

Enquiry for Course Details

CHEM2441 Organic chemistry I (6 credits)	Academic Year	2020
Offering Department	Chemistry	Quota
Course Co-ordinator	Dr X Y Li (1st sem); Prof P Chiu (2nd sem), Chemistry < xiaoyuli@hku.hk; pchiu@hku.hk >	
Teachers Involved	(Dr X Y Li, Chemistry) (Dr Z X Huang, Chemistry) (Prof P Chiu, Chemistry)	
Course Objectives	To provide students with the basic principles to understand the structure and reactivity of organic molecules, with examples illustrating the role of organic chemistry in daily life and industry. This course serves as the first part of the complete program on fundamental organic chemistry, to be followed up by CHEM3441 Organic Chemistry II.	
Course Contents & Topics	Structure and bonding of organic compounds, three dimensional structures of organic molecules, conformational stereochemistry, chirality. Chemistry of alkanes, cycloalkanes, alkenes, alkynes, haloalkanes, dienes, aromatic compounds, alcohols, thiols, and ethers. Organometallic chemistry for organic synthesis. Principles of organic synthesis. Detailed considerations of reaction mechanisms.	
Course Learning Outcomes	On successful completion of this course, students should be able to:	
	CLO 1	understand basic concepts and employ the vocabulary of organic chemistry
	CLO 2	visualize and draw three-dimensional, stereochemically correct representations of organic molecules
	CLO 3	recognize, discriminate and name chiral stereoisomers and diastereomers
	CLO 4	understand the reactivity of the functional groups
	CLO 5	understand reaction mechanisms and apply mechanistic knowledge to solve chemistry problems
	CLO 6	apply reactions to the synthesis of target molecules
	CLO 7	appreciate the relevance of organic chemistry in biological processes and daily life
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in CHEM1042; and NOT for students who have passed in CHEM2041, or already enrolled in this course (for students admitted in 2014-15 or before); Pass in CHEM1042; and Pass in CHEM1043, or already enrolled in this course; and NOT for students who have passed CHEM2041, or already enrolled in this course (for students admitted in 2015-16 or thereafter)	
Course Status with Related Major/Minor /Professional Core	2020 Major in Biochemistry (Core/Compulsory) 2020 Major in Chemistry (Core/Compulsory) 2020 Major in Chemistry (Intensive) (Core/Compulsory) 2020 Minor in Chemistry (Disciplinary Elective) 2019 Major in Biochemistry (Core/Compulsory) 2019 Major in Chemistry (Core/Compulsory) 2019 Major in Chemistry (Intensive) (Core/Compulsory) 2019 Minor in Chemistry (Disciplinary Elective) 2018 Major in Biochemistry (Core/Compulsory) 2018 Major in Chemistry (Core/Compulsory) 2018 Major in Chemistry (Intensive) (Core/Compulsory) 2018 Minor in Chemistry (Disciplinary Elective) 2017 Major in Biochemistry (Core/Compulsory) 2017 Major in Chemistry (Core/Compulsory) 2017 Major in Chemistry (Intensive) (Core/Compulsory) 2017 Minor in Chemistry (Disciplinary Elective) 2016 Major in Biochemistry (Core/Compulsory) 2016 Major in Chemistry (Core/Compulsory) 2016 Major in Chemistry (Intensive) (Core/Compulsory) 2016 Minor in Chemistry (Disciplinary Elective)	

Course to PLO Mapping	2020 Major in Biochemistry < PLO 1,2,3,4,5 > 2020 Major in Chemistry < PLO 1,2,3 > 2020 Major in Chemistry (Intensive) < PLO 1,2,3 > 2019 Major in Biochemistry < PLO 1,2,3,4,5 > 2019 Major in Chemistry < PLO 1,2,3 > 2019 Major in Chemistry (Intensive) < PLO 1,2,3 > 2018 Major in Biochemistry < PLO 1,2,3,4,5 > 2018 Major in Chemistry < PLO 1,2,3 > 2018 Major in Chemistry (Intensive) < PLO 1,2,3 > 2017 Major in Biochemistry < PLO 1,2,3,4,5 > 2017 Major in Chemistry < PLO 1,2,3 > 2017 Major in Chemistry (Intensive) < PLO 1,2,3 > 2016 Major in Biochemistry < PLO 1,2,3,4,5 > 2016 Major in Chemistry < PLO 1,2,3 > 2016 Major in Chemistry (Intensive) < PLO 1,2,3 >															
Offer in 2020 - 2021	Y	1st sem	2nd sem	Examination	Dec	May										
Offer in 2021 - 2022	Y															
Course Grade	A+ to F															
Grade Descriptors	<table border="1"> <tr> <td>A</td> <td>Demonstrate a thorough mastery at an advanced level of knowledge and understanding of facts and concepts pertaining to the chemical properties, reactions and mechanisms of organic chemistry. Show a strong ability to integrate knowledge and theory, and a strong ability to analyze and solve novel organic chemistry problems. Demonstrate highly effective organization, understanding, and execution of lab skills and techniques in organic chemistry experiments.</td> </tr> <tr> <td>B</td> <td>Demonstrate substantial command of knowledge and understanding of essential facts and concepts pertaining to the chemical properties, reactions and mechanisms of organic chemistry. Show evidence of ability to integrate knowledge and theory, and evidence of ability to analyze and solve novel organic chemistry problems. 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Course Type	Lecture-based course															
Course Teaching & Learning Activities	Activities		Details		No. of Hours											
	Lectures				36											
	Tutorials				12											
	Reading / Self study				100											
Assessment Methods and Weighting	Methods	Details	Weighting in final course grade (%)	Assessment Methods to CLO Mapping												
	Assignments	(Assignments and participation)	30	CLO 1,2,3,4,5,6,7												
	Examination		50	CLO 1,2,3,4,5,6												
	Test		20	CLO 1,2,3,4,5,6												
Required/recommended reading and online materials	"Organic Chemistry", by Paula Y. Bruice, 2016, 8th Edition, Pearson, with e-text and Mastering Chemistry. Chapters 3 - 13															
Course Website	NIL															
Additional Course Information	Nil															

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