

DEGREE PLAN

The Bachelor of Health Sciences curriculum provides the depth of knowledge and background theory necessary to understand not only how the human body functions in health and disease, but also how its environment – both physical and social – play major roles in health and disease.

Need help finding your way through Queen's and beyond? Get BHSc specific advice on academics, extra-curriculars, networking, international opportunities and career development all in one place! The BHSc Program Map, produced by the Career Services Major Map project, provides suggestions – you don't have to follow all the recommendations. Use the map to plan ahead, and find your own way at Queen's!

Jump to:

- Year 1 (p. 1)
- Year 2 (p. 1)
- Year 3 (p. 2)
- Year 4 (p. 1)

View the BHSc Program Map (<https://careers.queensu.ca/students/explore-careers-and-grad-school/major-maps/major-maps/>) here!

Code	Title	Units
Year 1 Core Course Requirements		
ANAT 100	Anatomy of the Human Body	3.00
GLPH 171	Social and Physical Determinants of Health and Disease	3.00
HSCI 190	Introduction to Statistics for the Health Sciences ¹	3.00
IDIS 173	The History and Philosophy of Health and Healthcare	3.00
PHAR 100	Introductory Pharmacology	3.00
PHGY 170	Human Cell Physiology	3.00
Total Units		18.00

Code	Title	Units
Year 1 Option Course Requirements		
BIOL 102	Fundamentals of Biology: Molecular and Cell Biology	3.00
BIOL 103	Fundamentals of Biology: Organisms to Ecosystems	3.00
CHEM 112	General Chemistry	6.00
	or CHEM 113 General Chemistry I (with Virtual Laboratory): From Atoms to Matter	

	or CHEM 114 General Chemistry II (with Virtual Laboratory): Thermodynamics and Kinetics	
ENGL 100	Introduction to Literary Study	6.00
IDIS 199	The Science of Mental Health, Well-being, & Resiliency	3.00
MATH 121	Differential and Integral Calculus	6.00
	or MATH 123 Differential and Integral Calculus I	
	or MATH 124 Differential and Integral Calculus II	
PATH 120	Understanding Human Disease in the 21st Century	8.00
PHYS 118	Basic Physics	6.00
	or PHYS 115 Introduction to Physics I	
	or PHYS 116 Introduction to Physics II	
PSYC 100	Principles of Psychology	6.00
WRIT 120	Fundamentals of Effective Writing	3.00
WRIT 125	Fundamentals of Academic Essay Writing	3.00

Code Title Units
Year 1 Electives* 6.00

Code	Title	Units
Year 2 Core Course Requirements		
BCHM 270	Biochemical Basis of Health and Disease	3.00
HSCI 270	Fundamentals of Health Research Methodology	3.00
GLPH 271	Global and Population Health	3.00
MICR 270	Infection, Immunity and Inflammation ²	3.00
	or MICR 271 Introduction to Microbiology	
PHGY 215	Principles of Mammalian Physiology I	3.00
PHGY 216	Principles of Mammalian Physiology II	3.00
Total Units		18.00

Code	Title	Units
Year 2 Option Course Requirements		
BCHM 218	Molecular Biology	3.00
CHEM 281	General Organic Chemistry I (with Virtual Laboratory)	3.00
CHEM 282	General Organic Chemistry II	3.00
	or CHEM 285 General Organic Chemistry II (with Virtual Laboratory)	
GLPH 281	Racism and Health in Canada	3.00
HLTH 230	Basic Human Nutrition	3.00
	or HSCI 230 Nutrition And Health	



IDIS 280	Interprofessional Approaches in Healthcare	3.00
MICR 290	Antibiotic Resistance Lab	3.00
PHGY 290	Investigation of Human Physiological Responses	3.00

Code	Title	Units
Year 2 Electives *		
		6.00

Code	Title	Units
Year 3 Core Course Requirements		

BCHM 370	Genetics and Genomics	3.00
IDIS 373	Health Ethics, Law, and Policy	3.00
PATH 310	Introduction to Pathology and Molecular Medicine	3.00
PHAR 370	Fundamentals of Pharmacology and Therapeutics	3.00
REPD 372	Reproduction and Development	3.00

Total Units		15.00
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Code	Title	Units
Year 3 Option Course Requirements		
		9.00

ANAT 309	Functional Histology	3.00
ANAT 312	Functional Neuroanatomy	3.00
ANAT 380	Clinically Relevant Human Anatomy	3.00
ANAT 391	Introduction to Cadaveric Dissection	3.00
LISC 300	The Process of Discovery in the Biomedical Sciences	3.00
LISC 387	Sex Differences in Health and Disease	3.00
LISC 390	Integrated Life Science Laboratory I	3.00
LISC 391	Integrated Life Sciences Laboratory	3.00
CANC 380	Evolutionary Biology of Cancer	3.00
GLPH 385	Biohacking & Gerontechnology	3.00
HSCI 383	Advanced Research Methodologies	3.00
MICR 320	Microbes in Health and Disease	3.00
MICR 360	Immunology	3.00
MICR 386	Fundamentals of Immunology in Health and Disease	3.00
NSCI 323	Cellular Neuroscience	3.00
NSCI 324	Systems Neuroscience	3.00
NSCI 325	The Science of Psychedelics	3.00
PATH 381	Clinical Biochemistry	3.00
PHAR 380	Drug and Environmental Toxicology	3.00
PHGY 350	Pathophysiology	3.00
PHGY 355	Biomedical Respiratory Physiology	3.00

