

ENVIRONMENTAL HORTICULTURE MAJOR

Program Curriculum

Code	Title	Credits
Plant Science Degree Core Requirements		
ALS 1234	CALS First Year Seminar	1
or SPES 1004	First Year Seminar	
ALCE 3634	Communicating Ag and Life Sciences in Speaking	3
or ALCE 3624	Communicating Ag and Life Sciences in Writing	
BIOL 1105	Principles of Biology	3
BIOL 1106	Principles of Biology	3
ENSC 1015	Foundations of Environmental Science	3
or ENSC 1016	Foundations of Environmental Science	
HORT/BIOL 2304	Plant Biology	3
PPWS 2104	Plants, Genes, and People	3
PPWS 4104	Plant Pathology	4
Subtotal		23
Environmental Horticulture Major Requirements		
HORT 2224	Horticulture Science and Industry	2
HORT 2234	Environmental Factors in Horticulture	3
HORT 2244	Plant Propagation	3
HORT 4334	Greenhouse and Controlled Environment Agriculture Management	3
HORT 3324	Herbaceous Landscape Plants	3
HORT 3325	Woody Landscape Plants	3
or HORT 3326	Woody Landscape Plants	
ENSC 3134	Soils in the Landscape	3
ENT 4254	Insect Pest Management	3
Subtotal		23
Professional Development Requirements		
SPES 2014	Professional Development Skills	1
SPES 3900	Bridge Experience	0
SPES 4014	Career Development and Planning	1
Subtotal		2
Business Requirements		
AAEC 2434	Foundations of Agribusiness	3
AAEC 3454	Small Business Management and Entrepreneurship	3
HORT 4614	Ornamental Plant Production and Marketing	3
or HORT 4344	Production of Food Crops in Controlled Environment Agriculture	
Subtotal		9
Restricted Electives		
Select 12 credits of the following:		12
AAEC 3314	Environmental Law	
AAEC 3004	Agricultural Production and Consumption Economics	
AAEC 3604	Agricultural Law	
ALS 2204	Sustainable Food Systems	
ALS 3404	Ecological Agriculture: Theory and Practice	

BIOL 2004	Genetics
CHEM 1045	General Chemistry Laboratory
CHEM 1046	General Chemistry Laboratory
CHEM 2535	Organic Chemistry
CHEM 2536	Organic Chemistry
CHEM 2545	Organic Chemistry Laboratory
CHEM 2546	Organic Chemistry Laboratory
CSES 2224	Foundations of Precision Agriculture
CSES 2444	Agronomic Crops
CSES 2564	Turfgrass Management
CSES 4344	Crop Physiology and Ecology
CSES 4064	Soil Microbiology
CSES 4214	Soil Fertility and Management
ENT 2004	Insects and Human Society
ENT 2254	Bees and Beekeeping
ENT 2264	Bees and Beekeeping Laboratory
ENT/PPWS 4264	Pesticide Usage
HORT 2144	Indoor Plants
HORT 2164	Floral Design
HORT 2134	Plants and Greenspaces in Urban Communities
HORT 2184	Plants, Places, and Cultures in a Global Context
HORT 2834	Sustainable Agriculture Practicum
HORT 3114	Wines and Vines
HORT 3354	Trees in the Built Environment
HORT 3664	Hardscape Materials and Installation
HORT 4504	Landscape Contracting
HORT 4545	Small Scale and Residential Landscape Design
HORT 4546	Small Scale and Residential Landscape Design
HORT 4654	Viticulture
HORT 4764	Vegetable Crops
HORT 4784	Vegetable Seed Production
HORT 4794	Medicinal Plants and Herbs
HORT 4205	Public Gardens Maintenance and Management
HORT 4206	Public Gardens Maintenance and Management
SPES 2004	Cannabis - Science, Industry, and Culture
SPES 2244	World Crops: Food and Culture
SPES 4114	Topics: StudyAway: Production, Culture and Social Aspects US Agriculture

Up to 3 credit hours can be selected from the following courses:

SPES 3954	Study Abroad (1-3)
SPES 4964	Field Study (1-3)
SPES 4974	Independent Study (1-3)
SPES 4994	Undergraduate Research (1-3)

These courses can count as a Restrictive Elective if NOT taken for Major Requirement or Business Requirement.

HORT 3325	Woody Landscape Plants
or HORT 3326	Woody Landscape Plants
HORT 4344	Production of Food Crops in Controlled Environment Agriculture
or HORT 4614	Ornamental Plant Production and Marketing

