



CHULABHORN
ROYAL ACADEMY
Chulabhorn Graduate Institute

Course Syllabus Medicinal Chemistry (0402602)

Course Description:

Various classical and modern synthetic techniques for natural and synthetic drugs, total synthesis as well as semi-synthesis of drugs and drug candidates, structural modifications of some natural products leading to compounds with better biological profiles, principles and mechanisms of drug actions, applications of computational chemistry to establish quantitative structure-activity relationship (QSAR), and investigation of the structure of active site of biological targets, as well as determination of ligand-receptor interactions

Grading:

PART I: Midterm examination (L1-L8, 24h)	57%
PART II: Final examination (L9-L14, 18h)	33%
Assignment	10%

Course Director: Watthanachai Jumpathong, Ph.D.

Time: Monday and Wednesday, 9:00 am-12:00 pm

Date	Topics	Lecturers
January 18	L1: Lead optimization I	PP
January 20	L2: Lead Optimization II	PP
January 25	L3: Drug targets I	WJ
January 27	L4: Drug targets II	WJ
February 1	L5: Drug targets III	WJ
February 3	L6: Ligand-receptor interactions	WJ
February 8	L7: Drug actions and drug-like properties	WJ
February 10	L8: Reactive intermediates of drugs and drug transporter	WJ
February 15	L9: CNS disorders and antipsychotic drugs	CE
February 17	-----Midterm examination (L1-L8 by PP and WJ)-----	
February 22	L10: Computational Chemistry I: Chemoinformatic	CE
February 24	L11: Computational Chemistry II: QSAR	CE
March 1	L12: Computational Chemistry III: Computer-aided drug design tutorial	CE
March 3	L13: Fundamentals of anticancer chemotherapy I	CE
March 8	L14: Fundamentals of anticancer chemotherapy II	CE
March 15	-----Final examination (L9-L14 by CE)-----	

Lecturers:

Dr. Chatchakorn Eurtivong (CE)

Dr. Poonsakdi Ploypradith (PP)

Dr. Watthanachai Jumpathong (WJ)