

Health Science: Bachelor of Science Major

Faculty of Science and Horticulture	kpu.ca/science
Program Type	Undergraduate
Credential Granted	Baccalaureate Degree
Offered At	Richmond Surrey
Start Date(s)	September January May
Intake Type	Open intake
Format	Full-time Part-time
Instructional Cycle	Semester-based
Curriculum Effective Date	01-Sep-2016
How to Apply	www.kpu.ca/admission

DESCRIPTION

The B.Sc. in Health Science program is designed to prepare students for public and private sector careers in health research, health practice, health product production and distribution, and health management. It also prepares students for entry into schools of health or graduate studies.

The objectives of the degree are as follows:

1. To provide students with a strong foundation in the basic sciences together with writing and critical thinking skills.
2. To provide students with a broad knowledge of the various health professions involved in the Canadian health system.
3. To equip students with the skills and knowledge necessary for employment in health service delivery, health research, production and distribution of health products, and other health-related fields.
4. To provide students with the educational prerequisites necessary for entry into a) post graduate degrees in the sciences, and b) qualified health professional programs (e.g. medicine, dentistry, physiotherapy, medical technical programs, pharmacy).
5. To provide students with the opportunity to integrate an understanding of complementary medicine (e.g., naturopathy, traditional Asian medicine) with the basic sciences.

The B.Sc. in Health Science is designed around a core of required basic science and health science courses, complemented by health science and open electives that provide graduates with a solid science foundation but also with critical health research, communication, and management skills for future success.

Please note that the first and second year courses required in the program are normally available on both Richmond and Surrey campuses. However, the courses with the prefix "HSCI" will be offered on the Surrey campus only.

STUDENT PROFILE

This degree program will appeal to individuals with a strong interest in life sciences and human biology and those who wish to pursue a career in the wide variety of health care fields.

Students who are successful in this program are likely to be self-motivated, have a strong work ethic and have well-developed oral and written communication skills.

ADMISSION REQUIREMENTS

The Faculty's Admission Requirements, which consist of KPU's undergraduate English Proficiency Requirement, apply to this program.

DECLARATION REQUIREMENTS

Students intending to graduate with this Faculty of Science and Horticulture degree must declare the credential by the time they complete 60 credits of undergraduate coursework. At the time of declaration, the student must satisfy all of the following requirements:

- In good academic standing with the University
- Completion of a minimum of 24 credits of undergraduate coursework, including the following:
 - 3 credits of ENGL at the 1100 level or higher
 - BIOL 1110 with a minimum grade of "C"
 - BIOL 1210 with a minimum grade of "C"
 - CHEM 1110 with a minimum grade of "B" or CHEM 1210 with a minimum grade of "C"
 - MATH 1120 with a minimum grade of "C" or MATH 1130 with a minimum grade of "C"
 - HSCI 1115 with a minimum grade of "C"
 - HSCI 1220 with a minimum grade of "C"

CURRICULAR REQUIREMENTS

General Requirements

All students must meet the following minimum requirements for a Bachelor of Science at KPU:

- 120 credits from a minimum of 40 courses (at least 3 credits each) at the 1100 level or higher.
- 45 credits from a minimum of 15 courses at the 3000 level or higher, including 9 credits at the 4000 level.
- 18 credits of breadth electives (see Electives below) including:
 - at least 12 credits from courses that are offered outside the Faculty of Science & Horticulture; and
 - up to 6 credits from fields of science not prescribed in the Major requirements; and
 - 3 credits from a course at the 3000 level or higher.
- Cumulative GPA of 2.0 or higher
- At least 50% of all courses for the BSc, and at least 66% of upper-level courses for the BSc, must be completed at KPU.

Health Science Major

The Health Science Major requires the completion of a minimum of 133 credits, including the following specific course requirements.

