

(For students admitted in 2018-19 under the 4-year degree)

## BSc in Environmental Science

In addition to the requirements of their major programs, students are required to complete the University and School requirements for graduation. For details please refer to the respective sections on this website.

Some courses used to fulfill Major and/or School Requirements can also fulfill University Common Core Requirements. Students may reuse a maximum of 9 credits of these courses to count towards Common Core Requirements.

Students may use no more than 6 credits earned from courses offered in pure online delivery mode to satisfy the graduation requirements of a degree program. This 6-credit limit does not apply to credits obtained through the credit transfer procedures of the University.

For students graduating with an additional major, they must take all the requirements specified for that major, within which they must complete at least 20 single-counted credits. These 20 credits cannot be used to fulfill any other requirements for graduation except for the 120-credit degree requirement.

### Major Requirements

Students **MUST** take the following courses prior to enrollment into the major

#### Major Pre-requisite course(s)

			Credit(s) attained
LIFS/MATH		Note: [LIFS 1901 <u>AND</u> LIFS 1902] <u>OR</u> [(MATH 1012 <u>OR</u> MATH 1013 <u>OR</u> MATH 1023) <u>AND</u> (MATH 1014 <u>OR</u> MATH 1024)] <u>OR</u> [MATH 1020] (Students with level 3 or above in HKDSE 1x Biology are exempted from taking LIFS 1901)	3-7
LIFS	1901	General Biology I	3
LIFS	1902	General Biology II	3
MATH	1012	Calculus IA	4
MATH	1013	Calculus IB	3
MATH	1014	Calculus II	3
MATH	1020	Accelerated Calculus	4
MATH	1023	Honors Calculus I	3
MATH	1024	Honors Calculus II	3

#### Required Course(s)

			Credit(s) attained
ENVS	2001	Environmental Conservation and Sustainability in Practice	1
ENVS	2003	Introduction to Atmospheric Science	3
ENVS	2004**	Introduction to Ocean Science**	3
ENVS	3001**	Pollution Monitoring and Measurement**	3
ENVS	3004**	Global Climate Change**	3

ENVS	3005	Environmental Microbiology	3
ENVS	4001	Environmental Impact and Risk Assessment	3
ENVS/SCIE		Note: ENVS 4964 <u>OR</u> (ENVS 4974 <u>AND</u> ENVS 4984) <u>OR</u> (SCIE 3500 <u>AND</u> SCIE 4500) [Students following IRE Track can only use (SCIE 3500 <u>AND</u> SCIE 4500) to fulfill the requirement.]	3-7
ENVS	4964	Environmental Science Capstone Project Research	3
ENVS	4974	Environmental Science Project Research I	3
ENVS	4984	Environmental Science Project Research II	4
SCIE	3500	IRE Research Project I	3
SCIE	4500	IRE Research Project II	3
CHEM		Note: CHEM 1010 <u>OR</u> CHEM 1020	3
CHEM	1010	General Chemistry IA	3
CHEM	1020	General Chemistry IB	3
CHEM	1030	General Chemistry II	3
CHEM	1050	Laboratory for General Chemistry I	1
CHEM	2311	Analytical Chemistry	3
CHEM	2355	Fundamental Analytical Chemistry Laboratory	1
CHEM/LIFS/ MATH		Note: CHEM 4310 <u>OR</u> LIFS 3160 <u>OR</u> MATH 2011	3
CHEM	4310	Environmental Chemistry	3
LIFS	3160	Ecology	3
MATH	2011	Introduction to Multivariable Calculus	3
LIFS	1030	Environmental Science	3
LIFS/MATH		Note: LIFS 3150 <u>OR</u> MATH 2411	3-4
LIFS	3150	Biostatistics	3
MATH	2411	Applied Statistics	4
PHYS	1003	Energy and Related Environmental Issues	3
LANG	3025**	Science Communication in English (Environmental Science)	3

## Elective(s)

ENVS/CHEM/ LIFS/MATH/ CENG/ENVR		Environmental Science Electives (Courses from the specified elective list. Students following IRE Track are required to take a minimum of 9 credits; while others a minimum of 12 credits. A maximum of two 1000- /2000-level Environmental Science electives may be used to count towards this requirement. Courses taken as Major/Track Required Courses may not be counted towards the elective requirement.)	Minimum credit(s) required
			9-12
ENVS	2002	Environmental Internship	2-4
ENVS	4012	Special Topics in Environmental Science	1-3
ENVS	4301	Environmental Conservation	3
ENVS	4905	Marine Molecular Biology and Ecology	3
CHEM	2110	Organic Chemistry I	3
CHEM	2210	Inorganic Chemistry I	3
CHEM	2410	Physical Chemistry I: Equilibrium Thermodynamics and Statistical Mechanics	3
CHEM	4320	Environmental Analytical Chemistry	3
CHEM	4350	Environmental Chemistry Laboratory	1
CHEM	4355	Instrumental Analytical Chemistry Laboratory	1
LIFS	2060	Biodiversity	3
LIFS	3060	Microbiology	3
LIFS	3130	Marine Biology	3
LIFS	3260	Microbiology Laboratory	3
LIFS	3330	Marine Biology Laboratory	3
MATH	2421	Probability	4
MATH	2431	Honors Probability	4
CENG	4710	Environmental Control	3
ENVR	2020	Urban Air Pollution	3
ENVR	3003	Green Buildings and Energy Efficiency	3
ENVR	3110	Sustainable Development	3
ENVR	3220	Energy Resources and Usage	3
ENVR	4330	Environmental Geographical Information System	3

## Track Study

### International Research Enrichment Track

Students in the IRE Track should also take SCIE 3500 and SCIE 4500 as specified in the major requirements.

#### Required Course(s)

			<b>Credit(s) attained</b>
CHEM/LIFS		Note: (CHEM 4350 <b>AND</b> CHEM 4355) <u>OR</u> LIFS 3260	2-3
CHEM	4350	Environmental Chemistry Laboratory	1
CHEM	4355	Instrumental Analytical Chemistry Laboratory	1
LIFS	3260	Microbiology Laboratory	3

#### **\*\*Remarks on course(s):**

- ENVS 2004: The course code will be changed to OCES 2001 starting from Fall, 2020-21.
- ENVS 2004: The course title will be changed to "Survey of Ocean Science" starting from Fall, 2020-21.
- ENVS 3001: The course code will be changed to OCES 3001 starting from Fall, 2021-22.
- ENVS 3001: The course title will be changed to "Coastal Environmental Monitoring" starting from Fall, 2021-22.
- ENVS 3004: The course code will be changed to OCES 4001 starting from Fall, 2021-22.
- ENVS 3004: The course title will be changed to "Global Ocean Change" starting from Fall, 2021-22.
- LANG 3025: This is a new course to take effect in Fall, 2019-20.