



## Plant Science: Landscape, Garden Design, and Turf Management Concentration (Agriculture B.S. Degree)

The Plant Science curriculum provides career training to prepare you for a rewarding and successful career in a variety of fields in Horticulture. It encompasses residential and commercial landscape management, environmental protection, landscape design as well as golf course, sports field, greenhouse and nursery management. A wide array of jobs are available in private and commercial business, sales, design, finance, extension, government agencies, and career and technical instruction. Hands-on training is reinforced through on campus practicums in the university gardens, greenhouses, nursery, golf hole, and turf plots. Students compete in national level competitions, sell student grown products at public sales, gain competitive internships, participate in research and horticulture service learning to benefit our local community. Our small class sizes promote interactions between students, faculty, and staff so that students aren't just taught but also mentored. We are small enough to care for you as an individual but large enough to provide every career opportunity.

### Career Opportunities

The practical instruction and hands-on application that ECU is known for makes you an immediate asset to employers. You will join the ranks of successful ECU graduates employed in plant science, design, landscape and turf industries. The Bureau of Labor Statistics predicts a shortfall of graduates in these areas indicating that the job market will be strong for the foreseeable future. Information for some of our most popular plant science positions.

- **Landscape Designers**—Design/sell residential, commercial, public landscapes. This position has a high level of job contentment. The average annual pay for a U.S. landscape designer in 2024 was \$79,600.
- **Landscape Management Entrepreneurs**—residential & commercial landscape management business owners in the U.S. make an average of \$128,000 annually.
- **Golf Course Superintendent**—Manage golf course labor, large budgets, turf and landscape care. The average annual pay for a U.S. golf course superintendent in 2025 was \$121,238. Graduates can obtain certification through the GCSAA after approximately 3 years on the job. The average certified golf course superintendent made \$138,303 annually in 2025. Golf course superintendents have strong support from industry organizations and stay involved in the golf community.
- **Sports Turf Managers**—Manage parks fields, school/university fields, small city team fields to professional level fields. Pay can differ substantially with the type of facility managed. Athletic field managers have a strong community of support from industry organizations and maintain lifetime involvement with their sports of interest. The average Kentucky sports turf manager's pay was \$74,947 in 2024.
- **Greenhouse Managers**—Manage the production of nursery, floral, and foliage crops. These positions, including the head-grower agri-tech positions spreading in our state and country, pay less than most other horticulture positions-- approximately \$55,000/yr.

### Philosophy

The Department of Agriculture blends scientific theory with practical application and hands-on experiences. Current concepts and theories are presented in the classroom and then applied in the laboratory with the faculty member as the laboratory supervisor using a hands-on approach. Practicum classes at the University facilities and through cooperative education are further utilized to reinforce the practical application of scientific theories. Professors are experienced, enthusiastic, and passionate about providing students the skills necessary to succeed with the changing technology and environment of the future greenscapes.

### Department Facilities & Student Organizations

The Horticulture Program at ECU is supported by excellent classroom laboratories and facilities at the A.B. Carter Building, including a modern computer laboratory, agriculture mechanics shop, hydraulic trainers, varying indoor and outdoor irrigation systems, greenhouses, fruit and vegetable gardens, landscape gardens and turf areas such as an on- campus golf hole complement and develop a student's horticulture understanding. Students have the opportunity to develop their extracurricular leadership skills through the Agriculture/Collegiate Farm Bureau Club, Block & Bridle Club, Delta Tau Alpha Agriculture Honor Society, Horticulture Club, Pre-Vet Club, and Sigma Alpha Sorority.

### For More Information

Department of Agriculture  
A.B. Carter Building, Eastern Kentucky University  
521 Lancaster Avenue  
Richmond, KY 40475-3102

859-622-2228  
Email: [agriculture@eku.edu](mailto:agriculture@eku.edu)  
Web: [www.eku.edu/agriculture](http://www.eku.edu/agriculture)  
Facebook and X: [@EKUAgiculture](https://www.facebook.com/EKUAgiculture)



Department of Agriculture  
College of Science, Technology, Engineering, and Math (2026-27)

**Suggested Curriculum Guide for Plant Science: Landscape, Garden Design, and Turf Management Concentration**

**Freshman (1st semester) 15 hrs**

|                      |                                           |   |
|----------------------|-------------------------------------------|---|
| GSD 101              | Foundations of Learning                   | 3 |
| AGR 115              | Operation of Agricultural Equipment       | 3 |
| AGR 213              | Principles of Ag Mechanics and Energy Sys | 3 |
| Element 1A (ENG 101) |                                           | 3 |
| Element 2A (Math)    |                                           | 3 |

**Sophomore (1st semester) 16 hrs**

|                                 |                                |   |
|---------------------------------|--------------------------------|---|
| AGR 215                         | Principles of Soils            | 3 |
| AGR 216                         | Principles of Soils Laboratory | 1 |
| OHO 365                         | Plant ID I                     | 3 |
| <sup>E</sup> ECO 120            | Economic Reasoning and Issues  | 3 |
| Element 1C (Oral Communication) |                                | 3 |
| Element 3B (Humanities)         |                                | 3 |

