

# HORTICULTURE (HORT)

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## HORT 1100 (AG 905)

### **Introduction to Horticulture**

3 Credit Hours

Principles and practices in the development, production and use of horticultural crops. Includes classification, structure, growth and development, environmental influences on horticultural plants, and vocational opportunities in the horticultural industries. (2 lecture hours, 2 lab hours)

## HORT 1101 (AG 904)

### **Soils and Fertilizers**

3 Credit Hours

Nature and characteristics of soils including physical, chemical and biological properties, soil origins, classification, soilless media and proper soil management. Examines the interrelationship between soils and fertilizers and the selection and use of fertilizers to meet plant nutritional needs. (2 lecture hours, 2 lab hours)

## HORT 1105

### **Floral Design I**

3 Credit Hours

Principles and elements of floral design, with practice in creating basic floral designs and using proper techniques. Includes identification, care and handling of flowers. (2 lecture hours, 2 lab hours)

## HORT 1109

### **OSHA 10-Hour Landscape Safety**

1 Credit Hour

Occupational Safety and Health Administration (OSHA) Landscape training for entry level workers and employers on the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces in general industry and landscape. Includes information regarding workers' rights, employer responsibilities, and how to file a complaint. Students receive their 10 hour Card upon satisfactory completion of the course. (1 lecture hour)

## HORT 1110

### **Applied Plant Taxonomy**

3 Credit Hours

Classification of plant families with an emphasis on plant material used in the horticulture industry. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1100 or consent of instructor.

## HORT 1111

### **Landscape Design I**

3 Credit Hours

The process of residential landscape design, site analysis and practical solutions of typical landscape problems. Includes plant selection, graphic presentation and correct placement of materials in the residential landscape. (2 lecture hours, 2 lab hours)

## HORT 1112

### **Landscape Maintenance**

3 Credit Hours

Principles and practices for sustainable maintenance of various landscape features for residential and commercial sites. Includes best practices and strategies for snow and ice management. (2 lecture hours, 2 lab hours)

## HORT 1113

### **Landscape Construction**

3 Credit Hours

Principles and practices for sustainable construction and installation of various landscape features for residential and commercial sites. (2 lecture hours, 2 lab hours)

## HORT 1114

### **Irrigation & Water Management**

3 Credit Hours

Principles and practices of landscape irrigation involving the use of water from proper system design and installation through maintenance and management. (2 lecture hours, 2 lab hours)

## HORT 1115

### **Floral Design II**

3 Credit Hours

Continuation of the principles covered in Floral Design I. Introduces new styles and techniques and includes flower shop management. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1105 or equivalent or consent of instructor.

## HORT 1116

### **Spanish for Horticulture**

3 Credit Hours

Develops basic conversational skills to communicate effectively in the horticulture industry. Emphasizes the ability to speak, understand, read, and write Spanish for safe, effective, and productive workplace interactions in a cross-cultural context. Role-plays and simulations will be used to prepare students to successfully engage with Spanish speakers in the green industry. For the beginning student. Credit cannot be earned for both SPANI 1116 and HORT 1116. (3 lecture hours)

## HORT 1120

### **Landscape Lighting**

2 Credit Hours

Principles and practices for design and installation of low voltage landscape lighting for residential and commercial sites. (1 lecture hour, 2 lab hours)

## HORT 1125

### **Water Use/Conservation in the Landscape**

1 Credit Hour

Residential and commercial water management as it relates to understanding the intersection of the Plant-Soil-Water continuum. Includes best practices and strategies for sustainability. (1 lecture hour)

## HORT 1130

### **Horticulture Business**

3 Credit Hours

Principles and practices of operating a horticultural business and operational procedures for dealing with the perishable and seasonal nature of horticulture. Includes trends, skills and career opportunities in the various disciplines within horticulture. (3 lecture hours)

## HORT 1131

### **Landscaping for Wildlife**

1 Credit Hour

A study of landscape environments that offer food, water, and shelter/ nesting cover to local wildlife to help species compete in our changing environment. The role of native plants in sustaining wildlife will be emphasized. (1 lecture hour)

**HORT 1135**

***Introduction to Green Roofs***

1 Credit Hour

The basics of green roof design, construction, and maintenance. Includes benefits of green roofs and a review of the products, plants, and growing media used in green roof applications. (1 lecture hour)

**HORT 1140**

***Landscape Graphics***

2 Credit Hours

Drawing plans, section-elevations and perspectives for landscape design. Includes the use of pencils and markers for lettering, drafting and color renderings. (2 lecture hours)

