

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 – 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:
<p>(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</p> <p>(2) equip with sufficient knowledge in chemistry for application within a biological context</p>	<p>(1) explain the basic scientific principles and methods</p> <p>(2) comprehend fundamental concepts in mathematics and the physical, chemical, biological and earth sciences, and understand the interconnectivity among the sciences and other disciplines</p> <p>(3) apply scientific processes and knowledge in a wide variety of careers and professions</p> <p>(5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines</p> <p>(6) integrate acquired discipline- specific knowledge in a science for professional and further academic pursuit in that discipline</p>	<p>(1) pursuit of academic /professional excellence, critical intellectual enquiry and life-long learning</p>
<p>(3) analyze and interpret quantitative and qualitative biological data to provide scientifically based conclusions and/or judgements</p> <p>(4) tackle biological research problems by formulating hypothesis and designing experimental investigations</p>	<p>(2) comprehend fundamental concepts in mathematics and the physical, chemical, biological and earth sciences, and understand the interconnectivity among the sciences and other disciplines</p> <p>(3) apply scientific processes and knowledge in a wide variety of careers and professions</p> <p>(5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines</p>	<p>(2) tackling novel situations and ill-defined problems</p>
<p>(3) analyze and interpret quantitative and qualitative biological data to provide scientifically based conclusions and/or judgements</p> <p>(4) tackle biological research problems by formulating hypothesis and designing experimental investigations</p>	<p>(5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines</p>	<p>(3) critical self- reflection, greater understanding of others, and upholding personal and professional ethics</p>
<p>(5) communicate effectively and professionally with scientists, educators, media, and general public in oral and written forms</p>	*	<p>(4) intercultural understanding and global citizenship</p>

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 (4) tackle biological research problems by formulating hypothesis and designing experimental investigations	(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.