

## 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 2 – December 9, 2020)\*

**Place:** Teleconference room, 3<sup>rd</sup> floor, Chulabhorn Graduate Institute

**Course Coordinator:** Satapanawat Sittihan, Ph.D.

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

<b>Grading:</b>	Midterm Examination	48%
	Final Examination	48%
	Problem Sets	2%
	Class Attendance	2%

#### Class Schedule:

Week	Date	Day	Topic	Instructor
1	Nov 2	Mon	Disconnection and Retrosynthetic Analysis	JT
	Nov 5	Wed	Basic Strategy for Regioselectivity and Stereoselectivity	JT
	Nov 6	Fri	Introduction to Stereoselective Synthesis	SS
2	Nov 9	Mon	Stereoselective Synthesis of Small Molecules	SS
	Nov 11	Wed	<i>Review and Discussions</i>	JT, SS
	Nov 13	Fri	<b>Midterm Examination</b>	Staff
3	Nov 27	Fri	Preparation and Reactivity of Organometallic Reagents	SS
4	Nov 30	Mon	Introduction to Organometallic Chemistry	SS
	Dec 2	Wed	Organopalladium Chemistry	SS
	Dec 4	Fri	Cross-coupling Reactions and Metathesis ( <i>1 pm – 4 pm</i> )	SS
5	Dec 7	Mon	<i>Review and Discussions</i>	SS
	Dec 9	Wed	<b>Final Examination</b>	Staff

\* Time and place are subjected to change with prior notice.