

HORTICULTURE (HORT)

HORT 1003 Home Horticulture

Description: Offered by correspondence only. An introduction to horticultural practices for the home gardener. Planning and care of home grounds, home orchards and vegetable gardens; selection, use and care of indoor plants. Non-majors only. Credit will not substitute for required courses.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 1013 Principles of Horticultural Science (LN)

Description: Basic physical and physiological processes responsible for plant dormancy, growth, flowering, fruiting, and senescence with respect to the science and art of production, cultivation, utilization, and/or storage of horticultural plants. Current research associated with various horticultural commodity groups. Additional flat fee of \$12.00 applies.

Credit hours: 3

Contact hours: Lecture: 2 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

General Education and other Course Attributes: Scientific Investigation, Natural Sciences

HORT 2010 Internship in Horticulture or Landscape Management

Prerequisites: 24 credit hours and consent of adviser.

Description: Supervised work experience with approved public and private employers in horticulture, landscape management, or related fields. Credit will not substitute for required courses. Graded on a pass-fail basis. Additional fee of \$24.00 per credit hour applies. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.

Credit hours: 1-6

Contact hours: Other: 1

Levels: Undergraduate

Schedule types: Independent Study

Department/School: Hort & Landscape Arch

HORT 2123 Environmental Issues in Horticultural Science

Description: Impact of urban and suburban development on the environment and a study of horticultural solutions to limit or reverse environmental damage. Emphasis on horticultural design, construction, and maintenance techniques as they relate to the conservation of water, soil, native species, and ecosystems.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 2513 Herbaceous Plant Materials

Description: Identification, cultural requirements, and use of ornamental garden and indoor herbaceous plants. Additional fee of \$12.00 per credit hour applies.

Credit hours: 3

Contact hours: Lecture: 2 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 2613 Woody Plant Materials

Description: Identification, cultural requirements, and use of ornamental woody plants including deciduous and evergreen trees, shrubs and vines. Additional fee of \$12.00 per credit hour applies

Credit hours: 3

Contact hours: Lecture: 2 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 2652 Basic Floral Design

Description: Fundamentals of floral arrangement and design for the home and the retail shop; basic skills useful to flower shop employment and operation.

Credit hours: 2

Contact hours: Lecture: 1 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 3013 Arboriculture

Prerequisites: HORT 2613 or NREM 2134 and SOIL 2124.

Description: Theory and practice of selecting, planting and maintaining trees, shrubs and vines in the landscape. Previously offered as HORT 3014.

Credit hours: 3

Contact hours: Lecture: 2 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 3084 Plant Propagation

Prerequisites: HORT 1013 or PLNT 1213, BIOL 1404 and SOIL 2124.

Description: Principles and practices involved in propagation of plants. Anatomical, morphological and physiological aspects of sexual and asexual methods of regeneration and their importance.

Credit hours: 4

Contact hours: Lecture: 3 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 3113 Greenhouse Management

Prerequisites: HORT 1013, BIOL 1404, MATH 1483 or MATH 1513 or above.

Description: Commercial greenhouse operation with emphasis on floricultural plant production aspects; environment, growing media, fertilizers and application methods, watering, pest and disease control, chemical growth regulators, production costs. Additional fee of \$12.00 per credit hour applies.

Credit hours: 3

Contact hours: Lecture: 2 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 3153 Turf Management

Description: Selection, establishment and maintenance of grass species and other plant materials for special use areas.

Credit hours: 3

Contact hours: Lecture: 2 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 3213 Fruit and Nut Production

Prerequisites: BIOL 1403.

Description: Commercial production of fruits and nuts, with emphasis on pecan, apple, peach, strawberry, blackberry and blueberry. A two-day field trip is required.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 3253 Personnel and Financial Management for Horticulture

Prerequisites: HORT 1013 or LA 1013 and one upper division HORT or LA course.

Description: Preparing and executing an operational budget in a horticultural service industry and methods for maintaining an effective work force.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 3433 Commercial Vegetable Production

Prerequisites: HORT 1013, SOIL 2124 and BIOL 1404.

Description: Commercial production and marketing of vegetable crops.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate, Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 3513 Landscape Irrigation

Prerequisites: HORT 1013 or LA 1013.