**HORT 1141**

***Sustainable Landscape Design***

1 Credit Hour

Sustainable landscape design and construction practices that minimize loss of natural resources. The economic benefits of sustainable practices will also be discussed. (1 lecture hour)

**HORT 1142**

***Landscaping for Pollinators***

1 Credit Hour

Biology and ecology of Midwest pollinators. Landscape design and implementation for attracting pollinators including site selection, plant selection, and maintenance requirements. (1 lecture hour)

**HORT 1145**

***Perennial Plant Communities I***

2 Credit Hours

Introduction to selecting perennial plants that grow well together and have similar maintenance requirements to create diverse, compatible, functional and beautiful gardens. Perennial plants are combined based on cost, maintenance and aesthetic appeal. (2 lecture hours)

**HORT 1150**

***Power Equipment Electrical Systems***

3 Credit Hours

Basic electrical theory, circuit construction, and digital multimeter use. Service information and wiring diagrams used in power equipment diagnosis. Power equipment starting and charging systems. Small engine ignition systems. Electrical wiring repair techniques. Diagnosis of power equipment electrical systems. (2 lecture hours, 2 lab hours)

**HORT 1151**

***2-Cycle Small Engine Repair/Maintenance***

2 Credit Hours

Principles of 2-cycle engine-powered devices used in the landscape industry. Includes 2-cycle engine function, use of technical literature, safe disassemble, repair and troubleshooting techniques. (1 lecture hour, 2 lab hours)

**HORT 1152**

***4-Cycle Small Engine Repair/Maintenance***

3 Credit Hours

Principles of 4-cycle small engine repair, maintenance, troubleshooting, failure analysis and problem solving skills to repair and rebuild small engines used in landscape, industrial, and agricultural applications. (2 lecture hours, 2 lab hours)

**HORT 1153**

***Portable Power Generator Repair and Maintenance***

2 Credit Hours

Introduces portable power generator operation, basic electrical concepts, safety procedures, brushless and brush type generators, circuit analysis, troubleshooting using related testing procedures and equipment to repair generators. (1 lecture hour, 2 lab hours)

**HORT 1154**

***Compact Diesel Engines***

3 Credit Hours

Explores the design, operation, proper maintenance, repair, and troubleshooting of compact diesel engines found in the horticulture and agriculture industries. (2 lecture hours, 2 lab hours)

**HORT 1155**

***Power Equipment Drivelines/Hydraulics/Hydrostatics***

3 Credit Hours

Foundation of driveline, hydraulic, and hydrostatic principles and system operation including how to troubleshoot and repair equipment found in the horticulture and agriculture industries. (2 lecture hours, 2 lab hours)

**HORT 1185**

***Arboriculture***

3 Credit Hours

Care and maintenance of trees and shrubs in the urban landscape. Includes Plant Health Care (PHC), environmental factors affecting plants, and proper and safe use of tools. (2 lecture hours, 2 lab hours)

**HORT 1800**

***Special Project***

1-3 Credit Hours

Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). (1 to 6 lab hours)

**HORT 1820**

***Selected Topics***

3 Credit Hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

**HORT 1821**

***Selected Topics***

3 Credit Hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

**HORT 1824*****Selected Topics***

2 Credit Hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours)

**HORT 1826*****Selected Topics***

1 Credit Hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lab hours)

**HORT 1827*****Selected Topics***

1 Credit Hour

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 lecture hour)

**HORT 1840*****Independent Study***

1-4 Credit Hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. (1 to 4 lecture hours)

**Prerequisite:** Consent of instructor is required.

**HORT 2211*****Computer-Aided Drafting for Landscape***

3 Credit Hours

Introduction to computer-aided design and drafting utilizing landscape-specific DynaSCAPE software. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1111 or equivalent or consent of instructor.

**HORT 2212*****Advanced Computer-Aided Drafting For Landscape***

2 Credit Hours

Advanced Computer-Aided Design (CAD) and drafting utilizing landscape-specific DynaSCAPE software. Includes producing quotes from CAD designs and producing designs in color. (1 lecture hour, 2 lab hours)

**Prerequisite:** HORT 2211 or equivalent or consent of instructor.

**HORT 2213*****3D Landscape Design***

3 Credit Hours

Visual interpretation and presentation of landscape design concepts using 3D Design Software. Create 3D models and presentation materials for multiple phases of landscape design projects. (2 lecture hours, 2 lab hours)

**HORT 2214*****Advanced 3D Landscape Design***

2 Credit Hours

Advanced visual interpretation and presentation of landscape design concepts using 3D design software. (1 lecture hour, 2 lab hours)

