Academic programs in the Department of Plant Sciences span the art, science and technology of plant use in society. Students receive preparation for careers in horticulture and agronomy within four concentrations – landscape design and construction; plant science, biotechnology and horticulture; public horticulture; and turfgrass science and management. With increasing emphasis placed on plants in urban areas, extensive training is offered in landscape horticulture (planning, implementation and management for landscapes, turf and gardens). Comprehensive programs are also offered in plant biotechnology and plant production.

Upon entering the department, each student is assigned a faculty advisor for guidance in selection of career specialties and elective courses. The curriculum builds upon the University General Education Requirement with critical courses in botany, soils, and business and adds a set of required departmental courses specific to each concentration. Students are able to customize their program by selecting electives. Students in all concentrations are trained to work knowledgeably in general plant culture. Students are encouraged to earn a minor in a supportive field to further enhance their academic training and professional competitiveness. While firmly grounding students in the knowledge and skills of the plant sciences and arts, our curricula emphasize critical thinking and creative activity. Our students also gain the theoretical education necessary for continuing on for advanced degrees in plant-related fields.

Students should declare a concentration early in their undergraduate program and strictly follow the curriculum described for the concentration. Students who transfer into plant sciences from other colleges or programs must meet the same requirements as those entering the department as freshmen.

Internship or undergraduate research participation is required for each concentration. Full-time summer internships are available at selected local, regional, and national companies or institutions. Part-time summer or semester internships and research experiences are available from the Department of Plant Sciences, other university departments and laboratories, and local commercial firms.

Our graduates find employment in a wide variety of professions. In working for others or within their own businesses, graduates of the landscape concentration design residential landscapes, select proper woody and herbaceous plant materials for specific sites, restore native landscapes, specify specialty components dealing with landscape construction (irrigation, lighting, water features), prepare materials lists and cost estimates for landscape installations, and manage landscape crews. Turf majors have career opportunities in the industries involved with lawn management, athletic fields, golf courses, sales, and park and grounds maintenance. The public horticulture concentration prepares students for careers in botanic gardens, zoos and national parks; professional writing; television and radio; urban forestry; teaching; and municipal and university horticulture. Graduates in plant science, biotechnology and horticulture find employment in education, consulting, sales, agricultural extension, and research and development.

Core Courses
The core courses for the plant sciences concentrations which are required for entry into upper-division courses are as follows.

**LANDSCAPE DESIGN CONCENTRATION**
Two courses in English composition (English 101 and 102 or equivalent); Mathematics 113 or 123 or 151 or equivalent; Computer Sciences 100 or 101 or 102 or equivalent; general chemistry (Chemistry 100 or 120 or equivalent); two courses in general botany (Biology 111 and 112 or equivalent); soil science (Environmental and Soil Sciences 210 or equivalent); Basic Landscape Plants (Plant Sciences 220 or equivalent); Fundamentals of Landscape Design (Plant Sciences 280 or equivalent).

**PLANT SCIENCE, BIOTECHNOLOGY AND HORTICULTURE CONCENTRATION**
Two courses in English composition (English 101 and 102 or equivalent); two courses in mathematics (Mathematics 123 and 125 or Mathematics 151 and 152 or equivalent); two courses in general chemistry (Chemistry 100 and 110 or 120 and 130 or equivalent); two courses in general botany (Biology 111 and 112 or equivalent); soil science (Environmental and Soil Sciences 210 or equivalent); Computer Applications to Problem Solving (Agriculture and Natural Resources 290 or equivalent).

**PUBLIC HORTICULTURE CONCENTRATION**
Two courses in English composition (English 101 and 102 or equivalent); Mathematics 113 or 123 or 151 or equivalent; Computer Sciences 100 or 101 or 102 or equivalent; general chemistry (Chemistry 100 or 120 or equivalent); two courses in general botany (Biology 111 and 112 or equivalent); soil science (Environmental and Soil Sciences 210 or equivalent); computer applications to problem solving (Agriculture and Natural Resources 290 or equivalent).

**TURFGRASS SCIENCE AND MANAGEMENT CONCENTRATION**
Two courses in English composition (English 101 and 102 or equivalent); two courses in mathematics (Mathematics 123 and 125 or equivalent); two courses in general chemistry (Chemistry 100 and 110 or 120 and 130 or equivalent); two courses in general botany (Biology 111 and 112 or equivalent); soil science (Environmental and Soil Sciences 210 or equivalent); Turfgrass Management (Plant Sciences 240 or equivalent); Computer Applications to Problem Solving (Agriculture and Natural Resources 290 or equivalent).

**Technical Electives**

**LANDSCAPE DESIGN AND CONSTRUCTION CONCENTRATION**
Architecture 111, 180, 211, 232, 421; Art 101, 103, 191, 295; Art Drawing 211, 212; Art Media Arts 231, 331; Art Painting 213, 214, 215, 216; Biochemistry and Cellular and Molecular Biology 306; Biology 250; Biosystems Engineering Technology 202, 212; Ecology and Evolutionary Biology 304, 330, 433; Communication Studies 230, 310; English 360*; Entomology and Plant Pathology 201, 306, 313, 321, 410; Environmental and Soil Science 324, 334; Forestry 321; Forestry Wildlife and Fisheries 211, 250, 311; Geography 365, 366; Geology 201, 202, 203; Philosophy 243*, 244, 245*; Political Science 402, 403, 446; Spanish 211, 212.

**PLANT SCIENCES, BIOTECHNOLOGY AND HORTICULTURE CONCENTRATION**
Agricultural Economics 330, 342, 350, 412; Accounting 200; Biochemistry and Cellular and Molecular Biology 310, 330, 401, 402, 404; Biology 240; Biosystems Engineering Technology 326; Business Administration 201, 202; Chemistry 350; Ecology and Evolutionary Biology 304, 410, 414, 433; English 360*; Entomology and Plant Pathology 451; Environmental and Soil Sciences 355, 442; Finance 301; Management 300; Marketing 300; Microbiology 210; Physics 221.

**PUBLIC HORTICULTURE CONCENTRATION**
Accounting 415; Art 481; Agriculture and Extension Education 345; Communication Studies 440; Ecology and Evolutionary Biology 309, 330, 433; Educational Administration and Policy Studies 200; Educational Psychology 102 or 101; English Literature 200; Human Resource Development 662; Philosophy 245*; Public Relations 270, 470; Recreation and Leisure Studies 201, 430.

**TURFGRASS SCIENCE AND MANAGEMENT CONCENTRATION**
Agricultural Economics 212; Biosystems Engineering Technology 202, 212, 452, 462; Entomology and Plant Pathology 321, 410; Environmental and Soil Science 324.

Courses marked with an * meet the University General Education Requirement.