Description: Basics of landscape irrigation with an emphasis on residential irrigation design, maintenance and installation.

Credit hours: 3

Contact hours: Lecture: 2 Lab: 2

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 3612 Bidding and Estimating

Prerequisites: HORT 1013 or LA 1013 or NREM 1114 or PLNT 1213.

Description: Bid preparation and job cost estimation for landscape related projects including quantity take-offs, plant material and hardscape estimates, budgeting and pricing.

Credit hours: 2

Contact hours: Lecture: 2

Levels: Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 3713 Urban Horticulture Production

Prerequisites: HORT 1013.

Description: Principles and production of crops for public or community practices with emphasis on production associated with hydroponics, raised beds, containers, controlled environments, roof tops, high tunnels, and farmers markets.

Credit hours: 3

Contact hours: Lecture: 2 Lab: 3

Levels: Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 4053 International Experience in Horticulture (I)

Description: Participation in international travel to develop an understanding of different horticultural systems and technologies used outside the U.S.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

General Education and other Course Attributes: International Dimension

HORT 4133 Temperature Stress Physiology

Prerequisites: BIOC 3653 and BOT 3463 or HORT 4963.

Description: Effects of heat, chilling and freezing stress on plants.

Responses to temperature extremes at the molecular to whole plant levels with emphasis on mechanisms of injury and resistance. Same course as PLNT 4133. May not be used for degree credit with HORT 5133 and PLNT 5133.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 4313 Commercial Flower Production and Marketing

Prerequisites: HORT 3113.

Description: Commercial production of cut flower, pot plant and bedding plant crops. Application of plant physiological principles to crop culture, crop production costs and marketing.

Credit hours: 3

Contact hours: Lecture: 3 Lab: 0

Levels: Graduate, Undergraduate

Schedule types: Lab, Lecture, Combined lecture and lab

Department/School: Hort & Landscape Arch

HORT 4453 Turfgrass Physiology and Ecology

Prerequisites: HORT 3153, BOT 1404.

Description: A study of the relationship between turf physiology and modern turf management practices. Concepts of stand ecology with emphasis on species dominance in stressful environments.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate, Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 4493 Athletic Field Management

Prerequisites: HORT 3153.

Description: Principles, practices and challenges associated with natural turf- covered athletic field management; field construction, maintenance and evaluation of playing surface quality; soil physical properties influencing management and field use, construction and maintenance materials specification, and traction, hardness and ball response factors. Offered in combination with HORT 5493. No credit for both HORT 4493 and HORT 5493.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Undergraduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 4543 Sustainable Nursery Production**Prerequisites:** HORT 2613 and SOIL 2124.**Description:** Sustainable commercial production of field- and container-grown woody ornamental crops. Previously offered as HORT 3544. No credit for both HORT 4543 and HORT 5543.**Credit hours:** 3**Contact hours:** Lecture: 2 Lab: 2**Levels:** Graduate, Undergraduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Hort & Landscape Arch**HORT 4713 Public Garden Management****Prerequisites:** HORT 1013.**Description:** Issues and methods in public garden management, including database management of collections, conservation of native species, grant writing, volunteer coordination, computerized mapping systems, master planning, and other topics pertaining to a career in public horticulture. Field trips required.**Credit hours:** 3**Contact hours:** Lecture: 3 Lab: 0**Levels:** Graduate, Undergraduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Hort & Landscape Arch**HORT 4773 Applied Landscape Planning****Prerequisites:** HORT 2313 or HORT 2413.**Description:** Concepts of landscape contracting, design and planning. Preparation of plans, and cost estimates with an emphasis on residential landscapes and use of plant materials. No credit for students in the landscape architecture or landscape contracting programs. Previously offered as HORT 4774.**Credit hours:** 3**Contact hours:** Lecture: 2 Lab: 3**Levels:** Undergraduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Hort & Landscape Arch**HORT 4901 Horticulture in Controlled Environments Laboratory****Prerequisites:** HORT 4903 or concurrent enrollment.**Description:** Hands-on experiences and virtual field trips designed to reinforce principles discussed in HORT 4903, and to develop skill sets important to successful implementation of horticultural practices in controlled environments. Offered through web-based instruction.**Credit hours:** 1**Contact hours:** Lab: 2**Levels:** Graduate, Undergraduate**Schedule types:** Lab**Department/School:** Hort & Landscape Arch**HORT 4903 Horticulture in Controlled Environments****Prerequisites:** CHEM 1215 and HORT 3113.**Description:** Designing, constructing, monitoring, and manipulating controlled environments for efficient horticultural production. Offered through web-based instruction. May not be used for degree credit with HORT 5903.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 4933 Principles of Sustainable and Organic Horticulture****Prerequisites:** HORT 1013.**Description:** Principles and practices of sustainable, organic, and alternative horticultural management systems. Offered through web-based instruction.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Undergraduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 4943 International Horticulture****Prerequisites:** HORT 1013.**Description:** Overview of the horticulture industry worldwide. Export, marketing, and international trade issues in a global horticulture context. Individual country analyses of specific fruit, vegetable and ornamental crops. Offered through web-based instruction.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate, Undergraduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 4953 Plant Growth and Development****Prerequisites:** HORT 1013 and BOT 1404.**Description:** Plant embryogenesis and organogenesis; growth and development of shoots and reproductive structures; plant developmental processes including shoot expansion and dormancy as influenced by temperature, light, and other environmental factors. No credit for HORT 4953 and HORT 5953.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate, Undergraduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 4963 Horticulture Physiology****Prerequisites:** CHEM 1215 and BIOL 1114.**Description:** Physiology of horticultural plants, including water relations, respiration, photosynthesis, and growth and development. Offered in combination with HORT 5963. No credit for both HORT 4963 and HORT 5963. Offered through web-based instruction. May not be used for degree credit with HORT 5963.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate, Undergraduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 4973 Sustainable Landscape Management****Prerequisites:** HORT 1013 or LA 1013.**Description:** The ecological principles and landscape resources supporting decision-making for sustainable landscape management. Retrofits of existing development for enhanced sustainability, including equipment selection, stormwater management, use of successional landscapes, permaculture, and organic methods. No credit for both HORT 4973 and HORT 5973.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate, Undergraduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch

