

# Department of Horticulture

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Courses prepare horticulture graduates for the following careers: nursery manager, landscape designer, landscape installer, landscape maintenance, interior landscaping, plant propagator, city or state horticulturist, extension horticulturist, horticulture writer, horticulture teacher, florist shop manager, greenhouse manager, vegetable producer, orchard manager, chemical company representative, seed company representative, or retail garden center manager.

Four undergraduate tracks are available to students in horticulture: landscape horticulture, nursery and greenhouse science, pre-landscape architecture, and fruit and vegetable production. Horticulture offers masters' and doctoral degrees, which lead to professional positions.

## Majors

- Agricultural Science ([http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/agriculturalscience\\_major/](http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/agriculturalscience_major/))
- Horticulture — Fruit and Vegetable Production Track ([http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/fruitandvegetableproductionemphasis\\_major/](http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/fruitandvegetableproductionemphasis_major/))
- Horticulture — Landscape Horticulture Track ([http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/horticulture\\_landscapehorticultureemphasis\\_major/](http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/horticulture_landscapehorticultureemphasis_major/))
- Horticulture — Nursery and Greenhouse Science Track ([http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/horticulture\\_nurseryandgreenhouseemphasis\\_major/](http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/horticulture_nurseryandgreenhouseemphasis_major/))
- Horticulture — Pre-Landscape Architecture Track ([http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/prelandscape\\_architecture\\_major/](http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/prelandscape_architecture_major/))

## Minors

Horticulture ([http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/hort\\_minor/](http://bulletin.auburn.edu/undergraduate/collegeofagriculture/horticulturehort/hort_minor/))

## Courses

**HORT 1010 INTRODUCTION TO HORTICULTURE (1)** LEC. 1. Introduces scientific and practical aspects of pomology, olericulture, floriculture and landscape horticulture. Also presents the broad scope of career opportunities in the field of horticultural science. Fall.

**HORT 2010 FRUIT AND NUT PRODUCTION (4)** LEC. 2. LAB. 4. Introductory course in cultural practices and economics associated with commercial fruit and nut production. Fall.

**HORT 2020 HORTICULTURE CROP PRODUCTION (3)** LEC. 2. LAB. 3. Pr. BIOL 1010 or BIOL 1030 or BIOL 1037. Techniques of plant propagation and cultural methods for successful fruit and vegetable production. Fall.

**HORT 2030 VEGETABLE PRODUCTION (3)** LEC. 3. Principles, practices, establishment, production, maintenance, harvesting, storage and marketing of commercial vegetable crops. Fall and Spring.

**HORT 2040 ORGANIC GARDENING (3)** LEC. 3. Principles, production practices, maintenance, harvesting and marketing of organically and traditionally home-grown vegetables.

**HORT 2060 HYDROPONICS: PRINCIPLES AND TECHNIQUES OF SOILLESS PLANT PRODUCTION (3)** LEC. 3. This course is a survey of the science of hydroponic plant production and is focused on commercial and home vegetable crop production. Specific topics include plant growth and nutrition in hydroponic growing systems, challenges and opportunities, and system design. Fall.

**HORT 2210 LANDSCAPE GARDENING (4)** LEC. 2. LAB. 4. Principles of landscape gardening applied to residential and small-scale commercial grounds. Involves plant identification and use, basic landscape design, and landscape installation and management concepts.

**HORT 2240 PLANT PROPAGATION (3)** LEC. 2. LAB. 2. Pr. P/C BIOL 1030 or BIOL 1037. Basic principles and practices involved in the propagation of horticulture plants. Departmental approval. Spring.

**HORT 2250 ART OF FLORAL DESIGN (3)** LEC. 2. LAB. 2. Basic art principles and design elements and their use with flowers and foliage; history and utilization of flowers within society.

**HORT 3000 GROWTH AND DEVELOPMENT OF HORTICULTURAL PLANTS (3)** LEC. 3. Pr. (BIOL 1030 or BIOL 1037) and CHEM 1030. Growth and development of plants with concepts applied to the practice of Horticultural Science. Summer and Fall.

**HORT 3110 A HISTORY OF GARDENS IN CULTURAL CONTEXT (3)** LEC. 3. Heritage and traditions influencing the development of public and private garden styles, context, and function including cultural expressions, plant use, and impact of noted designers and horticulturists throughout history. Only taught in Study Abroad programs.

**HORT 3200 WOODY LANDSCAPE PLANT IDENTIFICATION I (4)** LEC. 2. LAB. 4. This course introduces students to the language of botany and the Southeastern palate of landscape plants with distinguished fall characteristics. Specific topics include taxonomy, morphology, plants with global popularity, cultivation practices, structural plantings, and use in the landscape. Fall.

