

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 | | |
| School Requirements | | | | | | | | | | | | | | | |
| 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 Programming with C++ | 4 | | | | | 3 | | | | | 3 | COMP 1021 is an OST Major required course. | |
| LANG | 2010 | English for Science I | 3 | | | | | | | | | | | | |
| OCES | 1001 | The Earth as a Blue Planet | 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 | | | | | | | | |
| CHEM | 1008 | Introductory Chemistry | 3 | | | | | | | | | | | | |
| CHEM | 1011 | General Chemistry A: Reactions, Thermodynamics, and Reaction Kinetics | 3 | | | | (3) | | | | | | | | |
| CHEM | 1012 | General Chemistry B: Atomic Structure, Molecules, and Bonding Theories | 3 | | 3 | | | | | | | | | | |
| CHEM | 1051 | Laboratory for General Chemistry A | 1 | | | | | | | | | | | | |
| CHEM | 1052 | Laboratory for General Chemistry B | 1 | | | | | | | | | | | | |
| DASC | 2010 | Calculus for Data Analytics in Science | 3 | | | | | | | | | | | | |
| LIFS | 1030** | Environmental Science | 3 | | | | | | | | | | | | |
| LIFS | 1901 | General Biology I | 3 | | | 3 | | | | | | | | | |
| LIFS | 1902 | General Biology II | 3 | | | | 3 | | | | | | | | |
| LIFS | 1903 | Laboratory for General Biology I | 1 | | | 1 | | | | | | | | | |
| LIFS | 1904 | Laboratory for General Biology II | 1 | | | | | | | | | | | | |
| LIFS | 1930 | Nature of Life Sciences | 3 | | | | | | | | | | | | |
| LIFS | 2210 | Biochemistry I | 3 | | | | | | | | | | | | |
| MATH | 1012** | Calculus IA | 4 | | | | | | | | | | | | |
| MATH | 1013 | Calculus I | 3 | | 3 | | | | | | | | | | |
| MATH | 1014 | Calculus II | 3 | | | 3 | | | | | | | | | |
| MATH | 1020 | Accelerated Calculus | 4 | | | | | | | | | | | | |
| MATH | 1023 | Honors Calculus I | 3 | | | | | | | | | | | | |
| MATH | 1024 | Honors Calculus II | 3 | | | | | | | | | | | | |
| MATH | 2011 | Introduction to Multivariable Calculus | 3 | | | | | | | | | | | | |
| MATH | 2023 | Multivariable Calculus | 4 | | | | | | | | | | | | |
| MATH | 2111 | Matrix Algebra and Applications | 3 | | | | | | | | | | | | |
| MATH | 2121 | Linear Algebra | 4 | | | | | | | | | | | | |
| MATH | 2131 | Honors in Linear and Abstract Algebra I | 4 | | | | | | | | | | | | |
| PHYS | 1101 | Introductory Physics | 4 | | | | | | | | | | | | |
| PHYS | 1111 | General Physics I | 3 | | | | | | | | | | | | |
| PHYS | 1112 | General Physics I with Calculus | 3 | | 3 | | | | | | | | | | |
| PHYS | 1113 | Laboratory for General Physics I | 1 | | | | | | | | | | | | |
| PHYS | 1114 | General Physics II | 3 | | | | | | | | | | | | |
| PHYS | 1115 | Laboratory for General Physics II | 1 | | | | | | | | | | | | |
| PHYS | 1312 | Honors General Physics I | 3 | | | | | | | | | | | | |
| PHYS | 1314 | Honors General Physics II | 3 | | | | | | | | | | | | |
| Required credits for School / Major Pre-requisite Requirements | | | | | | | | | | | | | 31 | | |
| Major Requirements | | | | | | | | | | | | | | | |
| Major Required Courses and Electives | | | | | | | | | | | | | | | |
| OCES | 2001** | Survey of Ocean Science | 3 | | | | | 3 | | [3] | | | | | |
| OCES | 2002 | Marine Chemistry | 3 | | | | | | 3 | | | | | | |
| OCES | 2003 | Descriptive Physical Oceanography | 3 | | | | | | 3 | | | | | | |
| OCES | 2130 | Marine Biology | 3 | | | | | | | 3 | | [3] | | | |
| OCES | 3001 | Coastal Environmental Monitoring | 3 | | | | | | | | 3 | | [3] | | |
| OCES | 3003 | Field Methods in Marine Studies | 4 | | | | | | | | 3 | | [3] | | |
| OCES | 3160 | Ecology | 3 | | | | | | | | 3 | | [3] | | |
| OCES | 4001 | Ocean and Climate Change | 3 | | | | | | | | | 3 | | | |
| 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 | | | | | | | | | | | | |