HORT 4990 Horticultural Problems**Prerequisites:** Consent of instructor.**Description:** Problems related to pomology, olericulture, nursery production, landscape design, or the culture, sales and arrangement of flowers. Additional fee of \$12.00 per credit hour applies. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.**Credit hours:** 1-6**Contact hours:** Other: 1**Levels:** Graduate, Undergraduate**Schedule types:** Independent Study**Department/School:** Hort & Landscape Arch**HORT 5000 Master's Research and Thesis****Description:** Research on thesis problems required of master's degree candidates. Additional fee of \$12.00 per credit hour applies. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.**Credit hours:** 1-6**Contact hours:** Other: 1**Levels:** Graduate**Schedule types:** Independent Study**Department/School:** Hort & Landscape Arch**HORT 5020 Graduate Seminar****Prerequisites:** Graduate standing.**Description:** Proposal and results seminars for graduate programs. Additional fee of \$12.00 per credit hour applies. Offered for fixed credit, 1 credit hour, maximum of 2 credit hours.**Credit hours:** 1**Contact hours:** Other: 1**Levels:** Graduate**Schedule types:** Independent Study**Department/School:** Hort & Landscape Arch**HORT 5110 Advanced Horticultural Problems****Description:** Selected research problems in horticulture, floriculture, landscape design; nursery production, olericulture and pomology. Additional fee of \$12.00 per credit hour applies. Offered for variable credit, 1-12 credit hours, maximum of 20 credit hours.**Credit hours:** 1-12**Contact hours:** Other: 1**Levels:** Graduate**Schedule types:** Independent Study**Department/School:** Hort & Landscape Arch**HORT 5133 Temperature Stress Physiology****Prerequisites:** BIOC 3653 and BOT 3463 or HORT 4963.**Description:** Effects of heat, chilling and freezing stress on plants. Responses to temperature extremes at the molecular to whole plant levels with emphasis on mechanisms of injury and resistance. Offered in combination with HORT 4133 and PLNT 4133. Same course as PLNT 5133. May not be used for degree credit with PLNT 4133 and HORT 4133.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 5233 Experimental Horticulture****Description:** Methods of conducting research with horticultural crops, including organization and plans, field plot techniques and analysis of data.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 5293 Plant Response to Water Stress****Prerequisites:** BIOC 3653 and BOT 3463.**Description:** Physiological ramifications of water deficit stress on cells, tissues, plants and canopies. Discussion of the soil/plant/atmosphere continuum, and avoidance and tolerance mechanisms leading to drought resistance. Photosynthesis, transpiration, and water-use efficiency and their relationship to biomass accumulation and crop yield. Same course as PLNT 5293.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 5422 Flowering and Fruiting in Horticultural Crops****Prerequisites:** BOT 3463.**Description:** Environmental, chemical and cultural factors affecting the flowering and fruiting of horticultural crops.**Credit hours:** 2**Contact hours:** Lecture: 2**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 5433 Postharvest Physiology****Prerequisites:** BOT 3463 and BOT 3460.**Description:** Physiological causes for post-harvest changes in horticultural crops (ripening and senescence) and the basis for certain postharvest treatments (precooling at harvest, controlled atmosphere storage, refrigeration, and packaging techniques). Commodity-specific postharvest phenomena. Additional fee of \$12.00 per credit hour applies.**Credit hours:** 3**Contact hours:** Lecture: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Hort & Landscape Arch**HORT 5443 Basic Laboratory Experimentation****Description:** Principles and theory of safe laboratory practice and experimentation. Techniques for developing and optimizing plant sample acquisition, extraction and analysis protocols. Theory of operation and maintenance of common laboratory instrumentation (pH measurement, solid and liquid analytical measurement, temperature measurement, spectrophotometry, HPLC, GC). Laboratory provides hands-on experience for integrated protocol development and instrument use.**Credit hours:** 3**Contact hours:** Lecture: 2 Lab: 3**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Hort & Landscape Arch

