

# EDMONDS COMMUNITY COLLEGE

## HORTICULTURE PROGRAMS

A horticulture career offers creative and technical challenges that provide lasting professional and personal rewards. Job placement rates remain consistently high. Short courses and workshops are also offered that address special interests and trends in horticulture. The flexible curriculum provides learning opportunities for both professional and nonprofessional horticulture enthusiasts.

### ASSOCIATE OF TECHNICAL ARTS DEGREES

#### **Landscape Design (96 credits)**

Students develop skills in drawing and drafting, spatial and planting design as well as design and construction of landscape features. Prepares students to work in a landscape design firm or begin their own business.

#### **Landscape Management and Installation (95 credits)**

Combines a strong foundation of first year classes with the skills and knowledge needed to manage established landscapes in a sustainable manner or to install new designs. Further study includes irrigation, turf, integrated pest management, construction and business practices. Graduates of this program are prepared to enter a landscape firm or grounds department as a crew supervisor or start their own business. Some have gone on to become superintendents of city and county park and recreation departments, school districts, and golf courses.

#### **Nursery/Greenhouse (96.5 credits)**

Provides training and prepares students for careers in plant propagation, nursery and greenhouse operation, production, and management. Students have gone on to form their own nurseries, both retail and wholesale, as well as working for established firms.

#### **Restoration Horticulture (93 credits)**

Learn to repair damaged land, habitat, and ecosystems. Gain expertise in this emerging and critically important field. Learn how to replant natural areas by designing, establishing, and stewarding native plant communities. Create green spaces in urban settings using green roofs and walls, rain gardens, and bioswales.

### CERTIFICATE PROGRAMS\*

*\*Credits earned also apply to Horticulture Associate of Technical Arts degrees.*

#### **Ornamental Horticulture (43 credits)**

A combination of technical knowledge and hands-on skills prepare students to begin or enhance a career in horticulture.

#### **Nursery Growers (40.5 credits)**

Provides students with the training and skills they need to grow greenhouse and nursery ornamental plants. Graduates may seek to assist growers and managers in greenhouses or nurseries.

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**Find out more:** (425) 640-1739 • <http://hort.edcc.edu>



# EDMONDS COMMUNITY COLLEGE

HORTICULTURE COURSE DESCRIPTIONS (425) 640-1739 <http://hort.edcc.edu>

*The Horticulture Department at Edmonds Community College offers classes covering plant care, propagation and identification, pest management, garden design, water conservation and techniques for growing plants.*

*Degree options include a one-year certificate in Ornamental Horticulture, a one-year Nursery Grower's Certificate, and two-year Associate of Technical Arts (ATA) degrees in Nursery/Greenhouse, Landscape Management/Installation and Landscape Design.*

## **Horticulture Plant Science**

HORT 102, 4 Credits

Plants: how do they function, what are they made out of, why are they known by such unusual names? The answers to these questions and more will be presented in this botany for gardeners class.

## **Horticulture Tools and Equipment**

HORT 103, 2.5 Credits

Identification, selection, maintenance and safe use of tools and equipment common to the landscape and nursery industries. Safety issues such as hearing, skin and eye protection, lifting-warm-up exercises, and fuel transportation are included.

## **Broadleaf Plant Identification**

HORT 106, 5 Credits

Learn to recognize the principal broadleaf evergreens used in Northwest gardens along with their culture and use. Be prepared to arrive and depart from fieldtrip sites on your own.

## **Conifer Plant Identification**

HORT 107, 4 Credits

Learn to recognize the principal coniferous trees and shrubs used in Northwest gardens along with their culture and use. Be prepared to arrive and depart from fieldtrip sites on your own.

## **Deciduous Plant Identification**

HORT 108, 5 Credits

Learn to recognize the principal deciduous, flowering trees and shrubs used in Northwest gardens along with their culture and use. Be prepared to arrive and depart from fieldtrip sites on your own.

## **Soils and Plant Nutrition**

HORT 109, 5 Credits

Soils of Puget Sound including their chemical, physical and mechanical properties. Native soils, commercial mixes, soil testing, soil amendments and application rates are covered. Prerequisite: Placement into BRDGE 093 or EAP 121 or higher. MATH 080 or higher, HORT 102 and 174 or instructor's permission.

