HORTICULTURE

Horticulture is an art as old as the ancient garden and a science as new as today's genetic engineering. It involves intensive cropping technology, including the development, production, distribution and utilization of vegetables, fruits, turfgrass, woody landscape and greenhouse plants. Horticulture is an industry, profession, business, vocation and avocation. It is of universal value and application to the populace, whether rural, suburban or urban. Horticulture enriches our lives with nutritious, delectable foods and the beauty and utility of creative plantscapes.

The Program

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

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.

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

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

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

Arborist or Urban Park Forester – selection, planting and management of woody plants in urban environments

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

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

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. The average salary of a sports turf manager is about $44,000. Sports fields include baseball, football, soccer, lacrosse, rugby, lawn bowling and cricket

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

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

Graduates with master's degrees find positions in research, extension service and private industry. Teaching positions are available at community colleges, technical schools and other agriculture-related institutions.

They are also in demand for technical, supervisory and managerial positions in various horticultural industries. Graduates with doctoral degrees are qualified for teaching, research and extension positions at universities. They also may be employed for research positions by the USDA, government agencies, public and private botanical gardens and institutions, and various horticulture, breeding and biotechnology companies.

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

An active Horticulture and Forestry 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.

Turf Club

The goals of the Turf Club are to provide students with opportunities to share information, connect with the turf industry, gain real world experience and broaden their knowledge. The club organizes field trips, topic discussions and presentations by guest speakers. Other activities include attending regional and national turf conferences, community service and fundraising.

High School Preparation

Students should take high school courses in the sciences, such as biology, chemistry, mathematics, physics and vocational agriculture. English, communication and familiarity with computers also are essential.

The Facilities

Loftsgard Hall, a state of the art facility, houses the Department of Plant Sciences, including classrooms, research labs and student learning centers. Other facilities include campus greenhouses, the Horticulture Research Farm and Arboretum near Absaraka and NDSU Research/Extension Centers located throughout the state.

Horticulture Plan of Study

Please note this is a sample plan of study; actual student schedules will vary depending on start year, individual goals, applicable transfer credit, and course availability. Students are encouraged to work with their academic advisor on a regular basis to review degree progress and customize their own plan of study.

First Year

Fall	Credits	Spring	Credits
PLSC 189 Skills for Academic Success	1	ENGL 120 College Composition II	3
ENGL 110 College Composition I	4	BIOL 151 General Biology II	3
MATH 103 College Algebra	3	SOIL 210 Introduction to Soil Science	3
BIOL 150 General Biology I	3	CSCI 114 Microcomputer Packages	3
Gen Ed Humanities & Fine Arts	3	Gen Ed Humanities & Fine Arts	3
	14		**15**

Second Year

Fall	Credits	Spring	Credits
CHEM 121 & 121L General Chemistry I & General Chemistry I Laboratory	4	CHEM 122 General Chemistry II	3
PLSC 210 Horticulture Science	3	ECON 105, 201, or 202 Elements of Economics, Principles of Microeconomics, or Principles of Macroeconomics	3
PLSC 211 Horticulture Science Lab	1	Gen Ed Social & Behavioral Sciences	3
PLSC 355 Woody Landscape Plants	3	Electives	6
Elective	5		
	16		**15**

Third Year

Fall	Credits	Spring	Credits	Summer	Credits
PLSC 365 Herbaceous Landscape Plants	2	PLSC 380 Principles of Plant Physiology	3	PLSC 496 or 494 Field Experience or Individual Study	3
PPTH 324 Introductory Plant Pathology	3	PLSC 323 Principles of Weed Science	3		
ENGL 320, 321, or 324 Business and Professional Writing, Writing in the Technical Professions, or Writing in the Sciences	3	PPTH 455 or 457 Plant Disease Management or Landscape Plant Pathology	3		
STAT 330	3	Electives	6		
Electives	4				
	15		**15**		**3**

Fourth Year

Fall	Credits	Spring	Credits
ENT 350 General Entomology	3	PLSC 457 Horticulture and Turfgrass Systems	3
Electives	12	PLSC 491 Seminar	4
		Electives	8
	15		**15**

Total Credits: 123

View NDSU equivalencies of transfer courses at: www.ndsu.edu/transfer/equivalencies

For Further Information

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