

# Horticulture and Urban Agriculture

## Department Information

- **Department Web Site:**  
www.ndsu.edu/agriculture/academics/academic-units/plant-sciences (<http://www.ndsu.edu/agriculture/academics/academic-units/plant-sciences/>)
- **Credential Offered:**  
B.S.
- **Sample Program Guide:**  
[catalog.ndsu.edu/programs-study/undergraduate/horticulture/#planofstudytext](http://catalog.ndsu.edu/programs-study/undergraduate/horticulture/#planofstudytext) (<http://catalog.ndsu.edu/programs-study/undergraduate/horticulture/#planofstudytext>)

## Major Requirements

### Major: Horticulture and Urban Agriculture

**Degree Type:** B.S.

**Minimum Degree Credits to Graduate:** 120

### University Degree Requirements

1. Satisfactory completion of all requirements of the curriculum in which one is enrolled.
2. Earn a minimum total of 120 credits in approved coursework. Some academic programs exceed this minimum.
3. Satisfactory completion of the general education requirements as specified by the university.
4. A minimum institutional GPA of 2.00 based on work taken at NDSU.
5. At least 30 credits must be NDSU resident credits. Resident credits include credits registered and paid for at NDSU.
6. At least 36 credits presented for graduation must be in courses numbered 300 or higher.
7. Students presenting transfer credit must meet the NDSU residence credits and the minimum upper level credit. Of the 30 credits earned in residence, a minimum of 15 semester credits must be in courses numbered 300 or above, and 15 semester credits must be in the student's curricula for their declared major.

For complete information, please refer to the Degree and Graduation Requirements (<http://catalog.ndsu.edu/past-bulletin-archive/2023-24/academic-policies/undergraduate-policies/degree-and-graduation/>) section of this Bulletin.

### University General Education Requirements

Code	Title	Credits
<b>Communication (C)</b>		<b>12</b>
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing <sup>†</sup>		
<b>Quantitative Reasoning (R) <sup>†</sup></b>		<b>3</b>
<b>Science and Technology (S) <sup>†</sup></b>		<b>10</b>
<b>Humanities and Fine Arts (A) <sup>†</sup></b>		<b>6</b>
<b>Social and Behavioral Sciences (B) <sup>†</sup></b>		<b>6</b>
<b>Wellness (W) <sup>†</sup></b>		<b>2</b>
<b>Cultural Diversity (D) <sup>**†</sup></b>		
<b>Global Perspectives (G) <sup>**†</sup></b>		
<b>Total Credits</b>		<b>39</b>

\* May be satisfied by completing courses in another General Education category.

<sup>†</sup> General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review major requirements to determine if specific courses can also satisfy these general education categories.

- A list of university approved general education courses and administrative policies are available here (<http://catalog.ndsu.edu/past-bulletin-archive/2023-24/academic-policies/undergraduate-policies/general-education/#genedcoursestext>).

## Major Requirements

Code	Title	Credits
<b>Required Core Courses for Horticulture</b>		
PLSC 189	Skills for Academic Success <sup>1</sup>	1
CSCI 114	Computer Applications	3
or TL 116	Business Software Applications	
CHEM 117 & 117L	Chemical Concepts and Applications and Chem Concepts and Applications Lab	4
or CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	
ECON 105	Elements of Economics	3
or ECON 201	Principles of Microeconomics	
or ECON 202	Principles of Macroeconomics	
ENT 350	General Entomology	3
MATH 104	Finite Mathematics	3
or MATH 103	College Algebra	
PLSC 210	Horticulture Science	3
PLSC 211	Horticulture Science Lab	1
PLSC 215	Weed Identification	1
PLSC 355	Woody Landscape Plants	3
PLSC 365	Herbaceous Landscape Plants	2
PLSC 380	Principles of Plant Physiology	3
PLSC 457	Horticulture and Turfgrass Systems (Capstone)	3
PLSC 496	Field Experience	2
or PLSC 493	Undergraduate Research	
or PLSC 494	Individual Study	
PLSC 491	Seminar	1
PPTH 324	Introductory Plant Pathology	3
SOIL 210	Introduction to Soil Science	3
<b>Option: Students select one of the six options listed below.</b>		
Option information: Students must select one of the options listed below to complete the major. The standard option is Production Business; if students wish to complete one of the other options available they must officially declare their option with the Office of Registration and Records.		34
<b>Total Credits</b>		<b>76</b>

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PLSC 189 is only required for first-time, first-year students--A first-time, first-year student is defined as a student who has not yet completed a college course as a college student. Students that are not first-time, first-year students that either transfer into the university or change their major are not required to take this course.