**HORT 3210 WOODY LANDSCAPE PLANT IDENTIFICATION II (4)** LEC. 2. LAB. 4. This course introduces students to the language of botany and the Southeastern palate of landscape plants with distinguished spring characteristics. Specific topics include taxonomy, morphology, plants with global popularity, cultivation practices, structural plantings, and use in the landscape. Spring.

**HORT 3220 ARBORICULTURE (4)** LEC. 2. LAB. 4. Pr. BIOL 1030 or BIOL 1037. Identification, culture and use of ornamental trees in landscape plantings. Fall.

**HORT 3280 LANDSCAPE CONSTRUCTION (4)** LEC. 2. LAB. 4. Principles and practices used in the interpretation and implementation of landscape construction and planting plans. Fall.

**HORT 3840 STUDY/TRAVEL IN HORTICULTURE (1-10)** AAB/FLD. Study of horticultural or fruit and vegetable science, landscape design, nursery and greenhouse management in U.S. or international location. Course may be repeated for a maximum of 10 credit hours.

**HORT 3910 PROFESSIONAL LANDSCAPE (3)** LEC. 3. Departmental approval. Field-based course designed for learning to prepare and compete in the NALP National Collegiate Landscape Competition. Spring.

**HORT 3920 HORTICULTURE INTERNSHIP (1-4)** INT. 1-4. Practical on-the-job training for selected commercial horticultural companies. Course may be repeated for a maximum of 8 credit hours.

**HORT 3950 CAREERS IN HORTICULTURE (2)** LEC. 2. Current developments and career opportunities in horticulture. Fall and Spring.

**HORT 4000 PESTICIDE MANAGEMENT IN HORTICULTURE (3)** LEC. 3. Pr. (ENTM 4020 or ENTM 3040) and PLPA 3000. Proper management of pesticides in horticulture; decision making skills in relation to control strategies; environmental issues relevant to horticulture; safety considerations; scouting and application techniques. Fall.

**HORT 4100 HERBACEOUS ORNAMENTALS (4)** LEC. 2. LAB. 4. Pr. (BIOL 1020 or BIOL 1027) and (BIOL 1030 or BIOL 1037). Identification, culture, and use of herbaceous annuals and perennials, bulbs, herbs, and ornamental grasses. Consideration of flower bed and border preparation, care and maintenance. Spring and Summer.

**HORT 4250 INTERMEDIATE FRUIT & VEG PROD (3)** LEC. 3. Pr. (HORT 2040 or HORT 2043) or HORT 2030. Intermediate horticulture course in which students apply knowledge gained in the classroom to hands-on fruit and vegetable gardening practices.

**HORT 4270 INTERMEDIATE LANDSCAPE DESIGN (4)** LEC. 2. LAB. 4. Pr. HORT 3210 or HORT 3220 or HORT 4100. A study of the design principles and elements and technical skills used to create a functional and aesthetically pleasing residential landscape design. Fall.

**HORT 4300 COMPUTER AIDED PLANTING DESIGN (3)** LEC. 3. Pr. HORT 4270. Graphic concepts relating to spatial visualization and communication and project cost estimation using computer aided drafting and project management software developed for landscape professionals. Spring.

**HORT 4930 DIRECTED STUDIES (1-3)** AAB/IND. Departmental approval. Directed Studies related to research, teaching or outreach educational programs in Horticulture. Course may be repeated for a maximum of 6 credit hours.

**HORT 4970 SPECIAL TOPICS (1-3)** IND. Principles, methods and techniques for understanding various horticultural disciplines. Course may be repeated for a maximum of 6 credit hours.

**HORT 4980 UNDERGRADUATE RESEARCH (2-4)** IND. Departmental approval. Directed research in the area of specialty within the department. Course may be repeated for a maximum of 4 credit hours.

**HORT 5100 HORTICULTURAL PLANT BREEDING (3)** LEC. 3. Pr. (BIOL 3000 or CSES 3300 or AGRI 3000). This class will introduce students to traditional and modern technologies for breeding horticultural crops such as fruits, vegetables, and ornamental crops. Students will learn about the importance of plant breeding for horticultural crop improvement, mechanisms of traditional and modern breeding technologies, and biotechnologies with an emphasis on specific applications for horticultural crops. Credit will only be given for one of the following: HORT 5100 or HORT 6100.

