

The Hong Kong University of Science and Technology  
 School of Science  
 An Example on Student's Pathway (as of 30 July 2025)

<< Declaration of major

School:		School of Science			Student's Pathways (i.e. Study Pattern)										Remarks
Department:		Department of Ocean Science			Pathway 1										
Program:		BSc in Ocean Science and Technology			Background: HKDSE 4 Core + 2 Elec Profile: Student to graduate with 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		
<b>School Requirements</b>															
COMP	1021	Note: COMP 1021 OR COMP 1022P OR COMP 1023	3												
COMP	1022P	Introduction to Computer Science	3												
COMP	1023	Introduction to Computing with Java	3						3				3	COMP 1023 offered in Fall term is for SENG students only. SSCI students who have taken COMP 1021 in Fall term may take COMP 1023 in the Spring term to achieve the level of COMP 1023.	
OCES	1001	The Earth as a Blue Planet	3	@	3								3	OCES 1001 is NOT a Science Foundation course and CANNOT be used to fulfill School Requirements.	
OCES	1010	Principles and Applications of Environmental Science	3	@		3							3		
CHEM	1008	Introductory Chemistry	3										0		
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							3		
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										0		
LIFS	1030**	Environmental Science	3										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			1							1		
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 I	3		3								3		
MATH	1014	Calculus II	3			3							3		
MATH	1020	Accelerated Calculus	4										0		
MATH	1023	Honors Calculus I	3										0		
MATH	1024	Honors Calculus II	3										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		
PHYS	1101	Introductory Physics	4										0		
PHYS	1111	General Physics I	3										0		
PHYS	1112	General Physics I with Calculus	3		3								3		
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>													28		
<b>Major Requirements</b>															
<b>Major Required Courses and Electives</b>															
OCES	2002	Marine Chemistry	3					3					3		
OCES	2003	Descriptive Physical Oceanography	3				3						3		
OCES	2004	Sustainable Ocean	3				3						3		
OCES	2005	Coastal Marine Habitats	3				3						3		
OCES	2130	Marine Biology	3				3		[3]				3		
OCES	3001	Coastal Environmental Monitoring	3							3			3		
OCES	3003	Field Methods in Marine Studies	4							4		[4]	4		
OCES	3160	Ecology	3						3			[3]	3		
OCES	3301	Data Analysis in Ocean Science	3							3		[3]	3		
OCES	4001	Ocean and Climate Change	3							3			3		
OCES	4203	Environmental Impact and Risk Assessment	3						3				3	It is a co-requisite course for LANG 4010.	
OCES/SCIE		Note: OCES 4964 OR (OCES 4974 AND OCES 4984) OR (SCIE 3500 AND SCIE 4500) (Students following IRE Track can only use (SCIE 3500 AND SCIE 4500) to fulfill the requirement.)	3-6									3	3		
OCES	4964	Ocean Science and Technology Capstone Project Research	3										3		
OCES	4974	Ocean Science and Technology Research Project I	3										3		
OCES	4984	Ocean Science and Technology Research Project II	3										3		
SCIE	3500	IRE Research Project I	3										3		
SCIE	4500	IRE Research Project II	3										3		
CHEM	1011	General Chemistry A: Reactions, Thermodynamics, and Reaction Kinetics	3		3								3		
LIFS		Note: Students with level 3 or above in HKDSE 1x Biology are exempted from taking LIFS 1901	0-3			(3)							0		
LIFS	1901	General Biology I	3										0		
LIFS	1902	General Biology II	3				(3)						0		
MATH		Note: MATH 1012 OR MATH 1013 OR MATH 1020 OR MATH 1023	3-4										0		
MATH	1012**	Calculus IA	4										0		
MATH	1013	Calculus I	3		(3)								0		
MATH	1020	Accelerated Calculus	4										0		
MATH	1023	Honors Calculus I	3										0		
PHYS		Note: PHYS 1101 OR PHYS 1111 OR PHYS 1112 OR PHYS 1312	3-4										0		
PHYS	1101	Introductory Physics	4			(3)							0		
PHYS	1111	General Physics I	3										0		
PHYS	1112	General Physics I with Calculus	3										0		
PHYS	1312	Honors General Physics I	3										0		
COMP	1021	Introduction to Computer Science	3						(3)				0		
LANG		Note: LANG 4010 (Students following IRE Track are exempted from this course and should take LANG 3027 to fulfill the IRE requirement.)	0-3										0	It is a co-requisite course for OCES 4203.	
LANG	4010	From Report to Presentation: Mastering Effective Communication in Environmental Impact Assessments	3							3			3		
OCES/CHEM/LIFS/MATH		Ocean Science and Technology Electives (Courses from the specified elective list. Students taking the Marine Ecology Option must use OCES 4301 to count towards this elective requirement, while those taking the Oceanography Option must use MATH 1014. Courses taken to fulfill the Track/Option requirements may not be counted towards this elective requirement.)	12								3	6	3	12	
<b>Required credits for Major Required Courses and Electives</b>													64-75		
<b>Option Requirements</b>															
<b>Marine Ecology Option</b>															
OCES		Marine Ecology Electives (3 courses from the specified elective list)	9									3	6	9	
<b>Required credits for Marine Ecology Option</b>													9		
<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	0	0	It is a self-paced online course.
<b>Sub-total for University Legal Education Requirements</b>													0		
<b>University Common Core</b>															
CORE	C3 - C10	U CORE - Others	24		1	2		9		3	3	6	24		
CORE	C1 & C2	U CORE - English Language	6										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		
<b>Term load (excl. free credits)</b>															
16 18 15 12 16 15 15 15															
113 (w/o option)   122 (w/option)#															

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.

# 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.

- MATH 1012: The course was last offered in 2024-25 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.