

Programme Learning Outcomes – Major in Decision Analytics

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 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 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 Decision Analytics

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

- (1) apprehend the concepts of decision analytics and its underlying theory in relation to a broad range of related disciplinary academic or professional areas
(by means of coursework, tutorial classes and/or project-based learning in the curriculum)
- (2) identify and adopt appropriate analytical techniques and tools to extract and classify critical information from structured or unstructured data
(by means of coursework, tutorial classes and/or project-based learning in the curriculum)
- (3) be proficient with the design and implementation of advanced modelling techniques and database management, and offer effective recommendations for analytic initiatives and solutions
(by means of coursework, tutorial classes and/or project-based learning in the curriculum)
- (4) evaluate the quality of information from different sources in support of critical decision making, process streamlining and the optimization of resources, and appraise the related ethical issues
(by means of coursework, tutorial classes and/or project-based learning in the curriculum)
- (5) communicate to people effectively and efficiently with professionalism and accuracy using interactive and dynamic tools to translate technical information and present collaborative and strategic ideas
(by means of coursework, tutorial classes, project-based and/or capstone learning in the curriculum)
- (6) gain insights into current advances in decision analytics and confidence to solve real-life problems through either project or industrial training
(by means of coursework, tutorial classes, project-based and/or capstone learning 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 Decision Analytics	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:
<ul style="list-style-type: none"> (1) apprehend the concepts of decision analytics and its underlying theory in relation to a broad range of related disciplinary academic or professional areas (2) identify and adopt appropriate analytical techniques and tools to extract and classify critical information from structured or unstructured data (3) be proficient with the design and implementation of advanced modelling techniques and database management, and offer effective recommendations for analytic initiatives and solutions (4) evaluate the quality of information from different sources in support of critical decision making, process streamlining and the optimization of resources, and appraise the related ethical issues (6) gain insights into current advances in decision analytics and confidence to solve real-life problems through either project or industrial training 	<ul style="list-style-type: none"> (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 	<ul style="list-style-type: none"> (1) pursuit of academic / professional excellence, critical intellectual enquiry and life-long learning
<ul style="list-style-type: none"> (2) identify and adopt appropriate analytical techniques and tools to extract and classify critical information from structured or unstructured data (3) be proficient with the design and implementation of advanced modelling techniques and database management, and offer effective recommendations for analytic initiatives and solutions (4) evaluate the quality of information from different sources in support of critical decision making, process streamlining and the optimization of resources, and appraise the related ethical issues 	<ul style="list-style-type: none"> (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 	<ul style="list-style-type: none"> (2) tackling novel situations and ill-defined problems

Programme Learning Outcomes – Major in Decision Analytics	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:
(4) evaluate the quality of information from different sources in support of critical decision making, process streamlining and the optimization of resources, and appraise the related ethical issues	(5) analyze scientific aspects of complex issues, and recognize and appraise moral and ethical issues within the sciences and related disciplines	(3) critical self-reflection, greater understanding of others, and upholding personal and professional ethics
This will be fulfilled by other components of the University curriculum such as the Common Core Curriculum, Internships, Service Learning, Exchange Studies, etc.		(4) intercultural communication and global citizenship
(5) communicate to people effectively and efficiently with professionalism and accuracy using interactive and dynamic tools to translate technical information and present collaborative and strategic ideas	(4) effectively communicate within and across the science disciplines	(5) communication and collaboration
(3) be proficient with the design and implementation of advanced modelling techniques and database management, and offer effective recommendations for analytic initiatives and solutions (6) gain insights into current advances in decision analytics and confidence to solve real-life problems through either project or industrial training	(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