| OCES | 4964 | Ocean Science and Technology Capstone Project Research | 3 | | | | | | | | | 3 | | | |
| OCES | 4974 | Ocean Science and Technology Research Project I | 3 | | | | | | | | | | | | |
| OCES | 4984 | Ocean Science and Technology Research Project II | 3 | | | | | | | | | | | | |
| SCIE | 3500 | IRE Research Project I | 3 | | | | | | | | | | | | |
| SCIE | 4500 | IRE Research Project II | 3 | | | | | | | | | | | | |
| CHEM | 1011 | General Chemistry A: Reactions, Thermodynamics, and Reaction Kinetics | 3 | | | 3 | | | | | | | | | |
| CHEM | 1012 | General Chemistry B: Atomic Structure, Molecules, and Bonding Theories | 3 | | | (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) | | | | | | | | | |
| LIFS | 1902 | General Biology II | 3 | | | | (3) | | | | | | | | |
| MATH | | Note: MATH 1012 OR MATH 1013 OR MATH 1020 OR MATH 1023 | 3-4 | | | | | | | | | | | | |
| MATH | 1012** | Calculus IA | 4 | | | | | | | | | | | | |
| MATH | 1013 | Calculus I | 3 | | | (3) | | | | | | | | | |
| MATH | 1020 | Accelerated Calculus | 4 | | | | | | | | | | | | |
| MATH | 1023 | Honors Calculus I | 3 | | | | | | | | | | | | |
| PHYS | | Note: PHYS 1111 OR PHYS 1112 OR PHYS 1312 | 3 | | | | | | | | | | | | |
| PHYS | 1111 | General Physics I | 3 | | | | | | | | | | | | |
| PHYS | 1112 | General Physics I with Calculus | 3 | | | (3) | | | | | | | | | |
| PHYS | 1312 | Honors General Physics I | 3 | | | | | | | | | | | | |
| COMP | 1021 | Introduction to Computer Science | 3 | | | | | (3) | | | | | | | |
| LANG | | Note: LANG 3025 OR LANG 3027 (Students following IRE Track should take LANG 3027 to fulfill the requirement.) | 3 | | | | | | | | | | | | |
| LANG | 3025 | Science Communication in English (Environmental Science) | 3 | | | | | | | | 3 | | | | |
| LANG | 3027 | Science Communication in English for Research Students | 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 4203 and OCES 4301 to count towards this elective requirement, while those taking the Oceanography Option must use MATH 1014 and OCES 3301. Courses taken to fulfill the Track/Option requirements may not be counted towards this elective requirement.) | 12 | | | | | | | | | 3 | 3 | 3 | |
| Required credits for Major Required Courses and Electives | | | | | | | | | | | | | 61-68 | | |
| Option Requirements | | | | | | | | | | | | | | | |
| Marine Ecology Option | | | | | | | | | | | | | | | |
| OCES | | Marine Ecology Electives (2 courses from the specified elective list) | 6 | | | | | | | | | | 3 | 3 | |
| Required credits for Marine Ecology Option | | | | | | | | | | | | | 6 | | |
| University Legal Education Requirements | | | | | | | | | | | | | | | |
| LEGL | 1000 | Legal Education (Basic Law, National Security Law and Safeguarding National Security Ordinance) | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sub-total for University Legal Education Requirements | | | | | | | | | | | | | 0 | | |
| University Common Core | | | | | | | | | | | | | | | |
| CORE | C3 - C10 | U CORE - Others | 24 | | | 1 | 2 | 6 | 3 | | | 3 | 3 | 6 | |
| CORE | C1 & C2 | U CORE - English Language | 6 | | | 3 | 3 | | | | | | | | |
| Sub-total for University Common Core | | | | | | | | | | | | | 30 | | |
| | | | | | | | | | | | | | Term load (excl. free credits) | | |
| | | | | | | | | | | | | | 16 | 18 | |
| | | | | | | | | | | | | | 15 | 12 | |
| | | | | | | | | | | | | | 15 | 12 | |
| | | | | | | | | | | | | | 12 | 12 | |
| | | | | | | | | | | | | | 106 (w/o option) 112 (w/ option)# | | |
| | | | | | | | | | | | | | << Declaration of major | | |

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.
- OCES 2001: 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.