The Hong Kong University of Science and Technology **School of Science**

An Example on Student's Pathway (as of 24 July 2017)

<< Declaration of major</pre>

School:		School of Science												
Department:		Department of Mathematics			Pathway 1									
Program:		BSc in Mathematics			Background: HKDSE 4 Core + 1 Elec + MATH M1/M2									
						ormative. S								
Course	Course Code	Course Title / Courses List					i							
Offering				ă			į							
Dept (course code prefix)			Çr	Major Pre-requisite	Year 1	Year 1 Spring	Year 2 Fa	Year 2 Sprin	Year 3 Fall	Year 3 Spring	Year 4 Fall	Year 4 Spring	Sub-total	
			Credits	Jisit	Fa	prin	Fa	prin	8 Fa	prin	F _a	prin	tota	Remarks
School Requi	rements		U)	U	ш =	<u>u</u>		1 0		g		ů.		
SCIE	1000	Science School Induction	0	I	0	0	i						0	
COMP	1	Note: COMP 1001 OR COMP 1021 OR COMP 1022P OR	3-4		-	0	<u> </u>						0	
		COMP 1022Q OR COMP 2011					ļ							
COMP COMP	1001 1021	Exploring Multimedia and Internet Computing	3 3				I _						0	
COMP	1022P	Introduction to Computer Science Introduction to Computing with Java	3				3 						3	
COMP	1022Q	Introduction to Computing with Excel VBA	3				i							
COMP	2011	Introduction to Object-oriented Programming	3											
LANG MATH	2010	English for Science I Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND	4-7		1		3						3	
		(MATH 1014 OR MATH 1024)] OR [MATH 1020] (Students following IRE track can only use MATH 1023 and MATH 1024 to fulfill the requirement)	- -1				 							
MATH MATH	1012 1013	Calculus IA Calculus IB	4 3	@	3	3							6	
MATH	1014	Calculus II	3				Į					_		
MATH	1020	Accelerated Calculus	4				į	4						
MATH MATH	1023 1024	Honors Calculus I Honors Calculus II	3 3				i							
CHEM	1004	Chemistry in Everyday Life	3		3		} 						3	
CHEM	1010	General Chemistry IA	3		 		!	1					0	
СНЕМ	1020	General Chemistry IB	2		1			1					0	
CHEM	1030	General Chemistry II	3		1								0	
CHEM	1050	Laboratory for General Chemistry I	1		1								0	
CHEM	1055	Laboratory for General Chemistry II	1		1								0	
LIFS	1030	Environmental Science	3				 						0	
LIFS	1901	General Biology I	3			3	1						3	
LIFS	1902	General Biology II	3				i i						0	
LIFS	1903	Laboratory for General Biology I	1				1						0	
LIFS	1904	Laboratory for General Biology II	1										0	
LIFS	1930	Nature of Life Sciences	3										0	
LIFS	2210	Biochemistry I	3				1						0	
MATH	2023	Multivariable Calculus	4				4						4	
MATH	2121	Linear Algebra	4				{4}						0	
MATH	2131	Honors in Linear and Abstract Algebra I	4										0	
PHYS	1001	Physics and the Modern Society	3				ļ						0	
PHYS	1111	General Physics I	3										0	
PHYS	1112	General Physics I with Calculus	3		3		<u> </u>						3	
PHYS	1113	Laboratory for General Physics I	1		1		<u>i</u>						1	
PHYS	1114	General Physics II	3			3							3	
PHYS	1115	Laboratory for General Physics II	1				<u>!</u>						0	
PHYS	1312	Honors General Physics I	3										0	
PHYS	1314	Honors General Physics II	3										0	
		uired credits for School / Major Pre-requisite Requirements					i						29	
Major Require	ements			· ·										
	ourses and Electiv	es												
MATH	2023	Multivariable Calculus	4				(4)						0	
MATH MATH	2033	Note: MATH 2033 OR MATH 2043 [Students following IRE Track or Pure Mathematics (Advanced) Track can only use MATH 2043 to fulfill the requirement.] Mathematical Analysis	4				 	4					4	
MATH	2043	Honors Mathematical Analysis	4]	<u></u>	<u> </u>	<u> </u>		<u> </u>				
MATH		Note: MATH 2121 OR MATH 2131 [Students following IRE Track	4				<u> </u>							
		or Pure Mathematics (Advanced) Track can only use MATH 2131 to fulfill the requirement.]					4						4	
MATH	2121	Linear Algebra	4				i						,	
MATH MATH	2131	Honors in Linear and Abstract Algebra I Note: MATH 3033 OR MATH 3043 [Students following IRE Track	4	-	 			1						
IVIAITI		Note: MATH 3033 OR MATH 3043 [Students following IRE Track or Pure Mathematics (Advanced) Track can only use MATH 3043	4				!							
MATU		to fulfill the requirement.]					ļ		4				4	
MATH MATH	3033 3043	Real Analysis Honors Real Analysis	4 4				I							
COMP	-0.0	Note: COMP 1021 OR COMP 1022P OR COMP 1022Q	3		1		†	1						
COMP	1021	Introduction to Computer Science	3				(3)						0	
COMP COMP	1022P 1022Q	Introduction to Computing with Java Introduction to Computing with Excel VBA	3 3				I (-/							
LANG	3011	English for Mathematics	3				 		3				3	
	•	Required credits for Major Required Courses and Electives	22		1		<u> </u>	1					15	
Track Study				•	**		-	•		•	•		!	
Applied Mathematics	Track	*												
MATH	2352	Differential Equations	4				<u>i</u>	4					4	
MATH	2411	Applied Statistics	4				!	4					4	
MATH	3312	Numerical Analysis	3		1		<u> </u>	1	3				3	
MATH	1000	Note: MATH 4992 OR MATH 4999	3				i						_	
MATH MATH	4992 4999	Capstone Project in Applied Mathematics Independent Capstone Project	3 3				i				3		3	
MATH		MATH Depth Electives (4 courses from the specified elective list)	12		1		j	1	-		_	-		
<u></u>	<u> </u>]	<u></u>	<u>!</u>	<u> </u>	3	3	3	3	12	
	· 	Required credits for Applied Mathematics Track	26										26	
University CO	RE						-							
CORE	C3 - C12	U CORE - Others	30		3	3	3	3	3	9	3	3	30	
CORE	C1 & C2	U CORE - English Language	6		3	3	í	1					6	
		Sub-total for University CORE	36		1		-	1					36	
•		,					1	Term load (ex	cl. free credi	its)			L	
					16	15	17	15	16	12	9	6		
							-		6#	•	•			
Notes:					•		<< Dec	laration		r			•	
									.,					

