THE UNIVERSITY OF HONG KONG

FACULTY OF SCIENCE

Programme Learning Outcomes – Major in Environmental Science

1. University Educational Aims

Benchmarked against the highest international standards, the 4-year undergraduate curriculum at HKU is designed to enable our students to develop their capabilities in:

(1) pursuit of academic/professional excellence, critical intellectual inquiry and life-long learning
(2) tackling novel situations and ill-defined problems
(3) critical self-reflection, greater understanding of others, and upholding personal and professional ethics
(4) intercultural communication, and global citizenship
(5) communication and collaboration
(6) leadership and advocacy for the improvement of the human condition

2. Faculty Learning Outcomes

Students completing the BSc curriculum should be able to:

(1) explain the basic scientific principles and methods
(2) comprehend fundamental concepts in mathematics and the physical, chemical, biological and earth sciences, and understand the interconnectivity among the sciences and other disciplines
(3) apply scientific processes and knowledge in a wide variety of careers and professions
(4) effectively communicate within and across the science disciplines
(5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines
(6) integrate acquired discipline-specific knowledge in a science for professional and further academic pursuit in that discipline

3. Programme Learning Outcomes – Major in Environmental Science

By the end of this programme, students should be able to:

(1) understand fundamental principles and concepts related to environmental systems, including the physical, chemical, and biological processes that shape the natural environment
(by means of lectures, coursework, tutorial classes and field/ laboratory/ team-based learning in the curriculum)
(2) observe, describe and measure physical, biological and chemical characteristics of natural and man-made environments
(by means of lectures, coursework, tutorial classes and field/ laboratory/ team-based learning in the curriculum)
(3) evaluate the key issues in environmental science and their cause/consequence on the Earth System
(by means of lectures, coursework, tutorial classes and field/ laboratory/ team-based learning in the curriculum)
(4) appropriately evaluate and critically analyze a range of forms and sources of environmental data, and assess environmental problems
(by means of lectures, coursework, tutorial classes and field/ laboratory/ team-based learning in the curriculum)
(5) gain an advanced level of skills in scientific inquiry and effective communication of global environmental problems, issues of resource management, policies and management methods and appreciation of the related ethical issues
(by means of field/ laboratory/ team-based learning, research projects, presentation opportunities and capstone experiences in the curriculum)

4. Mapping of Programme Learning Outcomes to Faculty Learning Outcomes to University Educational Aims

Due to the richness and diversity of the Major, multiple Programme and/or Faculty Learning Outcomes may be used to satisfy the Faculty Learning Outcomes and/or University Educational Aims.

Programme Learning Outcomes – Major in Environmental Science	Faculty Learning Outcomes – BSc programme	University Educational Aims
By the end of this programme, students should be able to:	Students completing the BSc curriculum should be able to:	Benchmarked against the highest international standards, the 4-year undergraduate curriculum at HKU is designed to enable our students to develop their capabilities in:
(1) understand fundamental principles and concepts related to environmental systems, including the physical, chemical, and biological processes that shape the natural environment (2) observe, describe and measure physical, biological and chemical characteristics of natural and man-made environments (3) evaluate the key issues in environmental science and their cause/consequence on the Earth System (4) appropriately evaluate and critically analyze a range of forms and sources of environmental data, and assess environmental problems	(1) explain the basic scientific principles and methods (2) comprehend fundamental concepts in mathematics and the physical, chemical, biological and earth sciences, and understand the interconnectivity among the sciences and other disciplines (3) apply scientific processes and knowledge in a wide variety of careers and professions (5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines (6) integrate acquired discipline-specific knowledge in a science for professional and further academic pursuit in that discipline	(1) pursuit of academic/professional excellence, critical intellectual inquiry and life-long learning
(1) understand fundamental principles and concepts related to environmental systems, including the physical, chemical, and biological processes that shape the natural environment (2) observe, describe and measure physical, biological and chemical characteristics of natural and man-made environments (3) evaluate the key issues in environmental science and their cause/consequence on the Earth System (4) appropriately evaluate and critically analyze a range of forms and sources of environmental data, and assess environmental problems (5) gain an advanced level of skills in scientific inquiry and effective communication of global environmental problems, issues of resource management, policies and management methods and appreciation of the related ethical issues	(2) comprehend fundamental concepts in mathematics and the physical, chemical, biological and earth sciences, and understand the interconnectivity among the sciences and other disciplines (3) apply scientific processes and knowledge in a wide variety of careers and professions (5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines	(2) tackling novel situations and ill-defined problems

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(5) gain an advanced level of skills in scientific inquiry and effective communication of global environmental problems, issues of resource management, policies and management methods and appreciation of the related ethical issues	(4) effectively communicate within and across the science disciplines (5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines	(4) intercultural communication, and global citizenship
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(3) evaluate the key issues in environmental science and their cause/consequence on the Earth System (4) appropriately evaluate and critically analyze a range of forms and sources of environmental data, and assess environmental problems (5) gain an advanced level of skills in scientific inquiry and effective communication of global environmental problems, issues of resource management, policies and management methods and appreciation of the related ethical issues	(3) apply scientific processes and knowledge in a wide variety of careers and professions	(6) leadership and advocacy for the improvement of the human condition