**Prerequisite:** HORT 2213 or equivalent or consent of instructor.

**HORT 2221*****Plant Propagation***

3 Credit Hours

Principles and practices of sexual and asexual propagation of plants used in the horticulture industry. Includes work with seeds, cuttings, grafting, micropropagation, special structures and layering. (2 lecture hours, 2 lab hours)

**HORT 2222*****Introduction to Plant Breeding***

3 Credit Hours

Introduction to the principles, practices, and techniques of plant breeding. Examines modes of plant reproduction, breeding objectives, genetics, predictions, and selection. Course includes alternative techniques, practical considerations, and current developments in plant breeding. (3 lecture hours)

**Prerequisite:** HORT 1100 or equivalent or consent of instructor.

**HORT 2225*****Specialty Floral Design***

3 Credit Hours

Advanced floral design skills using principles, elements and techniques to create party, wedding and sympathy presentations. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1115 or equivalent or consent of instructor.

**HORT 2226*****Advanced Specialty Floral Design***

1 Credit Hour

Advanced floral design skills using principles, elements and techniques to create floral armatures, floral jewelry, wedding bouquets, prom corsages and boutonnières, and advanced sympathy work. (2 lab hours)

**Prerequisite:** HORT 2225 or equivalent or consent of instructor.

**HORT 2231*****Turf Science and Management***

3 Credit Hours

Principles and methods of selecting, establishing and maintaining turf for residential lawns, parks, sports fields and golf courses. Includes cultural practices such as fertilization, irrigation and cultivation, as construction and renovation techniques. Also covers weed, insect and disease identification and control. (2 lecture hours, 2 lab hours)

**HORT 2235*****Landscape Estimating and Bidding***

3 Credit Hours

Fundamentals of creating landscape project estimates and bids to present to a client including reading landscape plans, take-off's, plant pricing, labor rates, measuring equipment, contingency, overhead costs and math calculations. (3 lecture hours)

**HORT 2241*****Landscape Plants I***

3 Credit Hours

Identification of woody ornamental trees, shrubs, vines and groundcovers common to northern Illinois with an emphasis on deciduous plants. Includes adaptability, cultural requirements and placement in the landscape. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1100 or consent of instructor.

**HORT 2242**

***Landscape Plants II***

3 Credit Hours

Identification of woody ornamental trees, shrubs, vines and groundcovers common to northern Illinois with an emphasis on narrow and broad-leaved evergreens. Includes adaptability, cultural requirements and placement in the landscape. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1100 or consent of instructor.

**HORT 2243**

***Ornamental Grasses***

2 Credit Hours

Identification and use of ornamental grasses in the landscape. Includes propagation, production and designing with native and non-native grasses. (2 lecture hours)

**HORT 2244**

***Herbaceous Perennials***

3 Credit Hours

Identification, selection, design and maintenance of herbaceous perennials in the landscape. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1100 or consent of instructor.

**HORT 2245**

***Perennial Plant Communities II***

1 Credit Hour

Design, installation and evaluation of perennial plant community gardens. Plant selections are based on time, cost and sustainability. (1 lecture hour)

**Prerequisite:** HORT 1145 or equivalent.

**HORT 2246**

***Perennial Plant Communities Stewardship***

1 Credit Hour

Maintenance and evaluation of perennial plant community gardens. Emphasizes the arts and methods of becoming a skilled gardener. (2 lab hours)

**Prerequisite:** HORT 1145 and HORT 2245 or equivalents, or consent of instructor.

**HORT 2251**

***Diseases of Ornamental Plants***

3 Credit Hours

Detection, identification and treatment of common plant diseases. Includes analysis of symptoms, selection of chemicals, preventive measures and selection of disease resistant ornamental plants. (2 lecture hours, 2 lab hours)

**HORT 2253**

***Greenhouse Operations and Procedures***

3 Credit Hours

Principles and practices of operating a commercial greenhouse. Includes types of greenhouse structures, greenhouse components, plant nutrition, greenhouse pests, crop scheduling, and business management principles for the greenhouse industry. (2 lecture hours, 2 lab hours)

**HORT 2255**

***Greenhouse Crop Production***

3 Credit Hours

Principles and practices utilized in growing and maintaining greenhouse crops such as bench and pot mums, poinsettias, lilies, bulbs, azaleas, hydrangeas, foliage and miscellaneous pot crops. Includes hands-on experience with these crops. (2 lecture hours)

