

Health Science: Bachelor of Science Major

Faculty of Science and Horticulture	kpu.ca/science
Implementation Date	01-Sep-2015
Start Date(s)	September January May
Intake Type	Open intake
Instructional Cycle	Semester-based
Program Type	Undergraduate
Credential Granted	Baccalaureate Degree
Offered At	Richmond Surrey
Format	Full-time Part-time
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 the 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 complete the following general requirements for a Bachelor of Science:

- A minimum of 120 credits and a minimum of 40 courses (at least 3 credits each) at the post-secondary level (numbered 1100 or higher).
- At least 45 of the credits (15 courses) must be at the 3000- or 4000-level; at least 9 of these credits must be at the 4000-level.
- A minimum of 18 credits of breadth electives (see Electives) including:
 - at least one 3000- or 4000-level course; and
 - at least 12 credits from fields or courses not regarded as science; and
 - a maximum of 6 credits may come from fields of science not already included in the Biology Major requirements.
- Completion of 6 credits of 4000-level Research or 6 credits of 4000-level Directed Studies in Year 4.
- A minimum of a passing grade (D or better) in all courses counting towards the BSc, with a minimum cumulative GPA of 2.0.

To meet residency requirements, 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 following outlines the specific course requirements for the Health Science Major.

The Health Science Major requires the completion of a minimum of 136 credits.

Note: A first-year English course, ENGL 1100, is a requirement of this program. This course has prerequisites that may require a student to complete additional preparatory courses.

YEAR 1

All of:

BIOL 1110	Introductory Biology I	4 credits
BIOL 1210	Introductory Biology II	4 credits
CHEM 1110	The Structure of Matter	4 credits
CHEM 1210	Chemical Energetics and Dynamics	4 credits
ENGL 1100	Introduction to University Writing	3 credits
HSCI 1115	Introduction to Health Science	3 credits
HSCI 1220	Health Science Writing	3 credits
MATH 1130	Calculus for Life Sciences I	3 credits
MATH 1230	Calculus for Life Sciences II	3 credits

And one of:

MATH 1135	Problems and Concepts	3 credits
PHIL 1145	Critical Thinking	3 credits
PHIL 1155	Introduction to Scientific Reasoning	3 credits
SOCI 1125	Introduction to Society: Processes and Structures	3 credits

YEAR 2

All of:

BIOL 2321	Cell Biology	4 credits
BIOL 2421	Cellular Biochemistry	3 credits
CHEM 2320	Organic Chemistry I	4 credits
CHEM 2420	Organic Chemistry II	4 credits
HSCI 2220	Medical Terminology	3 credits
PHYS 1101	Physics for Life Sciences I	4 credits
PHYS 1102	Physics for Life Sciences II	4 credits
SOCI 2280	Sociology of Health and Illness	3 credits
Elective	(see Electives)	3 credits

And one of:

ANTH 1100	Social & Cultural Anthropology	3 credits
PSYC 1100	Introduction to Psychology: Basic Processes	3 credits

YEAR 3

All of:

BIOL 2320	Genetics	4 credits
BIOL 2330	Microbiology	4 credits
BIOL 3160	Human Anatomy and Physiology I	4 credits
BIOL 3180	Research Methodology	3 credits
BIOL 3321	Advanced Cell & Molecular Biology	4 credits
BIOL 4160	Human Anatomy and Physiology II	4 credits
MATH 2335	Statistics for Life Sciences	3 credits
PHIL 3010	Health Care Ethics	3 credits

And one of:

BIOL 3320	Molecular Genetics	4 credits
CHEM 3320	Natural Products Chemistry (under development)	4 credits
HSCI 3205	Health Law (under development)	3 credits
HSCI 3215	Complementary Medicine	3 credits
HSCI 3225	Nutrition	3 credits

YEAR 4

All of:

BIOL 3421	Molecular Biochemistry (under development)	3 credits
BIOL 4260	Human Anatomy and Physiology III	4 credits
BIOL 4360	Human Anatomy and Physiology IV	4 credits
HSCI 4199	Senior Research Project I (under development)	4 credits
HSCI 4299	Senior Research Project II (under development)	4 credits
HSCI 4380	Critical Evaluation (under development)	3 credits
Elective	(see Electives)	3 credits

And one of:

BIOL 3330	Microbiology II (under development)	4 credits
BIOL 4320	Human Genetics (under development)	3 credits
CHEM 4320	Drug Discovery, Design and Development (under development)	4 credits
HSCI 4130	Pharmacology (under development)	3 credits
HSCI 4135	Herbal Medicines and Natural Health Products (under development)	3 credits

HSCI 4140	Gerontology (under development)	3 credits
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And two of:

BIOL 4245	Developmental Biology (under development)	4 credits
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BIOL 4255	Bioinformatics (under development)	3 credits
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HSCI 4245	Populations and Policy (under development)	3 credits
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HSCI 4250	Health Business (under development)	3 credits
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Electives

Students are required to complete two elective courses (6 or more credits) through their program.

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

- BIOL 1112 or BIOL 1210
- 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

BREADTH ELECTIVES

At least 12 credits must come from fields or courses not regarded as science courses. EDUC 4100 may be used as a breadth requirement.

Up to 6 credits of breadth may come from fields of science not prescribed in the specific requirements for that BSc Health Science. These may include:

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| • ASTR 1100 | • ENVI 3112 |
| • ASTR 1105 | • ENVI 2405 |
| • ASTR 3110 | • PHYS 1112 |
| • ASTR 3111 | |

If taken above, PHIL 1145, PHIL 1155 and SOCI 1125 may be counted as a breadth elective.

CREDENTIAL AWARDED

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