

## THE UNIVERSITY OF HONG KONG

## FACULTY OF SCIENCE

**Programme Learning Outcomes – Major in Geology (Intensive)****1. University Educational Aims**

To enable our students to develop their capabilities in:

- (1) pursuit of academic/professional excellence, critical intellectual enquiry 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 understanding 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 Geology (Intensive)**

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

- (1) describe and apply key concepts in the conventional areas of the geosciences, covering the areas of physical geology, historical geology, mineralogy, petrology, geochemistry, geophysics, structural geology, tectonics and petrogenesis, and earth resources  
*(by means of coursework, laboratory-based, tutorial classes and project-based learning in the curriculum)*
- (2) have acquired the ability to make observation, description, measurement and analysis of common geological features in the field, conduct geological mapping as well as undertake independent geological study, and appraise the related ethical issues  
*(by means of both local and overseas residential field learning experience)*
- (3) communicate scientific concepts and critically discuss aspects of contemporary issues pertaining to earth sciences, environments and resources  
*(by means of capstone, project-based learning and presentation opportunities in the curriculum)*
- (4) have gained some insight to the real-life industrial environment and developed connections within the geosciences profession  
*(by means of internship opportunities in the curriculum)*
- (5) work with others in an effective manner and have learned to accept and appreciate different cultures  
*(by means of group project learning, field learning experience 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 Geology (Intensive)	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:	To enable our students to develop their capabilities in:
<ul style="list-style-type: none"> <li>(1) describe and apply key concepts in the conventional areas of the geosciences, covering the areas of physical geology, historical geology, mineralogy, petrology, geochemistry, geophysics, structural geology, tectonics and petrogenesis, and earth resources</li> <li>(2) have acquired the ability to make observation, description, measurement and analysis of common geological features in the field, conduct geological mapping as well as undertake independent geological study, and appraise the related ethical issues</li> <li>(4) have gained some insight to the real-life industrial environment and developed connections within the geosciences profession</li> <li>(5) work with others in an effective manner and have learned to accept and appreciate different cultures</li> </ul>	<ul style="list-style-type: none"> <li>(1) explain the basic scientific principles and methods</li> <li>(2) comprehend fundamental concepts in mathematics and the physical, chemical, biological and earth sciences, and understand the interconnectivity among the sciences and other disciplines</li> <li>(3) apply scientific processes and knowledge in a wide variety of careers and professions</li> <li>(5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines</li> <li>(6) integrate acquired discipline-specific knowledge in a science for professional and further academic pursuit in that discipline</li> </ul>	<ul style="list-style-type: none"> <li>(1) pursuit of academic/professional excellence, critical intellectual enquiry and life-long learning</li> </ul>
<ul style="list-style-type: none"> <li>(2) have acquired the ability to make observation, description, measurement and analysis of common geological features in the field, conduct geological mapping as well as undertake independent geological study, and appraise the related ethical issues</li> <li>(4) have gained some insight to the real-life industrial environment and developed connections within the geosciences profession</li> </ul>	<ul style="list-style-type: none"> <li>(2) comprehend fundamental concepts in mathematics and the physical, chemical, biological and earth sciences, and understand the interconnectivity among the sciences and other disciplines</li> <li>(3) apply scientific processes and knowledge in a wide variety of careers and professions</li> <li>(5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines</li> </ul>	<ul style="list-style-type: none"> <li>(2) tackling novel situations and ill-defined problems</li> </ul>
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Programme Learning Outcomes – Major in Geology (Intensive)	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:	To enable our students to develop their capabilities in:
*	*	(4) intercultural understanding and global citizenship
(3) communicate scientific concepts and critically discuss aspects of contemporary issues pertaining to earth sciences, environments and resources (5) work with others in an effective manner and have learned to accept and appreciate different cultures	(4) effectively communicate within and across the science disciplines	(5) communication and collaboration
(3) communicate scientific concepts and critically discuss aspects of contemporary issues pertaining to earth sciences, environments and resources (4) have gained some insight to the real-life industrial environment and developed connections within the geosciences profession	(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

\* This will be fulfilled by other components of the University curriculum such as the Common Core Curriculum, Internships, Service Learning, Exchange Studies, etc.