**HORT 5110 TREE FRUIT CULTURE (3)** LEC. 3. Pr. HORT 3000. Manipulation of growth and development of tree fruit crops by cultural methods. Credit will only be given for one of the following courses: HORT 5110 or HORT 6110. Summer.

**HORT 5120 SMALL FRUIT AND PECAN CULTURE (4)** LEC. 2. LAB. 4. Pr. HORT 3000. Principles and practices involved in the production and marketing of small fruits and pecans. Credit will only be given for one of the following courses: HORT 5120 or HORT 6120. Spring.

**HORT 5130 SUSTAINABLE VEGETABLE CROP PRODUCTION (3)** LEC. 2. LAB. 3. Pr. (BIOL 1030 or BIOL 1037) and HORT 3000. Best management practices and quality of vegetable crops. Credit will only be given for one of the following: HORT 5130 or HORT 6130. Spring.

**HORT 5140 POST-HARVEST BIOLOGY AND TECHNOLOGY (3)** LEC. 2. LAB. 3. Pr. (PLPA 3000 or PLPA 3003) and HORT 3000. Physiological changes occurring in fruits, vegetables and other horticultural products after harvest. Spring.

**HORT 5150 RETAIL GARDEN CENTER MANAGEMENT (3)** LEC. 2. LAB. 3. Pr. HORT 3210 or HORT 3220 or Departmental approval. The following topics will be covered: financing, location, design, stocking, selling, personnel management, advertising and maintaining plants. May count either HORT 5150 or HORT 6150. Summer.

**HORT 5200 CONTROLLED ENVIRONMENT AGRICULTURE (4)** LEC. 3. LAB. 2. Pr. HORT 2060. This course will provide a thorough overview of the aerial factors that influence crop production in controlled environments. Credit will only be given for one of the following courses: HORT 5200 or HORT 6200.

**HORT 5210 LANDSCAPE BIDDING, INSTALLATION AND MAINTENANCE (4)** LEC. 3. LAB. 3. Pr. CSES 2040 and PLPA 3000. Principles and practices of the bidding, installation and maintenance of commercial and residential landscapes. Spring.

**HORT 5220 GREENHOUSE MANAGEMENT SCIENCE (4)** LEC. 3. LAB. 2. Pr. HORT 3000 and HORT 2240 and CSES 2040. Management, culture and economics of commercial greenhouse production. Fall.

**HORT 5230 NURSERY MANAGEMENT (4)** LEC. 2. LAB. 4. Pr. HORT 2240 and HORT 3000. Factors affecting plant production. Environmental issues related to facilities design and pesticide and nutrient management. Departmental approval. Spring.

**HORT 5240 PUBLIC GARDEN MANAGEMENT (3)** LEC. 1. LAB. 4. Understanding personnel structure and responsibilities; plant care and management; and the educational, entertainment, and conservation missions of public gardens. Spring.

**HORT 5330 INTEGRATED PEST MANAGEMENT (3)** LEC. 3. Aspects of pest management as a broad-based approach that integrates practices for economic control of pests. May count either ENTM/HORT/PLPA 5330/5333/6330/6336.

**HORT 5910 HORTICULTURE PRACTICUM (4)** LEC. 1. LAB. 6. Practical application of a broad range of horticultural subject-matter knowledge and skills. May count either HORT 5910 or HORT 6910. Spring. Course may be repeated for a maximum of 8 credit hours.

**HORT 6100 HORTICULTURAL PLANT BREEDING (3)** LEC. 3. This class will introduce students to traditional and modern technologies for breeding horticultural crops such as fruits, vegetables, and ornamental crops. Students will learn about the importance of plant breeding for horticultural crop improvement, mechanisms of traditional and modern breeding technologies, and biotechnologies with an emphasis on specific applications for horticultural crops. Credit will only be given for one of the following: HORT 5100 or HORT 6100.

**HORT 6110 TREE FRUIT CULTURE (3)** LEC. 3. Manipulation of growth and development of tree fruit crops by cultural methods. Credit will only be given for one of the following courses: HORT 5110 or HORT 6110. Summer.

**HORT 6120 SMALL FRUIT AND PECAN CULTURE (4)** LEC. 2. LAB. 4. Principles and practices involved in the production and marketing of small fruits and pecans. Credit will only be given for one of the following courses: HORT 5120 or HORT 6120. Spring.

**HORT 6130 SUSTAINABLE VEGETABLE CROP PRODUCTION (3)** LEC. 2. LAB. 2. Advanced course in best management practices and quality of vegetable crops. Credit will only be given for one of the following courses: HORT 5130 or HORT 6130. Spring.

