

Enquiry for Course Details

CHEM3442 Organic chemistry of biomolecules (6 credits)		Academic Year	2023
Offering Department	Chemistry	Quota	50
Course Co-ordinator	Dr P H Toy, Chemistry < phtoy@hku.hk >		
Teachers Involved	(Dr P H Toy, Chemistry) (Dr. Y X Li, Chemistry)		
Course Objectives	The major objective of this course is to give the students an understanding and appreciation of the role of organic chemistry in biology and biochemistry.		
Course Contents & Topics	The chemistry of organic molecule groups such as carbohydrates, amino acids, peptides, coenzymes, nucleotides and lipids will be discussed. Enzyme catalysis, cofactors and inhibitors will also be presented.		
Course Learning Outcomes	On successful completion of this course, students should be able to:		
	CLO 1	have a basic understanding of biologically important organic molecules	
	CLO 2	have a basic understanding of enzyme catalysis	
	CLO 3	appreciate how organic chemistry plays an important role in biology and biochemistry	
Pre-requisites (and Co-requisites and Impermissible combinations)	Pass in CHEM2442 or CHEM3441		
Course Status with Related Major/Minor /Professional Core	2U000C00 Course not offered under any Major/Minor/Professional core 2023 Minor in Chemistry (Disciplinary Elective) 2022 Minor in Chemistry (Disciplinary Elective) 2021 Minor in Chemistry (Disciplinary Elective) 2020 Minor in Chemistry (Disciplinary Elective) 2019 Minor in Chemistry (Disciplinary Elective)		
Course to PLO Mapping			
Offer in 2023 - 2024	Y	1st sem	Examination Dec
Offer in 2024 - 2025	Y		
Course Grade	A+ to F		
Grade Descriptors	A	Demonstrate thorough mastery at an advanced level of extensive biomolecule organic chemistry knowledge, and skills required for attaining all the course learning outcomes. Show strong analytical and critical abilities and logical thinking, with evidence of original thought, and ability to apply knowledge to a wide range of complex, familiar and unfamiliar problems. Apply highly effective organizational and presentational skills.	
	B	Demonstrate substantial command of biomolecule organic chemistry with a broad range of knowledge, and skills required for attaining at least most of the course learning outcomes. Show evidence of analytical and critical abilities and logical thinking, and ability to apply knowledge to familiar and some unfamiliar problems. Apply effective organizational and presentational skills.	
	C	Demonstrate general but incomplete command of biomolecule organic chemistry knowledge, and skills required for attaining most of the course learning outcomes. Show evidence of some analytical and critical abilities and logical thinking, and ability to apply knowledge to most familiar problems. Apply moderately effective organizational and presentational skills.	
	D	Demonstrate partial but limited command of biomolecule organic chemistry knowledge, and skills required for attaining some of the course learning outcomes. Show evidence of some coherent and logical thinking, but with limited analytical and critical abilities. Show limited ability to apply knowledge to solve problems. Apply limited or barely effective organizational and presentational skills.	
	Fail	Demonstrate little or no evidence of command of biomolecule organic chemistry knowledge, and skills required for attaining the course learning outcomes. Lack of analytical and critical abilities, logical and coherent thinking. Show very little or no ability to apply knowledge to solve problems. Organization and presentational skills are minimally effective or ineffective.	
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 (%)
	Examination		50
	Presentation		10
	Test	(2-mid term tests)	40
Required/recommended reading and online materials	Bruice, P.Y.; Organic Chemistry (Pearson, 2017, 8th edition), Chapters 20-26.		
Course Website			
Additional Course Information			