

HORTICULTURE (HORT)

Department of Plant Agriculture, Ontario Agricultural College

The Horticulture major is for students who want to apply the latest advancements in the biological sciences to contemporary problems in the horticultural industry. This major is appropriate for students with a focus on the management of commercial greenhouses, horticultural production, breeding improved crop varieties, in vitro plant propagation or using turfgrass and other plant species to enhance urban environments. Students can incorporate a variety of field trips, experiential learning in the workplace and independent study into their program of studies.

Students interested in adding a business emphasis to their studies are encouraged to consider the Certificate of Business (calendar.uoguelph.ca/undergraduate-calendar/special-study-opportunities/certificates-diplomas/business/) offered by the Gordon S. Lang School of Business and Economics. This may require an additional semester to complete.

Students interested in organic agriculture should consider the Certificate in Organic Agriculture (calendar.uoguelph.ca/undergraduate-calendar/special-study-opportunities/certificates-diplomas/organic-agriculture/).

Credit Summary

- In semester 5 students must choose Option A: Production and Management, or Option B: Research.
 - Option A: 13.50 credits from required courses, 3.50 restricted electives, 0.50 of humanities and social sciences, and 2.50 free electives.
 - Option B: 15.00 credits from required courses, 3.50 restricted electives, 0.50 of humanities and social sciences, and 1.00 free electives.
- A humanities or social science courses (0.50 credits) at the 1000-level or above. See Program Counsellor for acceptable list of courses.

Code	Title	Credits
Semester 1		
AGR*1110	Introduction to the Agri-Food Systems	1.00
BIOL*1050	Biology of Plants & Animals in Managed Ecosystems	0.50
CHEM*1040	General Chemistry I	0.50
MATH*1080	Elements of Calculus I	0.50
Semester 2		
AGR*2050	Agroecology	0.50
BIOL*1090	Introduction to Molecular and Cellular Biology	0.50
CHEM*1050	General Chemistry II	0.50
FARE*1400	Economics of the Agri-Food System	1.00
Semester 3		
AGR*2320	Soils in Agroecosystems	0.50
AGR*2350	Animal Production Systems, Health and Industry	0.50
AGR*2470	Introduction to Plant Agriculture	0.50
FARE*2700	Survey of Natural Resource Economics	0.50
MBG*2400	Fundamentals of Plant and Animal Genetics	0.50
Semester 4		

BIOC*2580	Introduction to Biochemistry	0.50
BOT*2100	Life Strategies of Plants	0.50
ENVS*2040	Plant Health and the Environment	0.50
STAT*2040	Statistics I	0.50
0.50 electives or restricted electives		0.50

Option A - Production and Management

Code	Title	Credits
Semester 5		
ENVS*3210	Plant Pathology	0.50
HORT*3150	Principles and Applications of Plant Propagation	0.50
HORT*3510	Vegetable Production	0.50
or HORT*4420	Fruit Crops	
1.00 electives or restricted electives		1.00
Semester 6		
ENVS*4100	Integrated Management of Invasive Insect Pests	0.50
PBIO*3120	Plant Physiology	0.5
1.50 electives or restricted electives		1.50
Semester 7		
FOOD*3090	Food Science and Human Nutrition	0.50
2.00 electives or restricted electives		2.00
Semester 8		
AGR*4600	Agriculture and Food Issues Problem Solving	1.00
1.50 electives or restricted electives		1.50

Option B - Research

Code	Title	Credits
Semester 5		
AGR*3450	Research Methods in Agricultural Science	0.50
ENVS*3210	Plant Pathology	0.50
HORT*3150	Principles and Applications of Plant Propagation	0.50
HORT*3510	Vegetable Production	0.50
or HORT*4420	Fruit Crops	
0.50 electives or restricted electives		0.50
Semester 6		
ENVS*4100	Integrated Management of Invasive Insect Pests	0.50
PBIO*3120	Plant Physiology	0.50
1.50 electives or restricted electives		1.50
Semester 7		
AGR*4450	Research Project I	1.00
FOOD*3090	Food Science and Human Nutrition	0.50
1.00 electives or restricted electives		1.00
Semester 8		
AGR*4460	Research Project II	1.00
1.50 electives or restricted electives		1.50

Restricted Electives - Option A and Option B

A minimum of 7.00 credits must be at the 3000 level or higher, of which 5.00 credits must be in agricultural science and of which 3.50

credits must be at the 4000 level. Refer to Program Counsellor for list of agricultural science courses.

IAEF*3500	Experiential Education	0.50
UNIV*3140	Flexible Internship in Agri-Food	0.50

Students must take a minimum of 3.50 credits of restricted electives from the following lists:

Horticultural Production

A minimum of 2.00 credits from:

Code	Title	Credits
AGR*4020	Precision Techniques for Plant Agriculture	0.50
ENVS*3300	Introduction to Controlled Environment Systems	0.50
HORT*2450	Introduction to Turfgrass Science	0.50
HORT*3010	Annual, Perennial and Indoor Plants - Identification and Use	0.50
HORT*3270	Medicinal Plants	0.50
HORT*3280	Greenhouse Production	0.50
HORT*3510	Vegetable Production	0.50
HORT*4300	Postharvest Physiology	0.50
HORT*4420	Fruit Crops	0.50
HORT*4450	Advanced Turfgrass Science	0.50
OAGR*2070	Introduction to Organic Agriculture	1.00
PBIO*4290	Cannabis Production	0.50

Pest Management

A minimum of 0.50 from:

Code	Title	Credits
CROP*4240	Weed Science	0.50
ENVS*3020	Pesticides and the Environment	0.50
ENVS*3140	Management of Turfgrass Diseases	0.50
ENVS*4180	Insecticide Biological Activity and Resistance	0.50
ENVS*4190	Biological Activity of Herbicides	0.50
HORT*3050	Management of Turfgrass Insect Pests and Weeds	0.50
PBIO*4070	Biological and Cultural Control of Plant Diseases	0.50

Genetics, Biotechnology and Physiology

A minimum of 0.50 from:

Code	Title	Credits
MBG*3100	Plant Genetics	0.50
MBG*4160	Plant Breeding	0.50
PBIO*3110	Crop Physiology	0.50
PBIO*3750	Plant Tissue Culture	0.50
PBIO*4750	Genetic Engineering of Plants	0.50

Experiential Learning

A minimum of 0.50 from:

Code	Title	Credits
AGR*2500	Field Course in International Agriculture	0.50
AGR*3010	Special Studies in Agricultural Science I	0.50
CROP*4260	Crop Science Field Trip	0.50
EDRD*3050	Agricultural Communication	0.50