CD213 August 3:0

Organic Chemistry â€“ Structure and Reactivity

Instructor

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Department: Department of Organic Chemistry

Course Time: Tue, Thu, 10:00 - 11:30 AM

Lecture venue: Department of Organic Chemistry Lecture Hall (MMCR)

Detailed Course Page:

Announcements

Brief description of the course

This course is about various physical chemistry principles and their application in organic chemistry. This course is suitable for students who completed the basic organic chemistry, reaction mechanism and stereochemistry.

Prerequisites

Successful completion of UC201 (Organic Chemistry-I) and UC205 (Organic Chemistry-II)

Syllabus

Sterochemistry and conformation; kinetics and reaction mechanism; linear free energy relationships; solvent effects in nucleophilic reactions; Kinetic isotope effect; reactive intermediates; Pericyclic reactions and Woodward Hoffmann rules; Photochemistry

Course outcomes

The students will learn a great deal of physical chemistry principles as applied to organic chemistry. This would enable them to devise experiments to understand new reactions mechanistically.

Grading policy

25-30% for mid-term, 10% for assignments, 65-60 % for final

Assignments

Assignments include giving problems related to principles discussed in the class. There are also assignments to create questions by reading published work.

Resources

Advanced Organic Chemistry, Carey and Sundberg, Part A

Mechanism and Theory in Organic Chemistry, Lowry and Richardson

Physical Organic Chemistry, Anslyn and Dougherty

Pericyclic Reaction, Ian Fleming

and journal articles.