PLANT SCIENCE (BS)

The Plant Science major, with concentrations in Environmental Horticulture, Soil Science, Sustainable Agriculture, and Turfgrass Science, focuses on the science and practices associated with sustainable plant production and/or use within managed systems. Courses emphasize practices and concepts related to reducing environmental impact during production and in managed land use systems.

Concentrations focus on the production of ornamental and edible crops in controlled environments, greenhouses, nurseries and on farms; management practices for built landscapes and surfaces used for recreational and sporting activities; and the selection and management of ornamental trees, shrubs, grasses, native species, and plants and soils that perform ecosystem services in recreational, urban, and suburban settings to meet functional and aesthetic requirements. The program emphasizes hands-on learning and developing and applying knowledge to solve contemporary problems in individual and team approaches. Students have the opportunity to gain real-world experience through internships.

Requirements

All students in this major must complete the following courses:

Course	Title	Credits
Core Courses		
BIOL 1108	Principles of Biology II	4
or BIOL 1110	Introduction to Botany	
CHEM 1122	Chemical Principles and Applications	4
or CHEM 1124Q	Fundamentals of General Chemistry I	
or CHEM 1127Q	General Chemistry I	
PLSC 1120	Introduction to Plant Science	4
PLSC 2120	Environmental Soil Science	3
PLSC 2125	Environmental Soils Lab	1
PLSC 2110W	Sustainable Plant Pest Management Communication	1
or PLSC 2560W	Written Communications in Horticulture	
PLSC 4210	Plant Physiology: How Plants Work	3
Total Credits		**20**

The writing in the major requirement is satisfied by PLSC 2110W Sustainable Plant Pest Management Communication or PLSC 2560W Written Communications in Horticulture.

Plant Science General Concentration

This track is to be used when no concentration is declared and may also be used as a means of advancing to a graduate program without yet specializing to a concentration. Students in this concentration must complete the following courses:

Course	Title	Credits
Select one or a combination of the following:		2-6
PLSC 3990	Field Study Internship	
PLSC 3996	Undergraduate Research in Plant Science	
PLSC 3999	Independent Study	
Plants in ecology, environments, and landscapes		
Select two of the following:		6
LAND 2210E	The Common (Shared) Landscape of the USA: Rights, Responsibilities and Values	
LAND 2230E	Biophilic Cities and Landscapes	
PLSC 1060E	The Great American Lawn: History, Culture, and Sustainability	
PLSC 2100E	Environmental Sustainability of Food Production in Developed Countries	
PLSC 2500E	Principles and Concepts of Agroecology	
PLSC 3550	Urban Plant Systems Construction and Maintenance	
PLSC 3820	Ecology and Control of Weeds	
Applied plant production systems		**6-8**
Select two of the following:		
PLSC 1110	Fundamentals of Horticulture	
PLSC 1115	Turfgrass Management Lab	
PLSC 2130	Introduction to the Horticulture of Cannabis	
PLSC 2210	Golf Course Management	
PLSC 3440	Small Fruit Production	
PLSC 3540	Garden Center Management	
PLSC 3610	Organic and Sustainable Vegetable Production	
PLSC 3660	Nursery Production	
PLSC 3670	Greenhouse Technology and Operations	
PLSC 3675	Greenhouse Technology and Operations Laboratory	
Plant associated microbes and plant pests		**3**
Select one of the following:		
PLSC 3120E	Fungi, Fire, and Flood: Soil Microbes in a Changing World	
PLSC 3810	Fundamentals of Plant Pathology	
PLSC 3830	Horticultural Entomology	
PLSC 3840	Integrated Pest Management	
Plant materials		**3**
Select one of the following:		
PLSC 2430	Herbaceous Ornamental Plants	
PLSC 2520	Floral Art	
PLSC 3410	Woody Plants: Common Trees, Shrubs and Vines	
PLSC 3560	Indoor Plants and Interiorscaping	
Plant propagation and breeding		**3**
Select one of the following:		
PLSC 3210	Molecular Laboratory Technology	
PLSC 3230	Biotechnology - Science, Application, Impact, Perception	
PLSC 3245	Plant Breeding and Biotechnology	
PLSC 3255	Modern and Traditional Plant Breeding Techniques	
PLSC 3640	Plant Propagation	
Total Credits		**23-29**

