

Chulabhorn Graduate Institute

Elective Course: 0403504 Organic Synthesis 1 (2 Credits: 2-0-4)

Course Description:

Discussion of retrosynthetic analysis, basis of stereochemically controlled synthesis, chemical and biological catalysis and their applications. Introduction to organometallic chemistry, its fundamental reaction mechanisms, and the preparation of organometallic reagents. Applications to the development of new synthesis methodology and the synthesis of biologically active and medicinally useful compounds.

Time: Mondays, Wednesdays, Fridays, **9 am – 12 pm** (November 1 – December 2, 2019)

Place: Classroom, 7th Floor, Chulabhorn Graduate Institute

Course Coordinator: Satapanawat Sittihan, Ph.D.

Instructors: Satapanawat Sittihan, Ph.D. (SS)
Jumreang Tummatorn, Ph.D. (JT)

Grading:	Midterm Examination	45%
	Final Examination	45%
	Problem Sets	5%
	Class Attendance	5%

Class Schedule:

Week	Date	Day	Topic	Instructor
1	Nov 1	Fri	Disconnection and Retrosynthetic Analysis	JT
2	Nov 4	Mon	Basic Strategy for Regioselectivity and Stereoselectivity	JT
	Nov 6	Wed	Introduction to Stereoselective Synthesis	SS
	Nov 7*	Thu*	Stereoselective Synthesis of Small Molecules	SS
3	<i>Nov 11</i>	<i>Mon</i>	<i>Review and Discussions</i>	Staff
	Nov 15	Fri	Midterm Examination	Staff
4	Nov 20	Wed	Preparation and Reactivity of Organometallic Reagents	SS
	Nov 22	Fri	Introduction to Organometallic Chemistry	SS
5	Nov 25	Mon	Organopalladium Chemistry	SS
	Nov 27	Wed	Cross-coupling Reactions and Metathesis	SS
	<i>Nov 29</i>	<i>Fri</i>	<i>Review and Discussions</i>	Staff
6	Dec 2	Mon	Final Examination	Staff