Urban Ecosystems: Bachelor of Horticulture Science Major

Faculty of Science and Horticulture	kpu.ca/science
Horticulture	kpu.ca/hort
Program Type	Undergraduate
Credential Granted	Baccalaureate Degree
Offered At	Langley
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 Bachelor of Horticulture Science Urban Ecosystems Major is the only undergraduate degree in North America dedicated to the study of urban ecosystems. At KPU, the Urban Ecosystems Major is an interdisciplinary program that combines horticulture, ecology, design, biology, chemistry, mathematics, business, and student-selected electives from the breadth of courses offered throughout KPU. Students synthesize the science and practice of horticulture to resolve community, industry, and research-related problems in urban environments. Innovation and creative critical thinking are important essential skills that students gain through applied research projects.

The Urban Ecosystems program puts theory into practice through student-led projects. We are testing and adapting ideas about urban ecosystems in real time, on the KPU Langley Campus through protection, design, and management of a living landscape. We have a 550 m2 dedicated Roof Ecosystem Research Lab where we test plants, grow food, and manage a permanent grassland habitat. On the ground, we have a 65-metre rain garden and a vertical living wall rain garden. We are actively repairing, re-indigenizing and managing 1.5 hectares of floodplain habitat alongside Logan Creek, which flows through the campus.

The Bachelor of Horticulture Science program has the following strengths:

- Customized education through the selection of electives that support learner educational goals
- Emphasis on the economic, environmental, and social components of sustainability
- Strong connections with horticulture industry and community groups
- Development of essential skills such as teamwork, creative thinking, problem solving, and communication
- Capstone research courses which include business planning and the application of new skills to a community based issue
- Required work experience in horticulture

Students may have the opportunity to engage in international studies.

ADMISSION REQUIREMENTS

Students pursuing a Major in Urban Ecosystems must be admitted to the Faculty of Science & Horticulture.

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

A minimum of 121 credits from courses at the 1100 level or higher, including:

- A minimum of 39 credits from courses at the 3000 level or higher, including 6 credits from research courses at the 4000 level
- A minimum of 15 credits of Breadth electives chosen from fields or courses that are neither HORT nor prescribed within the Bachelor of Horticulture Science Urban Ecosystem Major, including at least 3 credits from courses at the 3000 or 4000 level

Urban Ecosystems Major

YEAR 1

All of:

ENGL 1100	Introduction to University Writing	3 credits
HORT 1102	Botany for Horticulture	3 credits
HORT 1104	Soils and Growing Media	3 credits
HORT 1110	Introduction to Sustainable Horticulture	3 credits
HORT 1155	Introduction to Plant Materials	3 credits
HORT 1217	Foundations of Plant Health	3 credits

Plus one of:

CBSY 1105	Introductory Computer Applications	3 credits
CBSY 1110	Business Problem Solving with Spreadsheets	3 credits

Plus:

9 credits of HORT electives at the 1100 or 2000 level	9 credits

YEAR 2

All of:

BIOL 1110	Introductory Biology I	4 credits

ENVI 1106	Environmental Chemistry I	4 credits
HORT 2302	Horticulture Work Experience	1 credit
HORT 2306	Work Experience Report	1 credit

Plus one of:

BUSI 1205	Supervisory Skills	3 credits
BUSI 1215	Organizational Behaviour	3 credits
BUSI 1250	Human Resources Management I	3 credits

Plus one of:

ACCT 1110	Introductory Financial Accounting I	3 credits
BUSI 1209	Business Management in Horticulture	3 credits
BUSI 1210	Essentials of Management	3 credits

Plus one of:

HORT 2308	Landscape Pest Management	3 credits
HORT 2333	Turfgrass Pest Management	3 credits
HORT 2378	Production Horticulture Pests	3 credits

Plus:

12 credits of HORT electives at the 1100 or 2000 level	12 credits

YEAR 3

All of:

HORT 3210	Applied Urban Ecosystems	3 credits
HORT 3230	Urban Watershed Planning	3 credits
HORT 3250	Monitoring, Inventory, and Assessment of Plant Communities	3 credits
HORT 3251	Landscape and Environment 1	3 credits
HORT 3270	Urban Agriculture	3 credits

Plus:

9 credits of HORT electives at the 2000 level or higher	9 credits

Plus:

6 credits of Breadth electives *	6 credits

YEAR 4

All of:

HORT 4231	Riparian Management	3 credits
HORT 4252	Landscape and the Environment: Applications	3 credits
HORT 4253	Urban Ecology	3 credits
HORT 4440	Vegetation Management	3 credits
HORT 4480	Society and Horticulture	3 credits
HORT 4810	Applied Research Project 1	3 credits
HORT 4820	Applied Research Project 2	3 credits

Plus:

9 credits of Breadth electives, including at least 3 credits at the 3000 level or higher *	9 credits

Note: * CMNS 1140 may be used as a Breadth elective.

CREDENTIAL AWARDED

Upon successful completion of this program, students are eligible to receive a **Bachelor of Horticulture Science, Major in Urban Ecosystems**.