### Production-Business Option (Standard) - 34 Credits

Code	Title	Credits
ENT 431	Principles of Insect Pest Management	3
MGMT 320	Foundations of Management	3
MRKT 320	Foundations of Marketing	3
or MGMT 430	Leadership in Organizations	
PLSC 368	Plant Propagation	3
PLSC 468	Landscape Irrigation Design	2
PLSC 469	Landscape Irrigation Installation and Management	2
PPTH 455	Plant Disease Management	3
or PPTH 457	Landscape Plant Pathology	

Electives: Select 15 credits of the following: 15

ABEN 286	Introduction to Controlled Environment Agriculture
ASM 373	Tractors & Power Units
ENTR 201	Introduction to Entrepreneurship
PLSC 177	Floral Design I
PLSC 296	Field Experience
PLSC 323	Principles of Weed Science
PLSC 375	Turfgrass Management
PLSC 375L	Turfgrass Management Laboratory
PLSC 412	Nursery Production and Management
PLSC 415	Vegetable Crop Production
PLSC 416	Fruit Crop Production
PLSC 422	Greenhouse Production and Management
PLSC 425	Potato Science
PLSC 453	Advanced Weed Science
PLSC 465	Advanced Landscape Plants
PLSC 484	Plant Tissue Culture and Biotechnology
PLSC 486	Applied Crop Physiology
SOIL 322	Soil Fertility and Fertilizers

**Total Credits**

**34**

### Horticulture Science Option - 34 Credits

Code	Title	Credits
BIOC 260	Elements of Biochemistry	4
CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory	4
CHEM 240	Survey of Organic Chemistry	3
MATH 146	Applied Calculus I	4
PLSC 315 & 315L	Genetics and Genetics Laboratory	4
PLSC 368	Plant Propagation	3
PLSC 484	Plant Tissue Culture and Biotechnology	3

Electives: Select 9 credits of the following: 9

PLSC 296	Field Experience
PLSC 323	Principles of Weed Science
PLSC 375 & 375L	Turfgrass Management and Turfgrass Management Laboratory
PLSC 411	Genomics
PLSC 412	Nursery Production and Management
PLSC 415	Vegetable Crop Production
PLSC 416	Fruit Crop Production
PLSC 422	Greenhouse Production and Management
PLSC 425	Potato Science
PLSC 431	Intermediate Genetics
PLSC 444	Applied Plant Breeding and Research Methods
PLSC 453	Advanced Weed Science
PLSC 465	Advanced Landscape Plants
PLSC 485	Arboriculture Science
PLSC 486	Applied Crop Physiology
PPTH 455 or PPTH 457	Plant Disease Management Landscape Plant Pathology
SOIL 465	Soil And Plant Analysis
STAT 330	Introductory Statistics

STAT 331	Regression Analysis	
STAT 367	Probability	
STAT 462	Introduction to Experimental Design	
<b>Total Credits</b>		<b>34</b>

### Landscape Design Option - 34 Credits

This option also requires the completion of the Landscape Architecture minor (21 credits).

Code	Title	Credits
PLSC 177	Floral Design I	2
PLSC 341	Landscape Bidding, Contracting and Operations	2
PLSC 465	Advanced Landscape Plants	3
PLSC 468	Landscape Irrigation Design	2
Electives: Select 4 credits of the following:		4
PLSC 296	Field Experience	
PLSC 375	Turfgrass Management	
PLSC 375L	Turfgrass Management Laboratory	
PLSC 412	Nursery Production and Management	
PLSC 422	Greenhouse Production and Management	
PLSC 469	Landscape Irrigation Installation and Management	
PLSC 485	Arboriculture Science	
PPTH 457	Landscape Plant Pathology	
Landscape Architecture Minor		21
<b>Total Credits</b>		<b>34</b>

### Landscape management Option - 34 Credits

Code	Title	Credits
PLSC 341	Landscape Bidding, Contracting and Operations	2
PLSC 370	Landscape Management	3
PLSC 465	Advanced Landscape Plants	3
PLSC 468	Landscape Irrigation Design	2
PLSC 469	Landscape Irrigation Installation and Management	2
PPTH 457	Landscape Plant Pathology	3
Electives: Select 19 credits of the following:		19
ENT 431	Principles of Insect Pest Management	
ENTR 201	Introduction to Entrepreneurship	
PLSC 296	Field Experience	
PLSC 323	Principles of Weed Science	
PLSC 368	Plant Propagation	
PLSC 375	Turfgrass Management	
PLSC 375L	Turfgrass Management Laboratory	
PLSC 381	Sports Turf Operations	
PLSC 412	Nursery Production and Management	
PLSC 480	Advanced Turfgrass Topics	
PLSC 485	Arboriculture Science	
SOIL 322	Soil Fertility and Fertilizers	
<b>Total Credits</b>		<b>34</b>