Code	Title	Units
Year 3 Electives *		
		6.00

Code	Title	Units
Year 4 Core Course Requirements		

GLPH 471	Advanced Global and Population Health	3.00
REPD 473	Developmental Origins of Health And Disease	3.00

Total Units		6.00
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Code	Title	Units
Year 4 Option Course Requirements: Complete a total of 18.0 Units from the following 3 lists.		

Minimum 3.0 units from this list:

ANAT 409	Selected Topics in Histology	3.00
ANAT 471	Human Embryology	3.00
BCHM 482	Proteomics and Metabolomics	3.00
CANC 440	Cancer Biology and Therapeutics	3.00
CRSS 453	Principles in Cardiorespiratory Science I	3.00
CRSS 454	Cardiovascular Sciences	3.00
CRSS 456	Molecular and Cellular Basis of Cardiovascular Disease	3.00
DDHT 459	Principles of Drug Discovery	3.00
DDHT 460	Principles of Drug Development	3.00
LISC 400	Neuro-Immune Interactions in Health and Disease	3.00
LISC 426	Current Concepts in Sensorimotor Neuroscience	3.00
MICR 451	Viral Pathogenesis	3.00
MICR 452	Viral Infection and Immunity	3.00
MICR 461	Advanced Immunology	3.00
MICR 483	Advanced Topics in Infectious Diseases	3.00
NSCI 401	Introduction to Theoretical Neuroscience	3.00
NSCI 403	Introduction to Neuroimaging	3.00
NSCI 422	Cellular and Molecular Neuroscience	3.00
NSCI 429	Disorders of the Nervous System	3.00
NSCI 433	Cellular Elements of the Nervous System: Responses to Injury and Disease	3.00
NSCI 444	Controversies in Neuroscience	3.00
NSCI 483	Neurobiology of Learning and Memory	3.00
PATH 411	Applied Data Science in Molecular Medicine	3.00
PATH 425	Current Topics in Human Genetics	3.00
PATH 430	The Molecular Basis of Disease	3.00
PHGY 424	Ion Channels of Excitable Cells	3.00

PHAR 416	Xenobiotic Disposition and Toxicity	3.00
PHAR 480	Drug Discovery and Development	3.00

Code	Title	Units
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Minimum 3.0 units from this list:

GLPH 472	Special Populations: Neonatal to End-of-Life-Care	3.00
GLPH 482	Foundations of Humanitarian Health Emergencies	3.00
GLPH 485	Global Application of Health Informatics	3.00
GLPH 487	One World, One Health: The Global Link Between Human, Animal, and Environmental Health	3.00
GLPH 488	Global Oncology: Cancer Care, Policy, Research, and Education	3.00
GLPH 493	Global Health Practice	3.00
HSCI 483	Applied Qualitative Methods for Health Research	3.00
IDIS 473	Designing Life After Queen's	3.00
IDIS 480	Advanced Interprofessional Approaches in Healthcare	3.00
IDIS 483	Applied Health Ethics: Clinical, Organizational, and Research Perspectives	3.00

Code	Title	Units
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Additional 4th year Options:

ANAT 599	Research Inquiry in Anatomy	6.00
HSCI 591	Health Sciences Research: Design and Methods	3.00
HSCI 592	Health Sciences Research: Design and Methods	3.00
HSCI 593	Health Sciences Research: Data Collection and Interpretation	3.00
HSCI 594	Health Sciences Research: Data Collection and Interpretation	3.00
HSCI 595	Health Sciences Research: Data Collection and Interpretation	3.00
HSCI 598	Advanced Health Sciences Research: Design and Methods	6.00
HSCI 599	Advanced Health Sciences Research: Data Collection and Analysis	6.00

Code	Title	Units
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Year 4 Electives *		6.00
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TOTAL UNITS REQUIRED

120.0

Note: Students who complete QUIP or a certificate require more than 120.0 units to satisfy their degree requirements. For specific

unit requirements please reach out to our Academic Advisors (bhscadvisor@queensu.ca).

- ¹ If a student has previously completed BIOL 243 or STAM 200, they do not need to take HSCI 190 to fulfil the statistics requirement.
 - ² If a student chooses to take both MICR 270 Infection, Immunity and Inflammation and MICR 271 Introduction to Microbiology, one will count as core and the other towards the option or elective requirements.
- * Electives can be any course the student is eligible to take, including any listed option courses. All Arts & Science Online (http://www.queensu.ca/artsci_online/courses/course-list/) courses are accepted as electives. Additionally, BHSc On-Campus students may choose courses from the Arts & Science Calendar (<https://queensu-ca-public.courseleaf.com/arts-science/course-descriptions/>).