



UC205 January 2:0

Basic Organic Reactions

Instructor

Prof. Santanu Mukherjee
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Teaching Assistant

Don't know yet
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Department: Undergraduate

Course Time: Tue., 10:00-11:00 am; Fri., 12:00 - 1:00 pm

Lecture venue: UG Admin Building T-1

Detailed Course Page:

Announcements

Brief description of the course

This is a core course for the UG students with Chemistry major. Other students minor in Chemistry may choose to credit this course.

Prerequisites

Successful completion of UC201

Syllabus

Acids and bases: effect of structure, kinetic & thermodynamic acidity, general & specific acid/base catalysis; Reactions of carbon-carbon multiple bonds: addition of halogens, hydrogen halides & interhalogen compounds, hydration, epoxidation, dihydroxylation, ozonolysis, cyclopropanation, hydrogenation; Reactions of carbonyl compounds: addition to carbonyls, oxidation, reduction, rearrangements & their applications, C=C bond forming reactions involving carbonyls; Introduction to pericyclic reactions: cycloadditions, electrocyclic reactions, sigmatropic rearrangement and group transfer reactions. Introduction to organometallic reagents: Grignard reagents, organolithium, organocopper and organozinc compounds

Course outcomes

As the title reflects, this is a basic organic chemistry course and compulsory for the Chemistry major UG students. Students successfully completing this course are expected to learn through this course the basic concepts of organic chemistry such as electronic structure and reaction mechanism.

All major reactions of alkenes, alkynes and carbonyls are taught through this course. In addition, preliminary aspects of pericyclic reactions and organometallics are also covered.

Grading policy

10% for surprise quiz (1-2 per semester)

40% for mid-term exam

50% for final exam

Assignments

Some assignments are given to the students for the purpose of practicing and strengthening the concepts taught.

Resources

1. Norman, R. O. C. and Coxon, J. M.; Principles of Organic Synthesis, 3rd Ed., (1993)
2. Clayden, J.; Greeves, N.; Warren, S. And Wothers, P.; Organic Chemistry, Oxford University Press, (2000)