- $@\ \ Course\ that\ students\ need\ to\ complete\ before\ enrolling\ into\ respective\ major/programs.$
- () 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.

The Hong Kong University of Science and Technology School of Science

An Example on Student's Pathway (as of 24 July 2017)

<< Declaration of major

School: School of Science					1									
Department:		Department of Mathematics												
Program:		BSc in Mathematics				nd: HKDSE								
			Profile: No Track	rmative. S										
Course Offering	Course Code	Course Title / Courses List		Ma			į							
Dept (course code prefix)				Major Pre-requisite		×	!	≼		≼		¥.		
()			_	re-rec	Year 1	Year 1	Year 2 Fa	ar 2	Year	ar 3	Year 4	Year 4	Sub	
			Credits	quisite	1 Fal	Spring	2 Fa	Year 2 Spring	Year 3 Fall	Year 3 Spring	4 Fal	Spring	Sub-total	Remarks
School Requi					. –				_		_			
SCIE	1000	Science School Induction Note: COMP 1001 OR COMP 1021 OR COMP 1022P OR	0 3-4		0	0	!						0	
COMP	1001	COMP 1022Q OR COMP 2011 Exploring Multimedia and Internet Computing	3				:							
COMP COMP	1021 1022P	Introduction to Computer Science Introduction to Computing with Java	3				i	3					3	
COMP COMP	1022Q 2011	Introduction to Computing with Excel VBA Introduction to Object-oriented Programming	3 4				į							
LANG MATH	2010	English for Science I Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND	3 4-7				3						3	
WATH		(MATH 1012 OR MATH 1013 OR MATH 1020) (Students following IRE track can only use MATH 1023 and MATH 1024	4-7				! :							
MATH	1012	to fulfill the requirement) Calculus IA	4				i							
MATH MATH	1013 1014	Calculus IB Calculus II	3	@	3	3	į						6	
MATH MATH	1020 1023	Accelerated Calculus Honors Calculus I	4 3				!							
MATH CHEM	1024	Honors Calculus II Chemistry in Everyday Life	3		3		!						3	
CHEM	1010	General Chemistry IA	3		3		<u> </u>						0	
CHEM	1020	General Chemistry IB General Chemistry II	2				<u> </u>						0	
CHEM	1050	Laboratory for General Chemistry I	1										0	
CHEM LIFS	1055 1030	Laboratory for General Chemistry II Environmental Science	1 3		-		<u>:</u>						0	
LIFS	1901	General Biology I	3			3	<u>i </u>						3	
LIFS	1902 1903	General Biology II Laboratory for General Biology I	3		-								0	
LIFS	1904	Laboratory for General Biology II	1				! (0	
LIFS	1930 2210	Nature of Life Sciences Biochemistry I	3		1								0	
MATH	2023	Multivariable Calculus	4				4						4	
MATH MATH	2121	Linear Algebra Honors in Linear and Abstract Algebra I	4				{4}						0	
PHYS PHYS	1001	Physics and the Modern Society	3										0	
PHYS	1112	General Physics I General Physics I with Calculus	3		3								3	
PHYS PHYS	1113 1114	Laboratory for General Physics I General Physics II	1		1								1	
PHYS	1115	Laboratory for General Physics II	1			3 {1}							3	
PHYS PHYS	1312	Honors General Physics I Honors General Physics II	3										0	
		quired credits for School / Major Pre-requisite Requirements											29	
Major Require														
Major Required C	Courses and Electiv	/es Multivariable Calculus	4				(4)						0	
MATH		Note: MATH 2033 OR MATH 2043 [Students following IRE Track or Pure Mathematics (Advanced) Track can only use MATH 2043	4				1							
MATH	2033	to fulfill the requirement.] Mathematical Analysis	4				! :	4					4	
MATH MATH	2043	Honors Mathematical Analysis Note: MATH 2121 OR MATH 2131 Students following IRE Track	4				<u>:</u>							
