HORTICULTURE - B.A.H.

College of Applied and Technical Studies
www.kent.edu/cats

About This Program
Cultivate your green thumb with Kent State’s horticulture program. Our Bachelor of Applied Horticulture degree provides hands-on training in plant cultivation, landscape design, and sustainable practices. With experienced faculty, cutting-edge facilities, and real-world experience, you’ll gain the skills needed to succeed in the horticulture industry. Enroll now and bring your love of plants to life. Read more...

Contact Information
• Sheren Farag | sfaragmo@kent.edu | 330-337-4270
• Speak with an Advisor
• Chat with an Admissions Counselor

Program Delivery
• Delivery:
  • In person
• Location:
  • Salem Campus

Example of Possible Careers and Salaries*
Farmers, ranchers, and other agricultural managers
• -6.5% decline
• 952,300 number of jobs
• $68,090 potential earnings

First-line supervisors of construction trades and extraction workers
• 4.8% about as fast as the average
• 685,000 number of jobs
• $67,840 potential earnings

Landscaping and groundskeeping workers
• 10.1% much faster than the average
• 1,188,000 number of jobs
• $31,730 potential earnings

* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics’ Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

First-Year Students on the Kent Campus: First-year admission policy on the Kent Campus is selective. Admission decisions are based upon cumulative grade point average, strength of high school college preparatory curriculum and grade trends. Students not admissible to the Kent Campus may be administratively referred to one of the seven regional campuses to begin their college coursework. For more information, visit the admissions website for first-year students.

First-Year Students on the Regional Campuses: First-year admission to Kent State’s campuses at Ashtabula, East Liverpool, Geauga, Salem, Stark, Trumbull and Tuscarawas, as well as the Twinsburg Academic Center, is open to anyone with a high school diploma or its equivalent. For more information on admissions, contact the Regional Campuses admissions offices.

International Students: All international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning a minimum 525 TOEFL score (71 on the Internet-based version), minimum 75 MELAB score, minimum 6.0 IELTS score or minimum 48 PTE Academic score, or by completing the ELS level 112 Intensive Program. For more information, visit the admissions website for international students.

Transfer Students: Students who have attended any other educational institution after graduating from high school must apply as undergraduate transfer students. For more information, visit the admissions website for transfer students.

Former Students: Former Kent State students or graduates who have not attended another college or university since Kent State may complete the reenrollment or reinstatement form on the University Registrar’s website. Admission policies for undergraduate students may be found in the University Catalog’s Academic Policies.

Some programs may require that students meet certain requirements before progressing through the program. For programs with progression requirements, the information is shown on the program’s Coursework tab.

Program Requirements

Major Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BSCI 16001</td>
<td>HORTICULTURAL BOTANY</td>
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<tr>
<td>BSCI 26002</td>
<td>ECOLOGICAL PRINCIPLES OF PEST MANAGEMENT</td>
<td>3</td>
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<tr>
<td>BSCI 26003</td>
<td>PLANT IDENTIFICATION AND SELECTION I</td>
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<tr>
<td>or BSCI 26004</td>
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<td>GEOG 16001</td>
<td>SOIL AND HORTICULTURAL MANAGEMENT</td>
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<td>HORT 16002</td>
<td>INTRODUCTION TO AGROECOLOGY</td>
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<td>HORT 16003</td>
<td>INTRODUCTION TO HORTICULTURE TECHNOLOGIES AND SENSORS</td>
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<td>HORT 26001</td>
<td>OCCUPATIONAL REGULATIONS AND SAFETY</td>
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<td>HORT 26016</td>
<td>IRRIGATION DESIGN AND MAINTENANCE</td>
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<td>LANDSCAPE DESIGN I</td>
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<td>or HORT 36046</td>
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<td>HORT 35092</td>
<td>HORTICULTURE PRACTICUM (ELR)</td>
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<tr>
<td>HORT 36014</td>
<td>PLANT PROPAGATION AND GREENHOUSE PRODUCTION</td>
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Admission Requirements
The university affirmatively strives to provide educational opportunities and access to students with varied backgrounds, those with special talents and adult students who graduated from high school three or more years ago.
HORT 36025  PROFESSIONAL PRACTICE IN HORTICULTURE  3
HORT 36092  INTERNSHIP IN HORTICULTURE (ELR)  4
HORT 46014  GARDEN CENTER AND NURSERY PRODUCTION MANAGEMENT  3

