



Chulabhorn Graduate Institute

0403508 Case Studies in Drug Discovery and Development

Course Description:

The course introduces principles of drug discovery and development. Then, synthetic methodologies commonly used in the synthesis of some current drugs are discussed. Modern techniques employed in process-scale synthesis of small-molecule drugs are also described. In addition, examples of the discovery and development of different classes of drugs in the market are presented as case studies. Finally, students will be introduced to the biological sides of drug discovery and development, real-world public health issues and will be tasked with working as a group with other students in the Applied Biological Sciences (ABS) and Environmental Toxicology (ET) programs to study the issues. This is in order to come up with solution(s) and to present the solution(s) in entrepreneurial scenarios/spirits both in the form of PowerPoint presentations and written reports.

Course Coordinator: Charnsak Thongsornkleeb, Ph.D.

Course Category: Elective course

Duration: September 2, 2020 – September 18, 2020 for CGCS508 and October – December 2020 for CGAB503

Time: 9:00 – 12:00

Place: Teleconference Room, 3rd Floor, CGI building for CGCS508 and to be announced for CGAB503

Grading Scheme:	Final Examination (CGCS508)	50%
	Final Presentation and Participation (CGAB503)	50%

Course Schedule

Date	Topic	Lecturer
Sep. 2, 2020 9:00 – 12:00	L1: Introduction to Drug Discovery and Development	CE
Sep. 4 and Sep. 7	National Holidays	

Sep. 9, 2020 13:00 – 16:00	L2: Synthetic drugs I	RS
Sep. 11, 2020 9:00 – 12:00	L3: Synthetic drugs II	WN
Sep. 14, 2020 9:00 – 12:00	L4: Process chemistry L5: Flow chemistry	CT SS
Sep. 16, 2020 9:00 – 12:00	L6: Case study I L7: Case study II	RS WN
Sep. 23, 2020 9:00 – 12:00	Final examination (L1 – L3)	Staff
Sep. – Dec. 2020 or Different dates	<i>Tentative duration of CGAB 503: lectures and group work on projects (for CB-track students)</i> or <i>Classes continue for OC-track students</i>	<i>CGAB503</i> <i>Staff</i> <i>JC</i>
Dec. 2020	<i>Tentative final presentation for CB-track students</i>	<i>CGAB503</i> <i>Staff</i>

Lecturers:

Chatchakorn Eurtivong, Ph.D. (CE)

Rungroj Saruengkhanphasit, Ph.D. (RS)

Worawat Niwetmarin, Ph.D. (WN)

Satapanawat Sittihan, Ph.D. (SS)

Charnsak Thongsornkleeb, Ph.D. (CT)

Jaruwan Chatwichien, Ph.D. (JC): the coordinator for CGCS 503