

0402501 Advanced Organic Chemistry

Course Syllabus

Modern concepts and theories of selectivity and reactivity in organic reactions will be introduced. Topics in the area of reactive intermediates, transition-state theories, and functional group interconversions will be discussed. Kinetics and thermodynamics of reactions, molecular mechanisms and stereochemistry of reactions, conformational analysis, and pericyclic reactions will be covered.

Time: Tuesday and Thursday

Course Director: Poonsakdi Ploypradith, Ph.D.

Grading: Two 3-hour exams (45% and 40%), homework (10%), and class participation (5%)

Module 1: 9:00 a.m.-12:00 p.m.

August 20:	Strain and Stability	WN
August 22:	Catalysis	WN
August 29:	Reactions of Carbonyl Compounds/Carbanion Chemistry	PP
September 3:	Reactive Electrophilic Species	PP
September 5:	Free-Radical Reactions/Photochemistry	PP
September 10:	Mechanistic Organic Chemistry I	RS
September 12:	Mechanistic Organic Chemistry II	RS
September 17:	Review and Discussions (3 h; exact time TBA)	Staff
September 19:	-----Midterm (9:00 am-12:00 p.m.)-----	

Module 2: 9:00 a.m.-12:00 p.m.

October 3:	Classes of Reactions I	CT
October 8:	Classes of Reactions II	CT
October 10:	Classes of Reactions III	CT
October 15:	Concerted Reactions	JT
October 17:	Concerted Reactions	JT
October 22:	Concerted Reactions	JT
October 24:	Review and Discussions (3 h; exact time TBA)	Staff
October 29:	-----Final (9:00 am-12:00 p.m.)-----	

List of Participating Faculties:

Dr. Charmsak Thongsornkleeb (CT)
 Dr. Jumreang Tummatorn (JT)
 Dr. Rungroj Saruengkhanphasit (RS)
 Dr. Worawat Niwetmarin (WN)
 Dr. Poonsakdi Ploypradith (PP)

References: 1) Advanced Organic Chemistry 5th Edition (Part A and B) by F. A. Carey & R. J. Sundberg
 2) Advanced Organic Chemistry 6th Edition by M. B. Smith & J. March
 3) Modern Physical Organic Chemistry by E. V. Anslyn

This is only a tentative schedule and thus can be subjected to changes which will be notified to faculties and students at the earliest possible.

No class on August 27 as it is during the SDLA-ICEOCA-1.

No classes also on September 24, 26, and October 1 as it is during the ICCEOCA-14.