## **Pest Management Principles and Chemical Safety**

HORT 110, 3 Credits

Introduction to the basic tenets of pest management, pesticide safety, and proper use of equipment. State license testing is required at an additional cost dependent upon type of test. Prerequisite: Placement into BRDGE 093 or EAP 121 or higher and MATH 080 or higher.

## **Plant Insects**

HORT 116, 4 Credits

Insect pests, predators and parasites of Pacific Northwest ornamentals; life cycles and damages; chemical and biological controls. Prerequisite: Placement into BRDGE 093 or higher and HORT 110 or instructor's permission. Students encouraged to have taken HORT 106, 107 and 108.

## **Pruning**

HORT 117, 3.5 Credits

Principles of pruning including tools, techniques, timing and special treatment of Northwest ornamentals. Field experience is stressed, including ladder use. Students must supply their own by-pass hand† pruners, folding saw, and rain gear.

## **Plant Diseases**

HORT 118, 5 Credits

Environmental problems, viruses, bacteria, fungi and nematodes: their life cycles and damages; cultural and chemical controls for landscape plants of the Northwest. Prerequisite: Placement into BRDGE 093 or EAP 121 or higher, HORT 102 or instructor's permission. Students encouraged to have taken HORT 106, 107, 108, 109 and 110.

## **Landscape Appreciation**

HORT 120, 2 Credits

This basic design course explores design elements and principles and their application in landscape design, maintenance, and other† fields of horticulture.

## **Interior Plants**

HORT 134, 3 Credits

Here's a class for anyone interested in tropical plants for home, office, commercial use or the conservatory. Learn to identify and care for the most popular species according to industry standards and trends. S/U grade option.

## **Special Topics**

HORT 155, 5 Credits

Classes, workshops or seminars of current interest in Horticulture.

## **Woody Plants for Gardeners**

HORT 160, 5 Credits

Interested in learning 250 of the most commonly used woody landscape plants? This class is a primer on trees and shrubs for Northwest gardens. Be prepared to arrive and depart from field sites on your own.

**Landscape Studies**

HORT 170, 3 Credits

Introduces students to basic landscape installation and maintenance practices, balling and burlapping, lawn and bed maintenance; proper planting techniques. Safe and efficient operation of equipment is stressed. S/U grade option.

**Landscape Studies**

HORT 171, 3 Credits

Introduction to basic landscape installation and maintenance practices, woodworking tools, paving, transplanting, and more. Safe and efficient operation of equipment is stressed. Further practice from goals in HORT 170. S/U grade option.

**Landscape Studies**

HORT 172, 3 Credits

Introduction to basic landscape installation and maintenance practices: shrub/tree planting, staking, turf aeration/thatching, mowing, edging, fertilizing, and more. Safe and efficient operation of equipment is stressed. S/U grade option.

**Landscape Studies**

HORT 173, 3 Credits

Introduction to basic landscape and maintenance practices: installation of plants and their maintenance, turf management, pest management approaches, small installation project. Safe and efficient operation of equipment stressed. S/U option.

**Landscape Materials**

HORT 174, 3 Credits

Selection, use and sizing of materials and plants for landscaping and nursery use. Estimating quantities of materials for typical horticultural applications. Prerequisite: Placement into MATH 080 or higher.

**Horticulture Internship**

HORT 191, 1-5 Credits

Independent training experience at horticultural institutions, businesses, or with professional mentors. Students are directly involved with development of planning of projects and their objectives. S/U grade option. Registration by entry code only.

**Horticultural Careers**

HORT 192, 1 Credit

Overview of horticultural careers, industry professionals present career information to familiarize students with career choices, requirements, benefits, and challenges. S/U grade option.

**Introduction to the Nursery and Greenhouse**

HORT 196, 3 Credits

Explore greenhouse/nursery operations and basic plant production requirements in a hands-on approach to learning at our College nursery facility. Field trips to commercial operations. S/U grade option.