Technical Electives, choose from the following:  6
BSCI 26004  PLANT IDENTIFICATION AND SELECTION II
HORT 16004  DRONE TECHNOLOGY FOR HORTICULTURE
HORT 26002  EMERGING TECHNOLOGIES IN HORTICULTURE AND PLANT SYSTEMS
HORT 26003  ARBORICULTURE AND URBAN FORESTRY MANAGEMENT
HORT 26006  SUSTAINABLE HORTICULTURAL SYSTEMS
HORT 26020  LANDSCAPE MANAGEMENT
HORT 26030  TURF GRASS MANAGEMENT
HORT 26032  GOLF COURSE MANAGEMENT
HORT 36004  MARKET GARDEN PRODUCTION
HORT 36005  ORCHARD PRODUCTION - DECIDUOUS AND EVERGREEN
HORT 36195  SPECIAL TOPICS IN HORTICULTURE
HORT 46008  FLORICULTURE AND ORNAMENTAL PLANTS
HORT 46009  ADVANCES IN VITICULTURE PRODUCTION
HORT 46013  INTERNET OF THINGS AND ARTIFICIAL INTELLIGENCE IN PRECISION FARMING: TECHNOLOGIES AND APPLICATIONS

Major Electives, choose from the following:  6
BSCI 10120  BIOLOGICAL FOUNDATIONS (ELR) (KBS) (KLAB)
GEOG 31062  FUNDAMENTALS OF METEOROLOGY
GEOG 31080  GEOGRAPHY OF OHIO
HORT 36034  SPORTS TURF MANAGEMENT
HORT 41096  INDIVIDUAL INVESTIGATION IN HORTICULTURE
ARTH 22007  ART HISTORY: RENAISSANCE TO MODERN ART (KFA)
BMRT 11000  INTRODUCTION TO BUSINESS
COMM 15000  INTRODUCTION TO HUMAN COMMUNICATION (KADL)
BSCI 10110  BIOLOGICAL DIVERSITY (ELR) (KBS) (KLAB)  4
& CHEM 10030  CHEMISTRY IN OUR WORLD LABORATORY (KBS) (KLAB)
ESCI 21062  ENVIRONMENTAL EARTH SCIENCE (KBS)  3
ESCI 41073  GEOLOGY OF OHIO  3
GEOG 17064  GEOGRAPHY OF THE UNITED STATES AND CANADA (DIVD) (KSS)  3
PHIL 21001  INTRODUCTION TO ETHICS (DIVG) (KHUM)  3
UC 10001  FLASHES 101  1
!
Foreign Language  4
Kent Core Composition  6
Kent Core Mathematics and Critical Reasoning  3
Kent Core Humanities and Fine Arts (minimum one course from each)  3
Kent Core Social Sciences (must be from two disciplines)  3
Kent Core Additional  3
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)  17

Minimum Total Credit Hours:  120

Graduation Requirements
Minimum Major GPA  2.000
Minimum Overall GPA  2.000

Roadmap
This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

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<thead>
<tr>
<th>Semester One</th>
<th>Credits</th>
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<tr>
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<td>UC 10001</td>
<td>FLASHES 101 1</td>
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<td>Semester Two</td>
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<tr>
<td>COMM 15000</td>
<td>INTRODUCTION TO HUMAN COMMUNICATION (KADL) 3</td>
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<td>Semester Four</td>
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<td>! ESCI 21062</td>
<td>ENVIRONMENTAL EARTH SCIENCE (KBS) 3</td>
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<tr>
<td>! ARTH 22007</td>
<td>ART HISTORY: RENAISSANCE TO MODERN ART (KFA) 3</td>
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</table>

1 Courses in one foreign language or American Sign Language in proficiency required. This requirement may be fulfilled by one of the following two conditions: (1) passing the first two semesters of any foreign language or American Sign Language, or (2) passing a foreign language course at the Elementary II level or above.
All students in a bachelor's degree program at Kent State University must complete the following university requirements for graduation.

