

Horticulture and Urban Agriculture

Department Information

- **Department Web Site:**
www.ag.ndsu.edu/plantsciences (<http://www.ag.ndsu.edu/plantsciences/>)
- **Credential Offered:**
B.S.; Minor
- **Official Program Curriculum:**
catalog.ndsu.edu/undergraduate/program-curriculum/horticulture/ (<http://catalog.ndsu.edu/undergraduate/program-curriculum/horticulture/>)

Horticulture is the art and science of producing, improving, marketing, and using fruits, vegetables, flowers, and landscape plants. It differs from botany and other plant sciences in that horticulture incorporates both science and art. Horticulture is an art as old as the ancient gardens and a science as new as today's genetic engineering. Horticulture is an entrepreneurial industry, profession, business, vocation and avocation. Production and consumption of high quality fruits and vegetables allows us to maintain a healthy, balanced daily diet. Flowers and ornamental plants enrich our homes and communities, and contribute to our sense of well-being. Horticulture impacts our lives on a daily basis by providing nutritious fruits and vegetables, offering visual enjoyment, and promoting recreational activities. Horticulture is a multibillion dollar industry made up of small businesses as well as large publicly traded enterprises.

The Program

The Department of Plant Sciences offers a four-year curriculum in horticulture leading to the Bachelor of Science degree. There are six horticulture options: horticulture science, landscape design, landscape management, production-business, sports and urban turfgrass management, and urban forestry and parks.

HORTICULTURE MINOR

The horticulture program offers a minor and is open to students in any major. The horticulture minor is geared toward students who want to learn more about plants and their many uses.

Career Opportunities

Production – producers of horticultural food crops for fresh consumption or processing; nursery and greenhouse production of food and ornamental crops; field positions for processing, marketing and seed companies; and plant propagation/tissue culture specialists. Salaries range from \$45,000 - \$80,000

Landscaping – planners, designers and installers of residential, commercial, public and recreational landscapes (both exterior and interior), employment with nurseries, landscape management and maintenance firms or private consultants. Salaries range from \$45,000 - \$80,000

Arborist or Urban Park Forester – selection, planting and management of woody plants in urban environments. Salaries range from \$45,000 - \$80,000

Park Management and Maintenance – positions in national, state and local park systems, botanic gardens and arboreta

Golf Course Superintendent – professional manager who manages the labor, time, materials and financial resources needed to care for the turfgrass and landscaped grounds on a golf course. Starting as an assistant, it is possible for a graduate to become a full-fledged golf course superintendent in three to five years. Starting salaries range from \$28,000 to \$35,000, with the national average of head superintendents reaching more than \$80,000

Sports Turf Management – professional manager that is entrusted with the operation and management of sports fields and facilities. Sports fields include baseball, football, soccer, lacrosse, rugby, lawn bowling and cricket. Salaries average around \$44,000.

Lawn Care Operator – professional manager responsible for the cultivation and care of the landscaping and grounds surrounding a business or building. Lawn care operators comprise the largest single group of potential career opportunities for the graduate with more than 6,000 companies in the United States servicing millions of American lawns at the residential, commercial and institutional levels. Salaries range from \$45,000 - \$80,000

Facility Managers – professional manager that maintains the buildings and grounds of an organization, directing staff and overseeing the upkeep of equipment and supplies. Facilities managers make sure the buildings and grounds are maintained, which entails daily and weekly reduction improvements and safety inspections

Marketing – positions in the retail/wholesale distribution of horticultural products and buying, selling and distribution of supplies and products used by the horticultural industries

Industry – management and sales positions in horticulture or allied firms for fertilizers, seed, food and ornamental crops, pesticides, equipment, processing and packaging

Inspection – field diagnosticians and inspectors for fresh and processed products in federal or private agencies

Research – positions at public and private institutions as technicians in field and laboratory research. Areas of research include horticultural plant breeding, pesticide evaluation, crop physiology, product testing and quality control, plant propagation and biotechnology

Communication – writers/editors for television, radio, magazines and newspapers

Teaching and Extension – extension personnel who assist growers, industry and the public through education and outreach

Financial Aid and Scholarships

Loans, scholarships, grants and the work-study program are available through the Office of Financial Aid and Scholarships. Students requiring financial assistance may contact the Office of Financial Aid and Scholarships or One Stop.

The Department of Plant Sciences awards 15 horticultural scholarships for use during the freshman, sophomore, junior and senior years. The Horticulture and Forestry Club awards three scholarships each year as well. Additionally, scholarships are awarded to freshmen students by the College of Agriculture, Food Systems, and Natural Resources prior to enrollment. Scholarships also are available to students continuing a major in the College. Applications for all college and departmental scholarships may be applied for online between December 1 and March 1, annually. Also, many undergraduate students are employed part-time during the school year and full-time during the summer months as research or teaching assistants.

Extra-Curricular Activities

Horticulture & Forestry Club – an opportunity for students who enjoy plants to come together and participate in fun plant related events including: collegiate contests, field trips and networking opportunities. The club meets at least monthly. Collegiate contests and exhibits provide educational and leadership opportunities. Field trips are made annually, exposing students to a diversity of horticultural enterprises and potential job opportunities. Club members propagate, grow and sell flowers and ornamental plants to finance social events, field trips and scholarships. Majors and non-majors are welcome!

Sample Program Guide

IMPORTANT DISCLAIMER: A Sample Program Guide provides an unofficial guide of program requirements and should be used by prospective students who are considering attending NDSU in the future. It is NOT an official curriculum and should NOT be used by current NDSU students for official degree planning purposes. Note that the official curriculum used by current NDSU students can vary from the Sample Program Guide due to a variety of factors such as, but not limited to, start year, education goals, transfer credit, and course availability.

To ensure proper program completion, enrolled students should utilize Degree Map (<https://www.ndsu.edu/registrar/degreemap/>) and Schedule Planner (<https://www.ndsu.edu/onestop/degree-map-and-planning/>) in Campus Connection and consult regularly with their academic advisor to ensure requirements are being met.

First Year			
Fall	Credits	Spring	Credits
COMM 110		3 ENGL 120	3
ENGL 110		3 CSCI 114 or TL 116	3
PLSC 189		1 MATH 104 or 103	3
PLSC 210		3 Major Option Elective	3
PLSC 211		1 Hum & Fine Arts and Cult Div Gen Ed	3
Free Elective		3	
		14	15
Second Year			
Fall	Credits	Spring	Credits
PLSC 355		3 ECON 105, 201, or 202	3
CHEM 117 or 121		3 Social & Behavioral Sc Gen Ed	3
CHEM 117L or 121L		1 Major Option Electives	6
SOIL 210		3 Free Elective	3
Major Option Elective		3	
Free Elective		2	
		15	15

Third Year					
Fall	Credits	Spring	Credits	Summer	Credits
PLSC 215		1 PLSC 380		3 PLSC 496, 493, or 494	1
PLSC 365		2 Major Option Electives		9	
PPTH 324		3 Free Elective		3	
Upper Division Writing Gen Ed		3			
Major Option Electives		4			
Free Electives		2			
		15		15	1
Fourth Year					
Fall	Credits	Spring	Credits		
ENT 350		3 PLSC 457		3	
PLSC 496, 493, or 494		1 PLSC 491		1	
Major Option Elective		3 Major Option Electives		6	
Wellness Gen Ed		2 Hum/Fine Arts & Glob Perspect Gen Ed		3	
Free Electives		6 Free Elective		2	
		15		15	

Total Credits: 120