**HORT 6140 POST-HARVEST BIOLOGY AND TECHNOLOGY (3)** LEC. 2. LAB. 2. Physiological changes occurring in fruits, vegetables and other horticultural products after harvest. Spring.

**HORT 6150 RETAIL GARDEN CENTER MANAGEMENT (3)** LEC. 2. LAB. 3. Topics included: financing, location, design, stocking, selling, personnel management, advertising, and maintaining plants. Graduate students will evaluate garden centers and provide feedback for improvement. Summer.

**HORT 6200 CONTROLLED ENVIRONMENT AGRICULTURE (4)** LEC. 3. LAB. 2. This course will provide a thorough overview of the aerial factors that influence crop production in controlled environments. Credit will only be given for one of the following courses: HORT 5200 or HORT 6200.

**HORT 6210 LANDSCAPE BIDDING, INSTALLATION AND MAINTENANCE (4)** LEC. 3. LAB. 3. Principles and practices of the bidding, installation and maintenance of commercial and residential landscapes. Spring.

**HORT 6220 GREENHOUSE MANAGEMENT SCIENCE (4)** LEC. 3. LAB. 2. Management, culture and economics of commercial greenhouse production. Fall.

**HORT 6230 NURSERY MANAGEMENT (4)** LEC. 2. LAB. 4. Factors affecting plant production. Environmental issues related to facilities design and pesticide and nutrient management. Departmental approval. Spring.

**HORT 6240 PUBLIC GARDEN MANAGEMENT (3)** LEC. 1. LAB. 4. Understanding personnel structure and responsibilities; plant care and management; and the educational, entertainment, and conservation missions of public gardens. Spring.

**HORT 6330 INTEGRATED PEST MANAGEMENT (3)** LEC. 3. Aspects of pest management as a broad-based approach that integrates practices for economic control of pests. May count either ENTM/HORT/PLPA 5330/5333/6330/6336.

**HORT 6910 HORTICULTURE PRACTICUM (4)** LEC. 1. LAB. 6. Practical application of a broad range of horticultural subject-matter knowledge and skills. May count either HORT 5910 or HORT 6910. Spring. Course may be repeated for a maximum of 8 credit hours.

**HORT 7010 EXPERIMENTAL METHODS IN HORTICULTURE (4)** LEC. 2. LAB. 3. Principles and methodologies of horticultural research, experimental design, preparation of project and grant proposals, and development of publication skills. Departmental approval. Fall.

**HORT 7040 ADVANCED GROWTH AND DEVELOPMENT OF HORTICULTURAL PLANTS (3)** LEC. 3. Plant growth and development from seed germination, through maturity and senescence. Spring.

**HORT 7050 NUTRITIONAL REQUIREMENTS OF HORTICULTURAL PLANTS (3)** LEC. 3. LAB. 2. Pr. HORT 3000. Nutritional requirements of horticulture crops and factors affecting these requirements. Departmental approval. Summer, odd years.

**HORT 7070 PLANT BIOTECHNOLOGY (4)** LEC. 2. LAB. 4. Departmental approval. Plant biotechnology, including plant tissue culture technologies and genetic transformation and applications to horticultural crop improvement.

**HORT 7840 GRADUATE STUDY/TRAVEL IN HORTICULTURE (1-4)** LEC. Departmental approval. Programmed activities to enhance national/international awareness and enable students to understand horticultural practices in diverse areas. Course may be repeated for a maximum of 8 credit hours.

**HORT 7920 GRADUATE INTERNSHIP (1-4)** INT. Departmental approval. Supervised professional experience in horticulture

**HORT 7950 SEMINAR (1)** SEM. SU. Graduate students are required to attend all seminars. Course may be repeated with change in topics.

**HORT 7960 SPECIAL PROBLEMS (1-3)** IND. 3. Conferences, problems and assigned readings in horticulture. Course may be repeated for a maximum of 6 credit hours.

**HORT 7970 SPECIAL TOPICS IN HORTICULTURE (1-3)** LEC. Principles, methods and techniques involved in gaining an understanding of different horticultural disciplines. Course may be repeated for a maximum of 3 credit hours.

**HORT 7980 NON-THESIS RESEARCH (1-4)** RES. 1-4. Research conducted as part of the Master of Agriculture degree. Course may be repeated for a maximum of 4 credit hours.

**HORT 7990 RESEARCH AND THESIS (1-10)** MST. Course may be repeated with change in topics.

**HORT 8990 RESEARCH AND DISSERTATION (1-10)** DSR. Course may be repeated with change in topics.