YEAR 1

All of:

BIOL 1110 Introductory Biology I 4 credits

BIOL 1210	Introductory Biology II	4 credits	MATH 2335	Statistics for Life Sciences	3 credits
CHEM 1110	The Structure of Matter	4 credits	PHIL 3010	Health Care Ethics	3 credits
CHEM 1210	Chemical Energetics and Dynamics	4 credits	And one of:		
ENGL 1100	Introduction to University Writing	3 credits	BIOL 3320	Molecular Genetics	4 credits
HSCI 1115	Introduction to Health Science	3 credits	CHEM 3320	Natural Products Chemistry	4 credits
HSCI 1220	Health Science Writing	3 credits	HSCI 3205	Health Law (under development)	3 credits
MATH 1130	Calculus for Life Sciences I	3 credits	HSCI 3215	Complementary Medicine	3 credits
MATH 1230	Calculus for Life Sciences II	3 credits	HSCI 3225	Nutrition	3 credits
And one of:					
MATH 1135	Problems and Concepts	3 credits	YEAR 4		
PHIL 1145	Critical Thinking	3 credits	All of:		
PHIL 1155	Introduction to Scientific Reasoning	3 credits	BIOL 3421	Molecular Biochemistry	3 credits
SOCI 1125	Introduction to Society: Processes and Structures	3 credits	BIOL 4260	Human Neural, Excretory and Endocrine Systems	4 credits
YEAR 2					
All of:					
BIOL 2321	Cell Biology	4 credits	BIOL 4360	Human Immune and Reproductive Systems	4 credits
BIOL 2421	Cellular Biochemistry	3 credits	HSCI 4380	Critical Evaluation	3 credits
CHEM 2320	Organic Chemistry I	4 credits	HSCI 4900	Special Topics (under development)	3 credits
CHEM 2420	Organic Chemistry II	4 credits	Elective	At the 1100 level or higher (see Electives below)	3 credits
HSCI 2220	Medical Terminology	3 credits	Elective	At the 3000 level or higher (see Electives below)	3 credits
PHYS 1101	Physics for Life Sciences I	4 credits	And one of:		
PHYS 1102	Physics for Life Sciences II	4 credits	BIOL 3330	Microbiology II	4 credits
SOCI 2280	Sociology of Health and Illness	3 credits	BIOL 4320	Human Genetics	3 credits
Elective	(see Electives below)	3 credits	CHEM 4320	Drug Discovery, Design & Development	4 credits
And one of:					
ANTH 1100	Social & Cultural Anthropology	3 credits	HSCI 4130	Pharmacology (under development)	3 credits
PSYC 1100	Introduction to Psychology: Basic Processes	3 credits	HSCI 4135	Herbal Medicines and Natural Health Products (under development)	3 credits
YEAR 3					
All of:					
BIOL 2320	Genetics	4 credits	HSCI 4140	Gerontology (under development)	3 credits
BIOL 2330	Microbiology	4 credits	And two of:		
BIOL 3160	Foundational Concepts in Human Anatomy & Physiology	4 credits	BIOL 4245	Developmental Biology	4 credits
BIOL 3180	Research Methodology	3 credits	BIOL 4255	Bioinformatics	3 credits
BIOL 3321	Advanced Cell & Molecular Biology	4 credits	HSCI 4245	Populations and Policy	3 credits
BIOL 4160	Human Cardiovascular and Respiratory Systems	4 credits	HSCI 4250	Health Business (under development)	3 credits
Electives					
As part of this program, students must choose 9 credits of elective courses. These choices, together with the prescribed courses, must satisfy the General Requirements for 18 credits of breadth as stated above. The following courses are recommended as electives:					

- ASTR 1100
- ASTR 1105
- ASTR 3110
- ASTR 3111
- EDUC 4100
- ENVI 2405
- ENVI 3112
- One of:
 - PHIL 1145
 - PHIL 1155
 - SOCI 1125

Courses with considerable content overlap may only be counted once towards degree completion. These include:

- BIOL 1112 or BIOL 1210
- ENGL 1100 or ENGL 1104
- ENVI 1106 or CHEM 1110
- ENVI 1206 or CHEM 1154 or CHEM 1210
- CHEM 2311 or CHEM 3310
- MATH 1120 or MATH 1130 or MATH 1140
- MATH 1220 or MATH 1230
- MATH 2335 or MATH 2341
- PHYS 1101 or PHYS 1120
- PHYS 1102 or PHYS 1220

CREDENTIAL AWARDED

Upon successful completion of the major program, students are eligible to receive a **Bachelor of Science, Major in Health Science**.