

# Sustainable Agriculture: Bachelor of Applied Science

*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.*

<b>Faculty of Science and Horticulture</b>	kpu.ca/science
<b>Implementation Date</b>	01-Sep-2012
<b>Start Date(s)</b>	September January May
<b>Admission Type</b>	Open admission
<b>Enrolment Type</b>	Open enrolment
<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*

## 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.

## PROGRAM ADMISSION REQUIREMENTS

General university admission requirements apply to this program including the undergraduate-level English Proficiency Requirement.

A passing grade in Biology 11 or 12 is an asset but is not required.

**Note:** One post-secondary English course, equivalent to KPU's ENGL 1100, is a graduation requirement for all KPU degrees. Students wishing to complete the program without having to undertake any preparatory courses must enter with English 12 with a B grade or the equivalent. Please make an appointment with an Academic Advisor to plan your course selections accordingly.

Students should be aware that acceptance into the Sustainable Agriculture Degree program is not a guarantee of registration in any or all of the courses. Qualifying courses are available for those students who do not meet the program's admission requirements and/or course prerequisites. To learn more about these options visit [www.kpu.ca/aca](http://www.kpu.ca/aca).

## PROGRAM REQUIREMENTS

The Bachelor of Applied Science in Sustainable Agriculture consists of 121 credits of course work

### Year One

#### Fall Semester

#### All of:

AGRI 1150	Sustainable Agriculture for the 21st Century	3 credits
BIOL 1110	Introductory Biology I	4 credits
ENVI 1106	Environmental Chemistry I	4 credits

GEOG 1101 Human Geography 3 credits

**And one of:**

MATH 1112 Pre-Calculus Algebra 3 credits

MATH 1117 Environmental Mathematics 3 credits

**Spring Semester**

**All of:**

AGRI 1299 Food System Field Analysis 1 credit

BIOL 1210 Introductory Biology II 4 credits

ENVI 1206 Environmental Chemistry II 4 credits

ENGL 1100 Introduction to University Writing 3 credits

**And one of:**

POST 1100 Sustainability: Analysis and Ethics 3 credits

PHIL 1110 Confronting Moral Issues: Introduction to Ethics 3 credits

PHIL 1112 Environmental Ethics 3 credits

**Year Two**

**Fall Semester**

**All of:**

AGRI 2190 Plant Science 3 credits

BIOL 2322 Ecology 4 credits

PHYS 1400 Energy, Environment, Physics 3 credits

GEOG 2250 The City 3 credits

**And one of:**

POST 2100 Sustainability and Government 3 credits

POLI 1120 Canadian Government and Politics 3 credits

POLI 1125 Introduction to Political Science 3 credits

**Spring Semester**

**All of:**

MATH 1115 Statistics I 3 credits

AGRI 2220 Soil Science 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

**Year Three**

**Spring Semester\***

**All of:**

AGRI 3225 Experimental Design and Analysis (under development) 3 credits

AGRI 3260 Animal Agriculture (under development) 3 credits

AGRI 3270 Olericulture (under development) 3 credits

AGRI 3280 Pomology (under development) 3 credits

AGRI 3290 Agro-Ecosystems Management I (under development) 3 credits

**Summer Semester\***

**All of:**

AGRI 3390 Agro-Ecosystems Management II (under development) 6 credits

AGRI 3398 Crop Physiology and Ecology (under development) 3 credits

AGRI 3399 Research Project I (under development) 3 credits

An elective† course (any course numbered 1100 or higher of 3 or more credits) 3 credits

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

**Year Four**

**Fall Semester**

**All of:**

AGRI 3135 Business of Agriculture (under development) 6 credits

AGRI 4190 Agro-Ecosystems Management III (under development) 3 credits

Two elective† courses (numbered 1100 or higher of 3 or more credits) 6 credits

**Spring Semester**

**All of:**

AGRI 4298 World Trends in Agriculture (under development) 3 credits

AGRI 4299 Research Project II (under development) 3 credits

AGRI 4295 Internship (under development) 3 credits

An elective† course (any course numbered 1100 or higher of 3 or more credits) 3 credits

†**Note:** One of the elective courses must be an ENGL course or a course meeting writing-intensive guidelines.

## **CREDENTIAL AWARDED**

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