NOTE: University requirements may be fulfilled in this program by specific course requirements. Please see Program Requirements for details.

Flashes 101 (UC 10001)  1 credit hour

Course is not required for students with 30+ transfer credits (excluding College Credit Plus) or age 21+ at time of admission.

Diversity Domestic/Global (DIV/DIVG)  2 courses

Students must successfully complete one domestic and one global course, of which one must be from the Kent Core.

Experiential Learning Requirement (ELR)  varies

Students must successfully complete one course or approved experience.

Kent Core (see table below)  36-37 credit hours

Writing-Intensive Course (WIC)  1 course

Students must earn a minimum C grade in the course.

Upper-Division Requirement  39 credit hours

Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate.

Total Credit Hour Requirement  120 credit hours

Kent Core Requirements

Kent Core Composition (KCMP)  6
Kent Core Mathematics and Critical Reasoning (KMCR)  3
Kent Core Humanities and Fine Arts (KHUM/KFA) (min one course each)  9
Kent Core Social Sciences (KSS) (must be from two disciplines)  6
Kent Core Basic Sciences (KBS/KLAB) (must include one laboratory)  6-7
Kent Core Additional (KADL)  6

Total Credit Hours:  36-37

Program Learning Outcomes

Graduates of this program will be able to:

1. Define plant characteristics, use, identification, and taxonomy and differentiate between a wide range of horticulturally important plant species, including both woody and herbaceous species.
2. Apply proper safety procedures and their application in the workplace.
3. Apply principles of agroecology and sustainable horticultural practices that reduce the environmental footprint of horticultural production and contribute to long-term sustainability.
4. Articulate pest identification, taxonomy, integrated pest management (IPM), and control strategies that use ecologically sustainable approaches.
5. Discuss the integration and utilization of advanced technologies, such as sensors, drones, and artificial intelligence applications, to enhance precision farming practices in horticulture, for optimizing crop yields, resource efficiency and environmental sustainability.
6. Apply practical expertise in orchard production and management by using industry best practices to maximize fruit quality and yield.
7. Design and maintain landscapes using a range of plant materials, hardscape features and sustainable practices.
8. Apply principles and practices of growing and marketing crops on a small scale for local markets.
9. Apply principles of plant propagation, greenhouse management, and garden center/nursery operations for successful plant cultivation and sales.
10. Discuss soil science's role in horticultural production, and interpret soil test results, analyze soil conditions, and implement corrective measures for optimal plant growth.
11. Explain concepts of tree biology, identification, planting, and maintenance practices, including pruning, tree risk assessment and disease management.

Full Description

The Bachelor of Applied Horticulture degree provides students with the academic background and learning environment to further their education beyond an associate degree. This program aids students in the development of managerial expertise in various horticultural domains, including a deep understanding of plant characteristics, safety procedures in the horticultural workplace, principles of agroecology and sustainable horticultural practices, pest management and the integration of advanced technologies to enhance precision farming. Additionally, students gain advanced knowledge in orchard production and management, landscape design and maintenance, local crop cultivation, plant propagation, greenhouse operations, soil science and tree care. This diverse skill set prepares students for a wide range of
career opportunities such as landscape designers, arborists, greenhouse managers, parks or botanical garden managers, garden center managers, horticultural therapists, pest control specialists, educators/extension agents, botanist, florists and more.