

The Hong Kong University of Science and Technology

School of Science

An Example on Student's Pathway (as of 17 September 2025)

<< Declaration of major

School:		School of Science			Student's Pathways (i.e. Study Pattern)										Remarks
Department:		School of Science			Pathway 1										
Program:		BSc in Data Analytics and Artificial Intelligence in Science			Background: SBA. Normative students to graduate with one of the Tracks. Profile: HKDSE 1XBIO, 1XCHEM										
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		
<b>School Requirements</b>															
COMP	1021	Note: COMP 1021 OR COMP 1022P OR COMP 1023	3				3						3		
COMP	1022P	Introduction to Computer Science	3												
COMP	1023	Introduction to Computing with Java	3												
COMP	1023	Introduction to Python Programming	3												
MATH	1013	Note: [(MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-6												
MATH	1014	Calculus I	3	@	3	3							6		
MATH	1020	Accelerated Calculus	4												
MATH	1023	Honors Calculus I	3												
MATH	1024	Honors Calculus II	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										0		
CHEM	1051	Laboratory for General Chemistry A	1										0		
CHEM	1052	Laboratory for General Chemistry B	1										0		
DASC	2010	Calculus for Data Analytics in Science	3				3						3		
LIFS	1030**	Environmental Science	3										0		
LIFS	1901	General Biology I	3										0		
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	1005	Calculus and Statistics	4										0		
MATH	1006	Calculus, Vectors, and Matrices	4										0		
MATH	2011	Introduction to Multivariable Calculus	3										0		
MATH	2023	Multivariable Calculus	4										0		
MATH	2111	Matrix Algebra and Applications	3										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>			22										22		
<b>Major Requirements</b>															
<b>Major Required Courses and Electives</b>															
DASC	2010	Calculus for Data Analytics in Science	3				(3)						0		
DASC	2020	Applied Linear Algebra for Least Squares Optimization and Machine Learning	3					3					3		
DASC	2110	Object-oriented Programming for Data Analytics in Science	3					3					3		
DASC	2210	A Survey on Big Data in Science and Society	1				1						1		
DASC	2220	Statistics and Probability for Data Analytics in Science	3					3					3		
DASC	3120	Data Structures for Data Analytics in Science	3						3				3		
DASC	3230	Statistical Modeling and Machine Learning	3						3				3		
DASC	3240	Data Visualization in Science	3							3			3		
DASC	3250	Numerical Methods for Data Analytics in Science	3							3			3		
DASC	4010	Practical Artificial Intelligence in Science	3								3		3		
DASC	4300	Capstone Project for Data Analytics in Science	3									3	3		
COMP	1021	Note: COMP 1021 OR COMP 1023	3										0		
COMP	1022P	Introduction to Computer Science	3					(3)					0		
COMP	1023	Introduction to Python Programming	3										0		
<b>Required credits for Major Required Courses and Electives</b>			34										28		
<b>Track Study</b>															
<b>Applied Biosciences Track</b>															
LIFS	1901	Note: Students with level 3 or above in HKDSE 1x Biology are exempted from taking LIFS 1901	0-3										0		
LIFS	1902	General Biology I	3										0		
LIFS	1902	General Biology II	3		(3)								0		
LIFS	2040	Cell Biology	3					3					3		
LIFS	3140	General Genetics	4						4				4		
LIFS	3580	Bioinformatics	3							3			3		
LIFS	4320	Data Science for Biology and Medicine	3									3	3		
<b>Required credits for Applied Biosciences Track</b>			16-19										13		
<b>University Legal Education Requirements</b>															
LEGL	1000	Legal Education (Basic Law, National Security Law and Safeguarding National Security Ordinance)	0			0	0	0	0	0	0	0	0	It is a self-paced online course.	
<b>Sub-total for University Legal Education Requirements</b>			0										0		
<b>University Common Core</b>															
CORE	C3 - C10	U CORE - Others	24		1	2	3	3	6	3	3	3	24		
CORE	C1 & C2	U CORE - English Language	6		3	3							6	Students who are required to take both English for University Studies (EUS) and English for Specific Academic Purposes (ESAP) shall take them in Y1 Fall and Y1 Spring respectively. For those who are required to take ESAP plus one Advanced Communication (AC) course, they will take ESAP in Y1 and the AC course in any term after completion of ESAP.	
<b>Sub-total for University Common Core</b>			30										30		
Term load (excl. free credits)															
10    11    10    15    16    12    6    13															
93#															

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.

\*\*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.