

# Health Science: Bachelor of Science Major (also: Honours)

<b>Faculty of Science and Horticulture</b>	kpu.ca/science
<b>Program Type</b>	Undergraduate
<b>Credential Granted</b>	Baccalaureate Degree
<b>Offered At</b>	Richmond Surrey
<b>Start Date(s)</b>	September January May
<b>Intake Type</b>	Open intake
<b>Format</b>	Full-time Part-time
<b>Instructional Cycle</b>	Semester-based
<b>Curriculum Effective Date</b>	01-Sep-2018
<b>How to Apply</b>	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 136 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	Elective	At the 1100 level or higher	3 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	At the 1100 level or higher	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	Foundational Concepts in Human Anatomy & Physiology	4 credits
BIOL 3180	Research Methodology	3 credits
BIOL 3321	Advanced Cell & Molecular Biology	4 credits
BIOL 4160	Human Cardiovascular and Respiratory Systems	4 credits

**And one of:**

BIOL 3320	Molecular Genetics	4 credits
CHEM 3320	Natural Products Chemistry	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	3 credits
BIOL 4260	Human Neural, Excretory and Endocrine Systems	4 credits
BIOL 4360	Human Immune and Reproductive Systems	4 credits
HSCI 4380	Critical Evaluation	3 credits
HSCI 4950	Senior Seminar	3 credits
Elective	At the 1100 level or higher	3 credits
Elective	At the 3000 level or higher	3 credits

**And one of:**

BIOL 3330	Microbiology II	4 credits
BIOL 4320	Human Genetics	3 credits
CHEM 4320	Drug Discovery, Design & Development	4 credits
HSCI 4130	Pharmacology (under development)	3 credits
HSCI 4135	Herbal Medicines and Natural Health Products (under development)	3 credits
HSCI 4140	Health and Aging	3 credits

**And two of:**

BIOL 4245	Developmental Biology	4 credits
BIOL 4255	Bioinformatics	3 credits
HSCI 4245	Populations and Policy	3 credits
HSCI 4250	Health Business	3 credits

**Health Science Honours**

Students pursuing the Bachelor of Science in Health Science Honours degree must complete the following 8 credits in lieu of HSCI 4950 – Senior Seminar and one of the optional upper-level courses in BIOL, CHEM or HSCI listed above:

**All of:**

HSCI 4990	Honours Thesis Project 1	4 credits
HSCI 4995	Honours Thesis Project 2	4 credits

Enrolment in the Health Science Honours courses requires the permission of the Biology Department. In order to be considered for Honours Courses, students must typically have a record of exceptional academic performance, including a minimum Grade Point Average of 3.0

## **CREDENTIAL AWARDED**

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

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