

# Sustainable Agriculture: Bachelor of Applied Science

<b>Faculty of Science and Horticulture</b>	kpu.ca/science
<b>Sustainable Agriculture</b>	kpu.ca/science/agriculture
<b>Implementation Date</b>	01-Sep-2015
<b>Start Date(s)</b>	September January May
<b>Intake Type</b>	Open intake
<b>Instructional Cycle</b>	Semester-based
<b>Program Type</b>	Undergraduate
<b>Credential Granted</b>	Baccalaureate Degree
<b>Offered At</b>	Richmond
<b>Format</b>	Full-time Part-time
<b>How to Apply</b>	www.kpu.ca/admission

## DESCRIPTION

The Bachelor of Applied Science in Sustainable Agriculture degree is unique to North America and is distinguished from other agriculture degree programs by providing a broad scope of study related to sustainable food production as an integral and fundamentally critical element of sustainable human existence. Through a distinctive and exceptional combination of classroom and farm-based learning, the program offers a comprehensive perspective on:

- The science of agro-ecosystem design and stewardship;
- Innovative and ecologically sound crop production methods;
- Sustainable farm business management; and,
- The economic, social, and environmental challenges facing our food system

## LEARNING OUTCOMES

The curriculum is designed in recognition of the need for both practical and academic training within the new powerful movement in sustainable agriculture. Students will be immersed in a setting which fosters experiential learning and exploring personal interests and inclination. During our four year Bachelor degree program, students will work to realize three major learning outcomes:

- *The ability to grow fruit and vegetable crops within a sustainable ecological context.* A full spectrum of experiential field-based agricultural courses are offered in Year 3 which, by necessity, follows a complete crop cycle beginning in the spring and extending through summer into the fall. These applied courses function as a mechanism to bring the theoretical concepts and principles of sustainable agro-ecosystem design, function and management to practical realization.
- *Develop the business, sales and marketing skills necessary to manage a sustainable agricultural farming business.* The development of these skills is facilitated by the inclusion of a broad base of foundational courses supplemented by a multidisciplinary business management course in Year Four.

- *Develop practical, problem solving and research skills as well as an understanding of government, economic and business environments and policies needed to address issues of and advance sustainable agri-food systems, as related to employment in government, non-government organizations and the private sector.*

## STUDENT PROFILE

Individuals interested in gaining a practical understanding of sustainably growing food for their communities as well as those who wish to see this type of local-regional agriculture and food system integrated fully into society. This program will appeal to students who recognize that environmental stewardship and community involvement are critical to our food system and who wish to be part of a new approach to agriculture. Students looking for creative, hands-on work on farms and in the community will thrive in this program.

## CAREER OPPORTUNITIES

Sustainable, local food production is a rapidly developing component of sustainable community/ regional planning and development is on the minds of the public and governments alike. Program graduates will be sought after in areas as diverse as planning, resource management, politics, government, non-government organizations, related business, and production agriculture.

## 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

## CURRICULAR REQUIREMENTS

The Bachelor of Applied Science in Sustainable Agriculture consists of 120 credits of course work, including 27 credits of electives. A minimum of 15 credits of electives must be chosen from subject areas other than AGRI, including at least 3 credits at the 3000-level or above.

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 One

#### All of:

AGRI 1150	Sustainable Agriculture for the 21st Century	3 credits
AGRI 1299	Food System Field Analysis	1 credit
BIOL 1110	Introductory Biology I	4 credits

BIOL 1210	Introductory Biology II	4 credits
ENGL 1100	Introduction to University Writing	3 credits

**One of:**

ENVI 1106	Environmental Chemistry I	4 credits
CHEM 1110	The Structure of Matter	4 credits

**One of:**

PHIL 1110	Confronting Moral Issues: Introduction to Ethics	3 credits
PHIL 1112	Environmental Ethics	3 credits
POST 1100	Sustainability: Analysis and Ethics	3 credits

**Plus:**

9 credits of electives. 9 credits  
 Note: Students who need to upgrade in order to meet the prerequisites for ENVI 1106 or MATH 1115, which is required in Year Two, may use MATH 1112 or MATH 1117 as an elective.

## Year Two

**All of:**

AGRI 2190	Plant Science	3 credits
AGRI 2220	Soil Stewardship and Management	4 credits
AGRI 2230	Sustainable Human Economy	3 credits
AGRI 2240	Ecologically Based Pest Management	3 credits
AGRI 2250	Agriculture and Food Systems	3 credits
BIOL 2322	Ecology	4 credits
MATH 1115	Statistics I	3 credits

**One of:**

POLI 1120	Canadian Government and Politics	3 credits
POLI 1125	Introduction to Political Science	3 credits
POST 2100	Sustainability and Government	3 credits

**Plus:**

6 credits of electives. 6 credits  
 The following two courses are recommended:

PHYS 1400	Energy, Environment, Physics	3 credits
GEOG 2250	The City	3 credits

## Year Three

**All of:**

AGRI 3225	Experimental Design and Analysis	3 credits
AGRI 3260	Animal Agriculture	3 credits
AGRI 3270	Vegetable Crop Production	3 credits
AGRI 3280	Fruit and Nut Production	3 credits
AGRI 3290	Agro-Ecosystems Management I	3 credits
AGRI 3390	Agro-Ecosystems Management II	6 credits
AGRI 3398	Crop Physiology and Ecology	3 credits
AGRI 3399	Research Project I	3 credits

**Plus:**

3 credits of electives. 3 credits

**Note:** Courses in Year Three follow the agricultural season and progression of agricultural practices.

## Year Four

**All of:**

AGRI 3135	Business of Agriculture	6 credits
AGRI 4190	Agro-Ecosystems Management III	3 credits
AGRI 4298	World Trends in Agriculture	3 credits
AGRI 4299	Research Project II	3 credits
AGRI 4295	Internship	3 credits

**Plus:**

9 credits of electives, with at least 3 credits at the 3000-level or above. 9 credits

## CREDENTIAL AWARDED

Upon successful completion of this program, students are eligible to receive a **Bachelor of Applied Science in Sustainable Agriculture**.