Free Electives

Select credits to reach 120 Total Credit Hours 6

Subtotal	18
Pathways to General Education	
<i>Pathways Concept 1 - Discourse</i>	
ENGL 1105 First-Year Writing (1F)	3
ENGL 1106 First-Year Writing (1F)	3
Select three credits in Pathway 1a (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G01A)	3
<i>Pathways Concept 2 - Critical Thinking in the Humanities</i>	
Select six credits in Pathway 2 (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G02)	6
<i>Pathways Concept 3 - Reasoning in the Social Sciences</i>	
AAEC 1005 Economics of the Food and Fiber System or ECON 2005 Principles of Economics	3
Select three credits in Pathway 3 (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G03)	3
<i>Pathways Concept 4 - Reasoning in the Natural Sciences</i>	
CHEM 1035 General Chemistry	3
CHEM 1036 General Chemistry	3
<i>Pathways Concept 5 - Quantitative and Computational Thinking</i>	
MATH 1014 Precalculus with Transcendental Functions (5F) or MATH 1025 Elementary Calculus	3
Select three credits in Pathway 5f (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G05F)	3
Select three credits in Pathway 5a (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G05A)	3
<i>Pathways Concept 6 - Critique and Practice in Design and the Arts</i>	
Select three credits in Pathway 6d (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06D)	3
Select three credits in Pathway 6a (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06A)	3
<i>Pathways Concept 7 - Critical Analysis of Identity and Equity in the United States</i>	
Select three credits in Pathway 7 (https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G07) (may be double-counted with another Pathways concept)	3
Subtotal	45
Total Credits	120

Satisfactory Progress

Upon having attempted 60 credits (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" toward a BS PLSC degree will include passing the following:

- At least 24 credits that apply to the Pathways to General Education
- MATH 1014 Precalculus with Transcendental Functions, CHEM 1035 General Chemistry and CHEM 1036 General Chemistry,
- HORT 2224 Horticulture Science and Industry or HORT 2234 Environmental Factors in Horticulture or HORT 2244 Plant Propagation
- 6 additional HORT courses
- 6 credits from ENSC 3134 Soils in the Landscape, ENT 4254 Insect Pest Management, PPWS 4104 Plant Pathology

Graduation Requirements

- GPA Requirements
 - Total Credit Hours Required: Minimum of 120
 - Overall GPA: 2.0 (each semester in order to be in good academic standing)
 - In-major GPA: 2.0 (by the time the student graduates)
 - Includes classes in: CSES, HORT, and PPWS
 - Prerequisites: Some courses listed may have pre/co-requisites; please consult the University Catalog or check with your advisor.

Acceptable Substitutions

1. SPES 1004 First Year Seminar : Any University approved First Year Experience (FYE) Course

Foreign Language Requirement

A sequence of two foreign language courses (Classical or ASL) is required unless two years of the same high school foreign language or 6 transfer credits of the same foreign language are completed. These credits **do not** count toward graduation requirements.

First Year		
Fall Semester		Credits
BIOL 1105	Principles of Biology	3
ENGL 1105	First-Year Writing	3
ENSC 1015 or ENSC 1016	Foundations of Environmental Science or Foundations of Environmental Science	3
HORT 2224	Horticulture Science and Industry	2
MATH 1014 or MATH 1025	Precalculus with Transcendental Functions or Elementary Calculus	3
SPES 1004 or ALS 1234	First Year Seminar or CALS First Year Seminar	1
Credits		15
Spring Semester		
BIOL 1106	Principles of Biology	3
ENGL 1106	First-Year Writing	3
HORT 2244	Plant Propagation	3
HORT 2234	Environmental Factors in Horticulture	3
Pathways Concept 5 - Quantitative and Computational Thinking		3
SPES 2014	Professional Development Skills	1
Credits		16
Second Year		
Fall Semester		
AAEC 1005	Economics of the Food and Fiber System	3
HORT 2304	Plant Biology	3
CHEM 1035	General Chemistry	3
Pathways Concept 1 - Discourse		3
Pathways Concept 5 - Quantitative and Computational Thinking		3
Credits		15
Spring Semester		
AAEC 2434	Foundations of Agribusiness	3
CHEM 1036	General Chemistry	3
PPWS 2104	Plants, Genes, and People	3
Pathways Concept 2 - Critical Thinking in the Humanities		3
Pathways Concept 6 - Critique and Practice in Design and the Arts		3
Credits		15

Third Year**Fall Semester**

AAEC 3454	Small Business Management and Entrepreneurship	3
ALCE 3624 or ALCE 3634	Communicating Ag and Life Sciences in Writing or Communicating Ag and Life Sciences in Speaking	3
HORT 3324	Herbaceous Landscape Plants	3
Restricted Electives		3
Pathways Concept 6 - Critique and Practice in Design and the Arts		3
Credits		15

Spring Semester

ENSC 3134	Soils in the Landscape	3
ENT 4224	Integrated Pest Management	3
HORT 3326	Woody Landscape Plants	3
Restricted Electives		3
Pathways Concept 2 - Critical Thinking in the Humanities		3
SPES 3900	Bridge Experience	0
Credits		15

Fourth Year**Fall Semester**

HORT 4334	Greenhouse and Controlled Environment Agriculture Management	3
Restricted Electives		3
Restricted Electives		3
Pathways Concept 3 - Reasoning in the Social Sciences		3
Pathways Concept 7 - Critical Analysis of Identity and Equity in the United States		3
Credits		15

Spring Semester

HORT 4614 or HORT 4344	Ornamental Plant Production and Marketing or Production of Food Crops in Controlled Environment Agriculture	3
PPWS 4104	Plant Pathology	4
Free Electives		6
SPES 4014	Career Development and Planning	1
Credits		14
Total Credits		120