**Individual Project in Horticulture**

HORT 198, 1-5 Credits

Independent study of a student-selected project or approved experience in the field of horticulture. S/U grade option. Prerequisite: Instructor's permission.

**Special Projects**

HORT 199, 5 Credits

Requires research in areas not specifically covered in other course work. Note: Credit available with approval. S/U grade option.

**Horticulture Taxonomy**

HORT 201, 2 Credits

A study of the classification and relationships within the major families and select taxa of ornamental plants including the use of keys and the rules of nomenclature. Prerequisite: HORT 102 or instructor's permission.

**Ferns and Fern Allies**

HORT 204, 2 Credits

Learn to recognize, grow, and propagate an ancient group of plants that predated the dinosaurs, provided their food, and outlived them to become coveted garden plants for people. S/U grade option.

**Herbs**

HORT 205, 1 Credit

Herbs, their culture and uses, selection of superior forms and considerations of ethnic heritage surveyed with hands-on project of potted herb garden to take home. S/U grade option.

**Rhododendrons and Azaleas**

HORT 206, 3 Credits

A huge and fascinating genus of ornamental plants; join us in a survey of the most important species and hybrids for Northwest gardens that will include their identification and culture. Be prepared to arrive and depart from fieldtrip sites on your own. S/U grade option.

**Native Plants in the Landscape**

HORT 207, 3 Credits

Identify principal native plant communities of Western Washington through class work and field trips. Examine cultural requirements and garden attributes. S/U grade option.

**Mixed Border Practicum**

HORT 210, 2 Credits

Hands-on experience in the management and care of large, mixed herbaceous borders. Class may include seed collection, pruning, soil prep, mulching, weeding, propagation, transplanting, design, and renovation of the borders at Bellevue Botanical Garden.

**Spring Flowering Herbaceous Plants**

HORT 211, 3.5 Credits

Spring flowering annuals, bulbs and perennials for Northwest gardens; learn to identify, appreciate and utilize this season's noteworthy stars as you visit them in a variety of settings. S/U grade option. Prerequisite: HORT 102. Field trips are an integral part of this class. Be prepared to arrive and depart from the sites on your own.

**Summer Flowering Herbaceous Plants**

HORT 212, 3.5 Credits

Summer flowering annuals, bulbs and perennials for Northwest gardens; learn to identify, appreciate and utilize this season's noteworthy stars as you visit them in a variety of settings. S/U grade option. Prerequisite: HORT 102. Field trips are an integral part of this class. Be prepared to arrive and depart from the sites on your own.

**Fall Flowering Herbaceous Plants**

HORT 213, 2.5 Credits

Fall flowering annuals, bulbs and perennials for Northwest gardens; learn to identify, appreciate and utilize this season's noteworthy stars as you visit them in a variety of settings. S/U grade option. Prerequisite: HORT 102. Field trips are an integral part of this class. Be prepared to arrive and depart from the sites on your own.

**Hedges, Screens and Espaliers**

HORT 218, 1 Credit

The selection of plant for hedges and special approaches (espalier, pleaching, etc.). Pruning, renovation, site preparation and planting are covered. A field trip is integral to this class. Be prepared to arrive and depart from the site on your own. S/U grade option.

**Introduction to Roses**

HORT 219, 2 Credits

Includes all aspects of the rose: cultivation, uses in the landscape, hybridizing, different classifications of roses, and some of their historical background. S/U grade option.

**Plants in the Landscape**

HORT 221, 3 Credits

Not only a review of outside woody plants but also a look at how they can be used in the landscape keeping in mind their environmental tolerances and aesthetic qualities. Successful plant combinations will be explored with on-site visitations. S/U grade option. Prerequisite: HORT 106, 107, and 108 or instructor's permission.

**Japanese Garden Arts**

HORT 223, 2 Credits

Exploration of Japanese gardens in reference to the American landscape. Topics discussed include history, design, construction and maintenance. S/U grade option.

**Design Presentation**

HORT 224, 3 Credits

Provides background training in the creation of a professional appearing plot plan. Topics includes scales, lettering, and layout for a legible plan. Learn basics of section/elevations and perspective sketching. S/U grade option.