		or Pure Mathematics (Advanced) Track can only use MATH 2131 to fulfill the requirement.]					4						4	
MATH MATH	2121 2131	Linear Algebra Honors in Linear and Abstract Algebra I	4				į							
MATH		Note: MATH 3033 OR MATH 3043 [Students following IRE Track or Pure Mathematics (Advanced) Track can only use MATH 3043	4				<u> </u>							
MATH	3033	to fulfill the requirement.] Real Analysis	4				i		4				4	
MATH COMP	3043	Honors Real Analysis Note: COMP 1021 OR COMP 1022P OR COMP 1022Q	3				<u> </u>							
COMP COMP	1021 1022P	Introduction to Computer Science Introduction to Computing with Java	3				į	(3)					0	
COMP LANG	1022Q 3011	Introduction to Computing with Excel VBA English for Mathematics	3		-		<u> </u> 			3			3	
T 10: 1		Required credits for Major Required Courses and Electives	22				i						15	
Track Study Mathematics and Physics	sics Track													
MATH	2352	Differential Equations	4				!	4					4	
MATH MATH	3312 4023	Numerical Analysis Complex Analysis	3		1		<u> </u>			3	3		3	
MATH MATH	4052	Partial Differential Equations Note: MATH 4991 OR MATH 4992 OR MATH 4999	3								3		3	
MATH MATH MATH	4991 4992	Note: MATH 4991 OH MATH 4992 OH MATH 4999 Capstone Project in Pure Mathematics Capstone Project in Applied Mathematics	3 3 3				į				3		3	
MATH PHYS	4999	Independent Capstone Project Note: PHYS 1111 OR PHYS 1112 OR PHYS 1312	3		<u> </u>		<u>!</u>							
PHYS PHYS PHYS	1111 1112	Note: PHYS 1111 OR PHYS 1112 OR PHYS 1312 General Physics I General Physics I with Calculus	3 3 3		(3)		!						0	
PHYS PHYS	1312	General Physics I Laboratory for General Physics I	3		/41		i						_	
PHYS		Note: PHYS 1114 OR PHYS 1314	3		(1)	4	İ						0	
PHYS PHYS	1114 1314	General Physics II Honors General Physics II	3			(3)	<u>!</u>						0	
PHYS PHYS	1115 2022	Laboratory for General Physics II Modern Physics	3		1	1	3						3	
PHYS	2023	Modern Physics Laboratory Classical Mechanics	1				1						1	
PHYS PHYS	3032	Note: PHYS 3033 OR PHYS 3053	3-4				<u> </u>		3				3	
PHYS PHYS	3033 3053	Electricity and Magnetism I Honors Electricity and Magnetism I	3 4				<u>į </u>		3				3	
PHYS PHYS	3034	Note: PHYS 3034 OR PHYS 4051 OR PHYS 4052 Electricity and Magnetism II	3				! :				3		3	_
PHYS PHYS	4051 4052	Quantum Mechanics II Introductory Solid State Physics	3				<u>: </u>						, i	
PHYS PHYS	3036	Note: PHYS 3036 OR PHYS 3037 Quantum Mechanics I	3-4				į			3			3	
PHYS PHYS	3037 4050	Honors Quantum Mechanics I Thermodynamics and Statistical Physics	3			<u> </u>	<u> </u>		<u> </u>	3			3	
MATH/PHYS		MATH/PHYS 3000-level or above Elective (Any 1 course of the subject and level as specified)	3				!					3	3	
	<u> </u>	Required credits for Mathematics and Physics Track	46-48		-		<u>:</u>						39	
University CO														
CORE	C3 - C12 C1 & C2	U CORE - Others U CORE - English Language	30 6		3	3	<u> </u>	6	6	3	3	6	30 6	
		Sub-total for University CORE					<u> </u>						36	
					16	16	15	erm load (ex	cl. free cred	ts)	15	9		
					10			11	9#	L	10			
Notes:		of an appelling late as a set of					<< Dec	laration	of major					
യ ഠourse that studer	no need to complete be	efore enrolling into respective major/programs.												

- () indicates the reuse of the same course to fulfill more than one requirement.
- ${\{\}}\ indicates\ the\ course\ overlapping\ with\ another\ requirement\ will\ not\ be\ necessarily\ counted\ towards\ the\ School\ Requirements.$
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