

The Hong Kong University of Science and Technology

School of Science

An Example on Student's Pathway (as of 2 August 2021)

<< Declaration of major

School:		School of Science			Student's Pathways (i.e. Study Pattern)										Remarks
Department:		Department of Chemistry			Pathway 1										
Program:		BSc in Chemistry			Background: HKDSE 4 Core + 2 Elec (1x CHEM, 1/2x PHYS, 1/2x BIOL)										
					Profile: Normative. Students to graduate in BSc CHEM with Biomolecular Chemistry Option										
Course Offering Dept (course code prefix)	Course Code	Course Title / Courses List	Credits	Major Pre-requisite	Year 1 Fall	Year 1 Spring	Year 2 Fall	Year 2 Spring	Year 3 Fall	Year 3 Spring	Year 4 Fall	Year 4 Spring	Sub-total		
School Requirements															
SCIE	1000	Science School Induction	0		0	0							0		
COMP	1021	Note: COMP 1021 OR COMP 1022P OR COMP 2011	3-4												
COMP	1022P	Introduction to Computer Science	3												
COMP	2011	Introduction to Computing with Java	3					3					3		
COMP	2011	Programming with C++	4												
LANG	2010	English for Science I	3				3						3		
CHEM	1010	Note: CHEM 1010 OR CHEM 1020	3												
CHEM	1020	General Chemistry IA	3	@	3								3		
CHEM	1020	General Chemistry IB	3												
CHEM	1030	General Chemistry II	3	@		3							3		
CHEM	1004	Chemistry in Everyday Life	3											0	
CHEM	1050	Laboratory for General Chemistry I	1		1								1		
CHEM	1055	Laboratory for General Chemistry II	1			{1}							0		
LIFS	1901	General Biology I	3		3								3		
LIFS	1902	General Biology II	3			3							3		
LIFS	1903	Laboratory for General Biology I	1										0		
LIFS	1904	Laboratory for General Biology II	1										0		
LIFS	1930	Nature of Life Sciences	3										0		
LIFS	2210	Biochemistry I	3										0		
MATH	1012	Calculus IA	4										0		
MATH	1013	Calculus IB	3		3								3		
MATH	1014	Calculus II	3										0		
MATH	1020	Accelerated Calculus	4										0		
MATH	1023	Honors Calculus I	3										0		
MATH	1024	Honors Calculus II	3										0		
MATH	2023	Multivariable Calculus	4										0		
MATH	2121	Linear Algebra	4										0		
MATH	2131	Honors in Linear and Abstract Algebra I	4										0		
OCES	1030	Environmental Science	3										0		
PHYS	1001	Physics and the Modern Society	3										0		
PHYS	1111	General Physics I	3			3							3		
PHYS	1112	General Physics I with Calculus	3										0		
PHYS	1113	Laboratory for General Physics I	1										0		
PHYS	1114	General Physics II	3						3				3		
PHYS	1115	Laboratory for General Physics II	1										0		
PHYS	1312	Honors General Physics I	3										0		
PHYS	1314	Honors General Physics II	3										0		
Required credits for School / Major Pre-requisite Requirements													28		
Major Requirements															
Major Required Courses and Electives															
CHEM	1050	Laboratory for General Chemistry I	1		(1)								0		
CHEM	1055	Laboratory for General Chemistry II	1			1							1		
CHEM	2110	Organic Chemistry I	3				3						3		
CHEM	2210	Inorganic Chemistry I	3				3						3		
CHEM	2310	Fundamentals of Analytical Chemistry	3						3				3		
CHEM	2409	Mathematical Methods for Physical Chemistry	4				4						4		
CHEM	2410	Physical Chemistry I: Equilibrium Thermodynamics and Statistical Mechanics	3						3				3		
CHEM	2550	Synthetic Chemistry Laboratory I	2				2						2		
CHEM	2555	Molecular Characterization Chemistry Laboratory I	2						2				2		
CHEM	3120	Organic Chemistry II	3					3					3		
CHEM	3220	Inorganic Chemistry II	3					3					3		
CHEM	3320	Instrumental Analysis	3							3			3		
CHEM	3420	Physical Chemistry II	3							3			3		
CHEM	3550	Synthetic Chemistry Laboratory II	2					2					2		
CHEM	3555	Molecular Characterization Chemistry Laboratory II	2							2			2		
CHEM/SCIE		Note: CHEM 4689 OR CHEM 4691 OR (SCIE 3500 AND SCIE 4500) (Students following IRE Track can only use (SCIE 3500 AND SCIE 4500) to fulfill the requirement)	3-6												
CHEM	4689	Capstone Project	3								3		3		
CHEM	4691	Capstone Research I	3												
SCIE	3500	IRE Research Project I	3												
SCIE	4500	IRE Research Project II	3												
MATH		Note: MATH 1012 OR MATH 1013 OR MATH 1020 OR MATH 1023	3-4												
MATH	1012	Calculus IA	4		(3)	(3)							0		
MATH	1013	Calculus IB	3												
MATH	1020	Accelerated Calculus	4												
MATH	1023	Honors Calculus I	3												
LANG		Note: LANG 3022 OR LANG 3027 (Students following IRE Track should take LANG 3027 to fulfill the requirement.)	3												
LANG	3022	Science Communication in English (Chemistry)	3							3			3		
LANG	3027	Science Communication in English for Research Students (Chemistry, Life Science and Ocean Science)	3												
CHEM		CHEM 3000-level or above Elective (Any 1 course (3 credits) of the subject and level specified. Students to graduate with a Chemistry Option or IRE Track are exempted from this requirement.)	0-3										0		
SSCI		Science 2000-level or above Elective (Any science course offered under the School of Science of the level as specified)	2					2					2		
Required credits for Major Required Courses and Electives			52-53										45		
Option Requirements															
Biomolecular Chemistry Option															
CHEM	4150	Biomolecular Synthesis Laboratory	1									1	1		
CHEM	4155	Biomolecular Characterization Laboratory	1									1	1		
CHEM		Chemistry Electives [Course(s) from the specified elective list, of which at least 2 courses must be taken from the Core Area. Courses taken as Required/Elective Courses of another Chemistry Option may not be counted towards this elective requirement.]	12								3	9	12		
Required credits for Biomolecular Chemistry Option			14										14		
University CORE															
CORE	C3 - C12	U CORE - Others	30			3	3	6	6	3	3	6	30		
CORE	C1 & C2	U CORE - English Language	6		3	3							6		
Sub-total for University CORE			36										36		
Term load (excl. free credits)															
13 16 18 19 17 14 11 15															
109 (w/o option) 123 (w/ option)#															
<< Declaration of major															

Notes:

@ Course that students need to complete before enrolling into respective major/programs.

() indicates the reuse of the same course to fulfill more than one requirement.

{ } indicates the course overlapping with another requirement will not be necessarily counted towards the School Requirements.

To graduate, students should complete at least 120 credits in approved courses. They may need to take courses additional to the required and elective courses as specified above to meet this minimum credit requirement.

>> The content of this example is not necessarily equivalent to a complete list of graduation requirements of the program. Students should refer to the Program Catalog/UG Curriculum Handbook for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.