**Junior (1st semester) 15-17 hrs**

|                                    |                                        |     |
|------------------------------------|----------------------------------------|-----|
| AGR 304                            | Pest Management                        | 4   |
| AGR 305                            | Professional Skills Seminar            | 1   |
| AGR 310                            | Principles of Agribusiness Management  | 3   |
| AGR 340                            | Conservation of Agricultural Resources | 3   |
| Concentration Elective 2           |                                        | 2-3 |
| Horticulture Specialist Elective 1 |                                        | 2-3 |

**Senior (1st semester) 12-14 hrs**

|                                    |                                 |     |
|------------------------------------|---------------------------------|-----|
| AGR 411                            | Senior Seminar                  | 1   |
| AGR 416                            | Soil Fertility and Management   | 3   |
| AGR 301                            | Directed Work Experience -OR-   | 1   |
| AGR 349                            | Applied Learning in Agriculture |     |
| Concentration Elective 2           |                                 | 2-3 |
| Horticulture Specialist Elective 2 |                                 | 2-3 |
| Free Elective                      |                                 | 3   |

**Freshman (2nd semester) 16 hrs**

|                      |                                     |   |
|----------------------|-------------------------------------|---|
| AGR 125              | Principles of Animal Science        | 3 |
| AGR 130              | Plant Science                       | 3 |
| AGR 131              | Plant Science Lab                   | 1 |
| INF 104              | Computer Lit and Software Appl -OR- | 3 |
| TEC 161              | Computer Applications in Technology |   |
| Element 1B (ENG 102) |                                     | 3 |
| Element 3A (Arts)    |                                     | 3 |

**Sophomore (2nd semester) 15-17 hrs**

|                                                |                                           |     |
|------------------------------------------------|-------------------------------------------|-----|
| OHO 354                                        | Irrigation Systems and Horticulture Equip | 3   |
| <sup>E</sup> BIO 111/111L                      | Cell and Molecular Biology -OR-           | 4   |
| <sup>E</sup> BIO 112/111L                      | Ecology and Evolution                     |     |
| AGR 308                                        | Agricultural Economics                    | 3   |
| Element 4A (Historical and Global Perspective) |                                           | 3   |
| Concentration Elective 1                       |                                           | 2-4 |

**Junior (2nd semester) 15 hrs**

|                      |                                    |   |
|----------------------|------------------------------------|---|
| AGR 319              | Renewable & Sustainable Energy Sys | 3 |
| AGR 404              | Advanced Pest Management           | 3 |
| AGR 301              | Directed Work Experience -OR-      | 2 |
| AGR 349              | Applied Learning in Agriculture    |   |
| <sup>E</sup> CHE 101 | Introduction to Chemistry          | 3 |
| CHE 101L             | Introduction to Chemistry Lab      | 1 |
| Free Elective        |                                    | 3 |

**Senior (2nd semester) 12-18 hrs**

|                                    |                                        |     |
|------------------------------------|----------------------------------------|-----|
| AGR 499                            | Ag Advocacy and Issues Capstone -OR-   | 3   |
| AGR 509                            | Ag Research Methods and Interpretation |     |
| AGR 520                            | Global Food Systems                    | 3   |
| Concentration Elective 3           |                                        | 3   |
| Horticulture Specialist Elective 3 |                                        | 2-3 |
| Free Elective                      |                                        | 1-6 |

<sup>E</sup> Denotes that 3 credit hours from the course are/can be applied to fulfill Essential Education Requirements.

**UNIVERSITY GRADUATION REQUIREMENTS..... 33 hours**

- Essential Education ..... 30 hours
- Foundations in Learning (GSD 101; waived for transfers with 30+ hrs) ..... 3 hours
- Upper division courses (42 hrs. distributed throughout Major/Supporting/Gen Ed/Free Electives categories)

**MAJOR REQUIREMENTS**

**Core Courses..... 47 hours**

AGR 125, AGR 130 and 131(1), AGR 115, AGR 213, AGR 215, AGR 216(1), Plus three credit hours: AGR 301 or AGR 349, AGR 304(4), AGR 305(1), AGR 308, AGR 310, AGR 319, AGR 340, AGR 411(1), AGR 499 or AGR 509, AGR 520, INF 104 or TEC 161.

**Plant Science: Landscape, Garden Design, and Turf Management Concentration Requirements.....25-31 hours**

AGR 404, AGR 416, OHO 354, OHO 365, Plus three courses from (concentration electives): OHO 351(4), OHO 368(2), OHO 370, OHO 372(2), OHO 373, or OHO 388, Plus three course from (horticulture specialist electives): AGR 300(2), OHO 353, OHO 362(2), OHO 366(2), OHO 375, OHO 391, OHO 392.

**Supporting Course Requirements..... 2 hours**

<sup>E</sup>BIO 111/111L or <sup>E</sup>BIO 112/112L, <sup>E</sup>CHE 101/101L, <sup>E</sup>ECO 120.

**Free Electives.....7-13 hours**

**Total Curriculum Requirements**

**120 hours**



Department of Agriculture  
College of Science, Technology, Engineering, and Math (2026-27)