### Sports & Urban Turfgrass management Option - 34 Credits

Code	Title	Credits
PLSC 375 & 375L	Turfgrass Management and Turfgrass Management Laboratory	4
PLSC 381	Sports Turf Operations	3

PLSC 468	Landscape Irrigation Design	2
PLSC 469	Landscape Irrigation Installation and Management	2
PPTH 457	Landscape Plant Pathology	3
SOIL 322	Soil Fertility and Fertilizers	3
Electives: Select 17 credits of the following:		17
ASM 373	Tractors & Power Units	
ASM 374	Power Units Laboratory	
ENT 431	Principles of Insect Pest Management	
HNES 128	Golf	
PLSC 219	Introduction to Prairie & Community Forestry	
PLSC 296	Field Experience	
PLSC 323	Principles of Weed Science	
PLSC 341	Landscape Bidding, Contracting and Operations	
PLSC 465	Advanced Landscape Plants	
PLSC 480	Advanced Turfgrass Topics	
PLSC 485	Arboriculture Science	
PPTH 455	Plant Disease Management	
SOIL 217	Introduction to Meteorology & Climatology	

**Total Credits** **34**

### Urban Forestry & Parks Option - 34 Credits

Code	Title	Credits
PLSC 219	Introduction to Prairie & Community Forestry	2
PLSC 368	Plant Propagation	3
PLSC 386	Arboriculture Climbing and Rigging Operations	2
PLSC 412	Nursery Production and Management	3
PLSC 465	Advanced Landscape Plants	3
PLSC 485	Arboriculture Science	3
PPTH 457	Landscape Plant Pathology	3

Electives: Select 15 credits of the following: 15

ENT 431	Principles of Insect Pest Management	
ENTR 201	Introduction to Entrepreneurship	
GEOG 105	Fundamentals of Geographic Information Systems	
NRM 264	Natural Resource Management Systems	
NRM 401	Urban-Ecosystem Management	
PLSC 296	Field Experience	
PLSC 323	Principles of Weed Science	
PLSC 370	Landscape Management	
PLSC 375	Turfgrass Management	
PLSC 375L	Turfgrass Management Laboratory	
PLSC 416	Fruit Crop Production	
PLSC 468	Landscape Irrigation Design	
PLSC 469	Landscape Irrigation Installation and Management	
SOIL 322	Soil Fertility and Fertilizers	

**Total Credits** **34**

## Minor Requirements

### Minor: Horticulture

Minimum Required Credits: 17

## Minor Requirements

Code	Title	Credits
<b>Required Courses</b>		
PLSC 210	Horticulture Science	3
PLSC 211	Horticulture Science Lab	1
Select two of the following courses listed below:		5-6
PLSC 355	Woody Landscape Plants	
PLSC 365	Herbaceous Landscape Plants	
PLSC 368	Plant Propagation	
<b>Elective Courses: Select from the following:</b>		<b>8-9</b>
PLSC 177	Floral Design I	
PLSC 341	Landscape Bidding, Contracting and Operations	
PLSC 370	Landscape Management	
PLSC 375	Turfgrass Management	
PLSC 375L	Turfgrass Management Laboratory	
PLSC 379	Study Tour Abroad	
PLSC 381	Sports Turf Operations	
PLSC 386	Arboriculture Climbing and Rigging Operations	
PLSC 412	Nursery Production and Management	
PLSC 415	Vegetable Crop Production	
PLSC 416	Fruit Crop Production	
PLSC 422	Greenhouse Production and Management	
PLSC 425	Potato Science	
PLSC 465	Advanced Landscape Plants	
PLSC 468	Landscape Irrigation Design	
PLSC 469	Landscape Irrigation Installation and Management	
PLSC 484	Plant Tissue Culture and Biotechnology	
PLSC 485	Arboriculture Science	
ENT 350	General Entomology	
PPTH 324	Introductory Plant Pathology	
SOIL 210	Introduction to Soil Science	
<b>Total Credits</b>		<b>17-19</b>

## Minor Requirements and Notes

- A minimum of 8 credits must be taken at NDSU.
- Students must earn a minimum 2.00 GPA for the minor requirements.