THE UNIVERSITY OF HONG KONG

FACULTY OF SCIENCE

Programme Learning Outcomes -Major in Biological Sciences (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 Biological Sciences (Intensive)

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

- (1) describe and explain the key concepts in genetics, molecular & cell biology; ecology, systematics and evolution; physiology and organismic biology, and to appraise the related ethical and moral issues (by means of coursework, laboratory- and/or research-based learning in the curriculum)
- (2) equip with sufficient knowledge in chemistry for application within a biological context (by means of coursework, laboratory- and/or research-based learning in the curriculum)
- (3) analyze and interpret quantitative and qualitative biological data to provide scientifically based conclusions and/or judgements (by means of coursework, laboratory- and/or research-based learning in the curriculum)
- (4) tackle biological research problems by formulating hypothesis and designing experimental investigations (by means of coursework, laboratory- and/or research-based learning in the curriculum)
- (5) communicate effectively and professionally with scientists, educators, media, and general public in oral and written forms (by means of coursework, laboratory- and/or research-based learning, and presentation opportunities 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 –	Faculty Learning Outcomes – BSc programme	University Educational Aims
Major in Biological Sciences		
(Intensive)		T 11
By the end of this programme,	Students completing the BSc curriculum	To enable our students to
students should be able to:	should be able to:	develop their capabilities in:
(1) describe and explain the key	(1) explain the basic scientific principles	(1) pursuit of academic
concepts in genetics,	and methods	/professional excellence,
molecular & cell biology;	(2) comprehend fundamental concepts in	critical intellectual enquiry
ecology, systematics and	mathematics and the physical, chemical,	and life-long learning
evolution; physiology and	biological and earth sciences, and	
organismic biology, and to	understand the interconnectivity among	
appraise the related ethical	the sciences and other disciplines	
and moral issues	(3) apply scientific processes and knowledge	
(2) equip with sufficient	in a wide variety of careers and professions(5) analyze scientific aspects of complex	
knowledge in chemistry for	(5) analyze scientific aspects of complex issues, and recognize and appraise moral	
application within a biological	and ethical issues within the sciences and	
context	related disciplines	
context	(6) integrate acquired discipline- specific	
	knowledge in a science for professional	
	and further academic pursuit in that	
	discipline	
(3) analyze and interpret	(2) comprehend fundamental concepts in	(2) tackling novel
quantitative and qualitative	mathematics and the physical, chemical,	situations and ill-
biological data to provide	biological and earth sciences, and	defined problems
scientifically based conclusions		
and/or judgements	the sciences and other disciplines	
	(3) apply scientific processes and knowledge	
(4) tackle biological research	in a wide variety of careers and professions	
problems by formulating	(5) analyze scientific aspects of complex	
hypothesis and designing experimental investigations	issues, and recognize and appraise moral and ethical issues within the sciences and	
experimental investigations	related disciplines	
(3) analyze and interpret	(5) analyze scientific aspects of complex issues,	(3) critical self- reflection,
quantitative and qualitative	and recognize and appraise moral and	greater understanding of
biological data to provide	ethical issues within the sciences and related	others, and upholding
scientifically based conclusions		personal and professional
and/or judgements	-	ethics
(4) tackle biological research		
problems by formulating		
hypothesis and designing		
experimental investigations		
(5) communicate effectively and	*	(4) intercultural understanding
professionally with scientists,		and global citizenship
educators, media, and general public in oral and written forms		
public in oral and written forms		

Programme Learning Outcomes – Major in Biological Sciences (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:
(5) communicate effectively and professionally with scientists, educators, media, and general public in oral and written forms	(4) effectively communicate within and across the science disciplines	(5) communication and collaboration
(3) analyze and interpret quantitative and qualitative biological data to provide scientifically based conclusions and/or judgements	(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
 (4) tackle biological research problems by formulating hypothesis and designing experimental investigations 		

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