

The Hong Kong University of Science and Technology

School of Science

An Example on Student's Pathway (as of 23 July 2018)

<< Declaration of major

School:		School of Science			Student's Pathways (i.e. Study Pattern)								Remarks	
Department:		Department of Mathematics			Pathway 1									
Program:		BSc in Data Science and Technology			Background: HKDSE 4 Core + 1 Elec + MATH M1/M2									
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>Major Pre-requisite Requirements</b>														
MATH			Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7										
MATH	1012		Calculus IA	4										
MATH	1013		Calculus IB	3	@	3	3							6
MATH	1014		Calculus II	3										
MATH	1020		Accelerated Calculus	4										
MATH	1023		Honors Calculus I	3										
MATH	1024		Honors Calculus II	3										
COMP			Note: COMP 1021 OR COMP 1022P OR COMP 1022Q	3										
COMP	1021		Introduction to Computer Science	3	@		3							3
COMP	1022P		Introduction to Computing with Java	3										
COMP	1022Q		Introduction to Computing with Excel VBA	3										
SCIE/ENGG			Note: SCIE 1000 OR ENGG 1010	0	@									
SCIE	1000		Science School Induction	0		0	0							0
ENGG	1010		Academic Orientation	0										
<b>Required credits for Major Pre-requisite Requirements</b>				7-10										9
<b>Major Requirements</b>														
<b>Major Required Courses and Electives</b>														
MATH	2023		Multivariable Calculus	4				4						4
MATH			Note: MATH 2121 OR MATH 2131	4				4						4
MATH	2121		Linear Algebra	4										
MATH	2131		Honors in Linear and Abstract Algebra I	4										
MATH	2411		Applied Statistics	4					4					4
MATH			Note: MATH 2421 OR MATH 2431	4						4				4
MATH	2421		Probability	4										
MATH	2431		Honors Probability	4										
MATH	3322		Matrix Computation	3					3					3
MATH	3332		Data Analytic Tools	3						3				3
MATH	3423		Statistical Inference	3							3			3
MATH	3424		Regression Analysis	3								3		3
MATH/COMP			Note: MATH 4432 OR COMP 4211	3								3		3
MATH	4432		Statistical Machine Learning	3										
COMP	4211		Machine Learning	3										
MATH/COMP			Note: MATH 4995 OR COMP 4981 OR COMP 4981H	3-6								3		3
MATH	4995		Capstone Project for Data Science	3										
COMP	4981		Final Year Project	6										
COMP	4981H		Final Year Thesis	6										
COMP			Note: (COMP 2011 AND COMP 2012) OR COMP 2012H	5-8										
COMP	2011		Introduction to Object-oriented Programming	4							4			8
COMP	2012		Object-Oriented Programming and Data Structures	4										
COMP	2012H		Honors Object-Oriented Programming and Data Structures	5										
COMP			Note: COMP 2711 OR COMP 2711H	4										
COMP	2711		Discrete Mathematical Tools for Computer Science	4					4					4
COMP	2711H		Honors Discrete Mathematical Tools for Computer Science	4										
COMP			Note: COMP 3711 OR COMP 3711H	3-4										
COMP	3711		Design and Analysis of Algorithms	3						3				3
COMP	3711H		Honors Design and Analysis of Algorithms	4										
LANG			Note: (LANG 2010 AND LANG 3021) OR (LANG 2030 AND LANG 4030)	6										
LANG	2010		English for Science I	3										
LANG	2030		Technical Communication I	3					3		3			6
LANG	3021		Science Communication in English (Mathematics)	3										
LANG	4030		Technical Communication II for CSE & CPEG	3										
MATH/COMP			Data Science Electives (4 courses from the specified elective list, of which at least 2 courses should be taken from COMP, and at least 1 course but no more than 2 courses taken from MATH)	12								3	3	6
<b>Required credits for Major Required Courses and Electives</b>				64-71										67
<b>University CORE</b>														
CORE	C3 - C12		U CORE - Others	30		6	9	3	3	3	3	3	3	30
CORE	C1 & C2		U CORE - English Language	6		3	3							6
<b>Sub-total for University CORE</b>				36										36
Term load (excl. free credits)														
						12	18	15	17	13	16	15	6	
<b>112#</b>														

Notes:

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

# 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.

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