HORT 5493 Athletic Field Management

Prerequisites: HORT 3153.

Description: Principles, practices and challenges associated with natural turf- covered athletic field management; field construction, maintenance and evaluation of playing surface quality; soil physical properties influencing management and field use, construction and maintenance materials specification, and traction, hardness and ball response factors. Offered in combination with HORT 4493. No credit for both HORT 4493 and HORT 5493.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 5543 Sustainable Nursery Production

Prerequisites: HORT 2613 and SOIL 2124.

Description: Sustainable commercial production of field and container grown woody ornamental crops. No credit for both HORT 4543 and HORT 5543.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 5903 Horticulture in Controlled Environments

Prerequisites: CHEM 1215 and HORT 3113.

Description: Designing, constructing, monitoring, and manipulating controlled environments for efficient horticultural production. May not be used for degree credit for HORT 4903. Offered through web-based instruction.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 5953 Plant Growth and Development

Prerequisites: HORT 1013 and BOT 1404.

Description: Plant embryogenesis and organogenesis; growth and development of shoots and reproductive structures; plant development processes including shoot expansion and dormancy as influenced by temperature, light, and other environmental factors. Additional fee of \$12.00 per credit hour applies. No credit for both HORT 4953 and HORT 5953.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 5963 Horticulture Physiology

Prerequisites: CHEM 1215 and BIOL 1114.

Description: Physiology of horticultural plants, including water relations, respiration, photosynthesis, and growth and development. Offered in combination with HORT 4963. May not be used for degree credit with HORT 4963. Offered through web-based instruction.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 5973 Sustainable Landscape Management

Prerequisites: HORT 1013 and LA 1013.

Description: The ecological principles and landscape resources supporting decision-making for sustainable landscape management. Retrofits of existing development for enhanced sustainability, including equipment selection, stormwater management, use of successional landscapes, permaculture, and organic methods. No credit for both HORT 4973 and HORT 5973.

Credit hours: 3

Contact hours: Lecture: 3

Levels: Graduate

Schedule types: Lecture

Department/School: Hort & Landscape Arch

HORT 6000 Doctoral Rsch & Dissertation

Description: Research on dissertation problems required of PhD candidates in multidisciplinary programs. Additional fee of \$12.00 per credit hour applies. Offered for variable credit, 1-12 credit hours, maximum of 30 credit hours.

Credit hours: 1-12

Contact hours: Other: 1

Levels: Graduate

Schedule types: Independent Study

Department/School: Hort & Landscape Arch