College of Agriculture

Horticulture

Overview
Horticulture combines art and skill with science and technology for sustainably growing, distributing and using ornamental plants, fruits and vegetables.

Our landscapes, homes and public buildings are surrounded by horticulture. Lives are enriched through the varied diets and physical activities resulting from this field of study. It improves and sustains our environment and enhances our mental well-being by providing shade, air filters and noise barriers.

Professional options
Most horticulture options are designed for students who want to enter a professional career in the horticulture industry. Opportunities exist with private production firms, public gardens, allied trade industries and the service areas of turf and landscape management.

Employers
- Wholesale plant production operations
- Nursery or greenhouse facilities
- Tree farms
- Garden centers
- Golf courses
- Research facilities
- Resident and commercial lawn services
- Horticultural consulting companies
- Retail florists
- Botanical gardens
- Conservatories
- Baseball parks
- Zoos
- City parks
- Retirement communities
- Landscape companies

Academics
Degree options
The department offers four program options in horticulture.

Horticulture production
Graduates can find employment as a manager or owner of a fruit or vegetable farm; organic farmer; field representative for processing; agricultural chemical or equipment companies; and manager, buyer, field representative or broker in marketing.

Landscape horticulture
This field prepares students with artistic and design abilities to create functional and sustainable landscape environments. Landscape designers are sought by garden centers, botanical gardens, arboreta, landscape maintenance and installation firms, and government agencies. Private consulting is also a possibility. This career involves consumer relations and retail sales. Opportunities abound in residential and commercial landscape care, from installation through maintenance and troubleshooting. An emphasis is placed on using sustainable practices.

Golf course and sports turf operations management
This program places a strong emphasis on business and communications skills and also requires courses in hospitality management. Graduates typically pursue careers as golf course superintendents and have the background to manage a golf facility. This field prepares students for rewarding careers with professional sports organizations, school districts, colleges and university grounds departments, and municipal park and recreation departments. Coursework in business, communications and hospitality management provides graduates the background to manage a sports facility operation.

Horticulture science
This option is intended for students who plan to pursue a graduate degree. Universities, state and federal agencies, and industries need trained scientists who can teach, conduct research and communicate research findings to the public to increase the production and effective use of horticultural products. Many who earn the Master of Science degree work as consultants, technical representatives, community college instructors and county extension agents. Those earning a doctorate degree work at universities, the U.S. Department of Agriculture and industry firms.

Required courses build upon the science base of the horticulture option. Calculus, biochemistry, physics and statistics are required. Horticulture electives in this option are more flexible so you and your advisor can tailor your program closely to meet your specific interests.

Faculty
K-State horticulture faculty members include a university distinguished teaching scholar, a certified international landscape irrigation auditor and designer, three fellows of the North American College and Teachers of Agriculture organization, a recipient of the American Horticulture Society’s Great American Gardeners National Award, and multiple recipients of the College of Agriculture Outstanding Advisor and Faculty of the Semester awards.

Student jobs
Several part-time positions in the K-State Gardens, greenhouse complex, campus landscape facilities and various research projects are available to students.
Advising

One of the department’s greatest strengths is faculty members who are genuinely committed to teaching and serving as great advisors. They make it a point to get to know their students. With an average student-to-faculty ratio of 15 to 1, individual attention is strongly emphasized.

Advisors not only guide academics and assist with career planning, but are excellent resources for finding help with student employment, internships and personal concerns.

Facilities

The horticulture program is in the Throckmorton Plant Sciences Center where high-tech teaching and research facilities are available. Students can work with individual faculty members on independent studies covering a wide range of topics, from tissue culture research to the development of extension materials.

The department is home to the 12-acre K-State Gardens located directly north of the Throckmorton greenhouse complex. Students use the gardens and campus to study plant material and gain hands-on experience through class projects such as installing flower beds or laying irrigation pipe.

Activities

Student organizations provide opportunities for students to become actively involved in their chosen career while interacting with their peers who share similar interests.

Clubs

The K-State Horticulture Club offers many opportunities for students to work together on various club fundraising activities that include growing chrysanthemums and bedding plants, selling roses for Valentine’s Day and creating wreaths for Christmas. Students enjoy each other’s company during club meetings and gatherings.

Willow Lake Student Farm is a student-operated vegetable and fruit farm that uses primarily organic production practices. Students sell produce at farmer’s markets and K-State dining services, as well as run a community-supported agriculture service.

Students in golf course and sports turf operations management may join the golf club, which is affiliated with the Golf Course Superintendents Association of America. Students attend national conferences as a club.

Student teams

The National Association of Landscape Professionals’ Landscape Contracting Team allows students the opportunity to attend the largest green industry career fair in the country as well as compete in 28 competitive events, including irrigation assembly; exterior and interior design; interior, annual and perennial ID; skid steer operation; and leadership skills.

Financial assistance

Twenty-six scholarships are available through the department to students majoring in horticulture. K-State students are routinely among the recipients of the more than 30 national horticulture scholarships that are available.

Suggested coursework

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<tr>
<th>Hrs.</th>
<th>Fall</th>
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<tbody>
<tr>
<td>1</td>
<td>HORT 190 Preparing for Horticulture Courses</td>
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<tr>
<td>3</td>
<td>HORT 201 Principles of Horticultural Science</td>
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<td>3</td>
<td>HORT 210 Concepts of Floral Design</td>
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<td>HORT 275 Horticultural Design I</td>
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<td>HORT 320 Introduction to Organic Farming</td>
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<td>HORT 350 Plant Propagation</td>
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<td>HORT 374 Landscape Plants I</td>
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<td>2</td>
<td>HORT 508 Sustainable Landscape and Maintenance Practices</td>
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<td>2</td>
<td>HORT 515 Basic Turfgrass Culture</td>
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<tr>
<td>1</td>
<td>HORT 516 Intensive Culture of Golf and Sports Turf</td>
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<tr>
<td>3</td>
<td>HORT 545 Computer Applications in Horticultural Design</td>
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<td>HORT 550 Landscape Irrigation Systems Management</td>
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<td>HORT 570 Greenhouse Operations Management</td>
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<td>HORT 575 Nursery and Garden Center Operations</td>
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<td>HORT 582 Horticulture Pest Management</td>
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<td>HORT 590 Horticulture Internship**</td>
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<td>HORT 595 Landscape Irrigation Systems</td>
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k-state@k-state.edu
k-state.edu/admissions

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Post-Graduation Statistics
k-state.edu/postgrad-stats
ksdegreestats.org

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