

The Hong Kong University of Science and Technology

School of Science

An Example on Student's Pathway (as of 26 July 2024)

<< Declaration of major

School:		School of Science				Student's Pathways (i.e. Study Pattern)										Remarks
Department:		Division of Life Science				Pathway 1										
Program:		BSc in Biochemistry and Cell Biology				Background: HKDSE 4 Core + 2 Elec (incl. 1/2x BIOL, 1/2x CHEM) Profile: Normative										
Course Offering Dept (course code prefix)	Course Code	Course Title / Courses List		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			
<b>School Requirements</b>																
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													
COMP	2011	Programming with C++	4													
LANG	2010	English for Science I	3													
LIFS		Note: Students with level 3 or above in HKDSE 1x Biology are exempted from taking LIFS 1901	0-3	@												
LIFS	1901	General Biology I	3		3									3		
LIFS	1902	General Biology II	3	@		3								3		
CHEM	1008	Introductory Chemistry	3											0		
CHEM	1011	General Chemistry A: Reactions, Thermodynamics, and Reaction Kinetics	3			3								3		
CHEM	1012	General Chemistry B: Atomic Structure, Molecules, and Bonding Theories	3		3									3		
CHEM	1051	Laboratory for General Chemistry A	1			(1)								0		
CHEM	1052	Laboratory for General Chemistry B	1		(1)									0		
DASC	2010	Calculus for Data Analytics in Science	3											0		
LIFS	1030**	Environmental Science	3											0		
LIFS	1903	Laboratory for General Biology I	1		1									1		
LIFS	1904	Laboratory for General Biology II	1			(1)								0		
LIFS	1930	Nature of Life Sciences	3											0		
LIFS	2210	Biochemistry I	3				3							3		
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	1001	The Earth as a Blue Planet	3											0		
OCES	1010	Principles and Applications of Environmental Science	3											0		
PHYS	1101	Introductory Physics	4		4									4		
PHYS	1111	General Physics I	3											0		
PHYS	1112	General Physics I with Calculus	3											0		
PHYS	1113	Laboratory for General Physics I	1											0		
PHYS	1114	General Physics II	3											0		
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		
<b>Required credits for School / Major Pre-requisite Requirements</b>														29		
<b>Major Requirements</b>																
<b>Major Required Courses and Electives</b>																
LIFS		Note: Students with level 3 or above in HKDSE 1x Biology are exempted from taking LIFS 1903	0-1		(1)									0		
LIFS	1903	Laboratory for General Biology I	1			1								1		
LIFS	1904	Laboratory for General Biology II	1				1							1		
LIFS	2010	Modern Approaches to Biochemical and Cell Biological Research	3				3							3		
LIFS	2040	Cell Biology	3					3						3		
LIFS	2210	Biochemistry I	3				(3)							0		
LIFS	2220	Biochemistry II	3					3						3		
LIFS	2240	Cell Biology Laboratory	3						3					3		
LIFS	2720	Biochemistry Laboratory	2				2							2		
LIFS	2820	Biochemical Laboratory Techniques	1				1							1		
LIFS	3010	Molecular and Cellular Biology I	3						3					3		
LIFS	3020	Molecular and Cellular Biology II	3							3				3		
LIFS	3140	General Genetics	4						4					4		
LIFS/SCIE		Note: LIFS 4961 OR (LIFS 4971 AND LIFS 4981) OR (SCIE 4500 AND LIFS 4981) (Students following IRE Track can only use (SCIE 4500 AND LIFS 4981) to fulfill the requirement.)	3-7													
LIFS	4961	Biochemistry and Cell Biology Capstone Project	3								[3]	3		3		
LIFS	4971	Biochemistry and Cell Biology Project Research I	3											3		
LIFS	4981	Biochemistry and Cell Biology Project Research II	4											4		
SCIE	4500	IRE Research Project II	3											3		
CHEM	1011	General Chemistry A: Reactions, Thermodynamics, and Reaction Kinetics	3			(3)								0		
CHEM	1012	General Chemistry B: Atomic Structure, Molecules, and Bonding Theories	3		(3)									0		
CHEM	1051	Laboratory for General Chemistry A	1			1								1		
CHEM	1052	Laboratory for General Chemistry B	1		1									1		
CHEM		Note: CHEM 2110 OR CHEM 2311	3													
CHEM	2110	Organic Chemistry I	3				3	[3]						3		
CHEM	2311	Analytical Chemistry	3											3		
CHEM		Note: CHEM 2155 OR CHEM 2355	1													
CHEM	2155	Fundamental Organic Chemistry Laboratory	1					1						1		
CHEM	2355	Fundamental Analytical Chemistry Laboratory	1											1		
LANG		Note: LANG 3024 OR LANG 3027 (Students following IRE Track should take LANG 3027 to fulfill the requirement.)	3													
LANG	3024	Science Communication in English (Life Science)	3							3		[3]		3		
LANG	3027	Science Communication in English for Research Students	3											3		
LIFS/BIPH/CHEM/OCES/PHYS		Biochemistry and Cell Biology Electives (Courses from the specified elective list. Students following IRE Track are required to take a minimum of 12 credits; while others should either take a minimum of 20 credits (for those opting for LIFS 4971 & LIFS 4981), or 24 credits (for those opting for LIFS 4961). Courses taken as Major/Track Required Courses may not be counted towards the elective requirement.)	12-24													
<b>Required credits for Major Required Courses and Electives</b>			63-72											62		
<b>University CORE</b>																
CORE	C3 - C10	U CORE - Others	24		1	2	3	3	3	3	6	3		24		
CORE	C1 & C2	U CORE - English Language	6		3	3								6		
<b>Sub-total for University CORE</b>			30											30		
Term load (excl. free credits)																
16   16   15   16   16   15   12   15																
121#																

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- 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.
  - [] denotes the course is also offered in other terms as indicated and students may take the course in one of these terms subject to advice by the program office.
  - { } 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.

\*\*Remarks on course(s):  
- LIFS 1030: The course was last offered in 2020-21 and was deleted subsequently.

>> 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 for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.