

Chemical Structure and Reactivity - Part I and II		
Course Director: Chuo Chen		
Tue/Thu	Lecturer	Topic
08/25	Falck	Chemical Bonding and Structure
08/27	Falck	Acid/Base Theory
09/01	Falck	Stereochemistry
09/03	Falck	Conformational Analysis - I
09/08	Falck	Conformational Analysis - II
09/10	Falck	Conformational Analysis - III
09/15	Falck	Resonance & Aromaticity
09/17	Falck	Intro to FMO
09/22	Falck	FMO Applications - I
09/24	Falck	FMO Applications - II
09/29	Falck	Pericyclic Reactions - I
10/01	Falck	Cycloadditions - I
10/06	Falck	Cycloadditions - II
10/08		Midterm Exam
10/13	Chen	Photochemistry - I
10/15	Chen	Photochemistry - II
10/20	Chen	Pericyclic Reactions - II
10/22	Chen	Physical Organic Chemistry - I
10/27	Chen	Physical Organic Chemistry - II
10/29	Chen	Physical Organic Chemistry - III
11/03	Chen	Substitution/Elimination - I
11/05	Chen	Substitution/Elimination - II
11/10	Chen	Carbonyl Reactivity - I
11/12	Chen	Carbonyl Reactivity - II
11/17	Chen	Carbonyl Reactivity - III
11/19	Chen	Reactive Intermediates - I: Carbocations
11/24	Chen	Reactive Intermediates - II: Carbocations
11/26		Thanksgiving Holiday
12/01	Chen	Reactive Intermediates - III: Carbenes, Radicals
12/03	Chen	Reactive Intermediates - IV: Radicals
12/10		Final Exam

Required Reading

* Carey and Sundberg 'Advanced Organic Chemistry: Structure and Mechanisms (Parts A & B)' 4th Ed., Springer Science+Business Media, 2000. ISBN 0-306-46243-5 (n.b. on reserve in the library)

* Ian Fleming 'Frontier Orbitals and Organic Chemical Reactions' John Wiley & Sons, 1976. ISBN 0-471-01819-8

Suggested Reading

* T. H. Lowry, K. S. Richardson 'Mechanism and Theory in Organic Chemistry' 3rd Ed., Harper Int. ISBN 0-06-044084-8 (n.b. on reserve in the library)

* Daniel Weeks 'Pushing Electrons: A Guide for Students of Organic Chemistry' 3rd Ed., Saunders College Pub; ISBN: 0-030-20693-6

* Robert Grossmann 'The Art of Writing Reasonable Organic Reaction Mechanisms' Springer Verlag, 1998. ISBN: 0-387-98540-9