**HORT 2256**

***Interior Plant Identification & Design***

2 Credit Hours

Identification, selection, cultural requirements, maintenance and propagation techniques of interior plants. Includes an introduction to professional interior landscaping, plant care and design techniques. (1 lecture hour, 2 lab hours)

**HORT 2257**

***Bedding Plant Production***

3 Credit Hours

Principles and practices of bedding plant and plug production. Includes culture and identification of annual plant material such as petunias, marigolds, impatiens, begonias, geraniums and miscellaneous bedding plant varieties. Hands-on experience with these crops is provided. (2 lecture hours, 2 lab hours)

**HORT 2261**

***Insects of Ornamental Plants***

3 Credit Hours

Detection, identification and eradication of local species of insects that damage ornamental plants. Includes selection and use of pesticides for insect control. (2 lecture hours, 2 lab hours)

**Prerequisite:** Course requires Reading Placement Test Score-Category One.

**HORT 2271**

***Landscape Design II***

3 Credit Hours

The design process with emphasis on problem solving and hardscape materials. Includes graphics, estimating, sales, and construction processes as they relate to design, installation and costs. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1111 and HORT 2241.

**HORT 2300**

***Introduction to Sustainable Urban Agriculture***

3 Credit Hours

Principles of sustainable agriculture for urban production. Includes the ethical, practical and scientific aspects of agricultural sustainability addressing economic, social and environmental impacts of food and urban farming. (2 lecture hours, 2 lab hours)

**HORT 2301**

***Principles of Agroecology***

3 Credit Hours

Introduces ecological approaches to urban agriculture examining the interactions of crops with the environment and soil culminating in a whole systems perspective. (3 lecture hours)

**Prerequisite:** HORT 1100 or equivalent.

**HORT 2302**

***Sustainable Urban Vegetable and Herb Production***

3 Credit Hours

Explores origin, crop requirements, harvesting, and management strategies for sustainable urban production of vegetables and herbs. (2 lecture hours, 2 lab hours)

**Prerequisite:** HORT 1100 or equivalent.

**HORT 2303**

***Urban Agriculture Issues***

2 Credit Hours

Explores urban agricultural issues at the local, national, and global level focusing on growing food in urban areas. Includes the current state of urban agriculture, as both a social movement and as an aid in the implementation of urban environment sustainability. (2 lecture hours)

**HORT 2304*****Hydroponic and Aquaponic Production Systems***

3 Credit Hours

Introduction to concepts and practices of growing crops in hydroponic and aquaponic systems. (2 lecture hours, 2 lab hours)

**HORT 2305*****Local Foods***

2 Credit Hours

Explore the local food system, the importance of locally grown foods and the future impact of urban agriculture. (2 lecture hours)

**HORT 2306*****Introduction to Beekeeping***

2 Credit Hours

Principles and practices to start bee hives in your backyard. Includes topics on bee biology, hive management, queen bee purchasing, honey extraction, and bees in an urban setting. (2 lecture hours)

**HORT 2307*****Business Principles for Sustainable Agriculture***

2 Credit Hours

Introduction to starting and expanding a sustainable urban agriculture business. Emphasizes management and marketing practices unique to sustainable agriculture. (2 lecture hours)

**HORT 2308*****Introduction to Composting***

1 Credit Hour

Introduces the cultural requirements, advantages, and benefits of composting systems. (2 lab hours)

**HORT 2309*****Fruit and Berry Production***

3 Credit Hours

Principles and practices of cultivating fruit and berry crops commercially. Includes fruit tree selection, planting and care for small-scale orchards or home gardens, pruning and training methods, and details on pest management. (2 lecture hours, 2 lab hours)

**HORT 2800*****Special Project***

1-3 Credit Hours

Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit. (1 to 6 lab hours)

**Prerequisite:** At least one course in the discipline or consent of instructor.

**HORT 2860*****Internship (Career & Technical Ed)***

1-4 Credit Hours

Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. (5 to 20 lab hours)

**Prerequisite:** Consent of instructor and 2.0 cumulative grade point average, 12 semester credits earned in a related field of study, students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

**HORT 2863*****Internship (Career & Technical Ed)***

3 Credit Hours

Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 225 clock hours for three semester credit hours. (15 lab hours)

**Prerequisite:** Consent of instructor and 2.0 cumulative grade point average, 12 semester credits earned in a related field of study, students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

**HORT 2865 (HORT-PE1)*****Internship Advanced (Career & Tech Ed)***

1-4 Credit Hours

Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. (5 to 20 lab hours)

**Prerequisite:** Consent of instructor and 2.0 cumulative grade point average, 12 semester credits earned in a related field of study, students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.