Environmental Horticulture Concentration

Students in this concentration must complete the following courses:

Course	Title	Credits
PLSC 3640	Plant Propagation	3
Select two of the following:		6
PLSC 3810	Fundamentals of Plant Pathology	
PLSC 3820	Ecology and Control of Weeds	
PLSC 3830	Horticultural Entomology	
Select two of the following:		6
PLSC 2430	Herbaceous Ornamental Plants	
PLSC 3410	Woody Plants: Common Trees, Shrubs and Vines	
PLSC 3560	Indoor Plants and Interiorscaping	
Select three of the following:		9
PLSC 3440	Small Fruit Production	
PLSC 3540	Garden Center Management	
PLSC 3550	Urban Plant Systems Construction and Maintenance	
PLSC 3610	Organic and Sustainable Vegetable Production	
PLSC 3660	Nursery Production	
PLSC 3670	Greenhouse Technology and Operations	
PLSC 4650	Plant Tissue Culture	
Total Credits		**24**

Soil Science Concentration

Students in this concentration must complete the following courses:

Course	Title	Credits
PLSC 3120E	Fungi, Fire, and Flood: Soil Microbes in a Changing World	3
PLSC 3620	Soil Fertility	3
PLSC 3700	Soil Morphology	3
PLSC 3710	Soil Management, Soil Health, and Climate Change	3
Select one or a combination of the following:		1-6
PLSC 3990	Field Study Internship	
PLSC 3996	Undergraduate Research in Plant Science	
PLSC 3999	Independent Study	
Select one of the following:		3
PLSC 3810	Fundamentals of Plant Pathology	
PLSC 3820	Ecology and Control of Weeds	
PLSC 3830	Horticultural Entomology	
PLSC 3840	Integrated Pest Management	
Three of the following:		9
PLSC 1100	Turfgrass Management	
PLSC 2100E	Environmental Sustainability of Food Production in Developed Countries	
PLSC 2500E	Principles and Concepts of Agroecology	
PLSC 3440	Small Fruit Production	
PLSC 3550	Urban Plant Systems Construction and Maintenance	
PLSC 3610	Organic and Sustainable Vegetable Production	
PLSC 3660	Nursery Production	
PLSC 3670	Greenhouse Technology and Operations	
Total Credits		**25-30**

Sustainable Agriculture Concentration

Students in this concentration must complete the following courses:

Course	Title	Credits
PLSC 2100E	Environmental Sustainability of Food Production in Developed Countries	3
PLSC 2500E	Principles and Concepts of Agroecology	3
PLSC 3610	Organic and Sustainable Vegetable Production	4
PLSC 3620	Soil Fertility	3
PLSC 3840	Integrated Pest Management	3
PLSC 3990	Field Study Internship	1-6
Select two of the following:		6
PLSC 3810	Fundamentals of Plant Pathology	
PLSC 3820	Ecology and Control of Weeds	
PLSC 3830	Horticultural Entomology	
Total Credits		**23-28**

Turfgrass Science Concentration

Students in this concentration must complete the following courses:

Course	Title	Credits
PLSC 1100	Turfgrass Management	3
PLSC 1115	Turfgrass Management Lab	1
PLSC 3150	Advanced Turfgrass Management	3
PLSC 3620	Soil Fertility	3
PLSC 3990	Field Study Internship	1-6
Select three of the following:		9
PLSC 3810	Fundamentals of Plant Pathology	
PLSC 3820	Ecology and Control of Weeds	
PLSC 3830	Horticultural Entomology	
PLSC 3840	Integrated Pest Management	
Select one of the following:		3
PLSC 2430	Herbaceous Ornamental Plants	
PLSC 3410	Woody Plants: Common Trees, Shrubs and Vines	
PLSC 3550	Urban Plant Systems Construction and Maintenance	
Total Credits		**23-28**

Students successfully completing these courses will have met their Common Curriculum requirements for information literacy.