon as possible. Appropriate arrangements may be made as required for equitable participation.

Course Outline

Aromatic and Heterocyclic Chemistry

Part A: Structure and Mechanism, Chapters 8: Aromaticity

Part A: Structure and Mechanism, Chapters 9: Aromatic Substitution

- Presentation I

Part B: Reaction and Synthesis, Chapters 11: Aromatic Substitution Reactions

- **Exam 1**

Photochemistry, Concerted Reactions and Cycloadditions

Part A: Structure and Mechanism, Chapters 10: Concerted Pericyclic Reactions

Part A: Structure and Mechanism, Chapters 12: Photochemistry

- Presentation II

Part B: Reaction and Synthesis, Chapters 6: Concerted Cycloadditions, Unimolecular Rearrangements and Thermal Eliminations

- **Exam 2**

Organometallic Chemistry

Part B: Reaction and Synthesis, Chapters 7: Organometallic Compounds of Group I and II Metals

Part B: Reaction and Synthesis, Chapters 8: Reactions Involving Transition Metals

- Presentation III

Part B: Reaction and Synthesis, Chapters 9: Carbon-Carbon Bond-Forming Reactions of Compounds of Boron, Silicon, and Tin

- **Exam 3**

- Review

- **Final Exam (05/12/2014, Monday)**