**Advanced Plant Identification**

HORT 225, 5 Credits

Less common but available woody ornamentals are covered as well as their culture and landscape uses. Field trips are an integral part of this class. Be prepared to arrive and depart on your own. S/U grade option. Prerequisite: HORT 106, 107, and 108 or instructor's permission.

**Introduction to Rock Plants**

HORT 226, 2 Credits

Introduction to cultivation of alpine and rock garden plants in the PNW. Topics include common and rare plants, rock gardening, and alpines in pots. S/U grade option.

**Container Gardening**

HORT 227, 2 Credits

Bold, calm, cute or zany. Take a close look at container gardens and the types of plants that make for effective displays. Soils, drainage, weight, fertilizers, exposure, and plant combinations are considered. Practical experience in planning container combinations.

**Field Sketching**

HORT 228, 3 Credits

Drawing techniques that will help develop ideas and facilitate designer/client communication. Class will include field trips to area gardens for sketching practice.

**Plant Propagation**

HORT 229, 3 Credits

Hands-on introduction to seed collecting, treatment, germination; handling, preparation, treatment and rooting of cuttings; grafting tools and the preparation of grafts; and a fieldtrip to examine how micropropagation in tissue culture is accomplished. S/U grade option.

**Micropropagation Laboratory**

HORT 231, 1 Credit

A hands-on laboratory to prepare and produce plants using micropropagation. Prerequisite: HORT 229 recommended.

**Grafting**

HORT 232, 1 Credit

Hands-on laboratory to prepare and graft several kinds of plants to take home. S/U grade option.

**Seed Propagation Lab**

HORT 233, 1 Credit

Hands-on laboratory to gain additional experience propagating plants from seed with an in-depth examination of seed selection, the development of seed lines and seed germination requirements. Prerequisite: HORT 229 recommended.

**Hardwood Cuttings Lab**

HORT 234, 1 Credit

Hands-on laboratory with a special focus on the handling, preparation, treatment, and rooting of hardwood cuttings with an in-depth examination of the special attributes of hardwood cutting propagation. Prerequisite: HORT 229 recommended.

**Greenhouse Design and Management**

HORT 235, 3 Credits

A study of greenhouse structures and the management of the greenhouse environment including greenhouse light and lighting, air movement and temperature control along with irrigation and other production issues. Prerequisite: Placement into BRDGE 093 or higher.

**Wholesale Nursery Operations**

HORT 236, 3 Credits

Explore the principal facets of wholesale nursery operation and management including spatial organization, facilities, plant production systems, and marketing. Prerequisite: Placement into BRDGE 093 or higher, HORT 102 and 196 or instructor's permission.

**Bulbs and Bulb Gardening**

HORT 238, 2.5 Credits

Explore the wondrous world of bulb gardening. Learn how to incorporate hardy bulbs like daffodils and galanthus into your landscape. Want spring color in the winter? Learn the techniques of forcing bulbs. S/U grade option.

**Intro to Arboriculture**

HORT 242, 3 Credits

Covers basics of arboriculture and tree management, including tree physiology, selection, maintenance and common landscape problems. International Society of Arboriculture (ISA) standards will be discussed. S/U grade option.

**Urban Forestry**

HORT 243, 1 Credit

An exploration of urban forest practices focusing on community involvement. Prerequisite: HORT 242

**Growing Fruits and Nuts in Western Washington**

HORT 247, 2.5 Credits

Comprehensive look at fruit and nut varieties, including vining and bush fruits, suitable for growing in Western Washington. Emphasis on how to provide proper growing conditions, cope with pests, and integrate these food producing plants into the landscape. S/U grade option.

**Codes, Statutes and Rules**

HORT 248, 1 Credit

A review of important codes, statutes, and rules affecting restoration horticulture and the legal research processes necessary to stay up to date on them.

**Pacific Northwest Land and Water Issues**

HORT 249, 3 Credits

Introduction to land and water resource use, conflicts, and resource management issues in the Pacific Northwest.

**Prerequisite:** GEOG 150 or concurrently enrolled, and/or instructor's permission.

**Introduction to Restoration Ecology**

HORT 250, 3 Credits

Introduction to the basic tenets of restoration ecology with a focus on the re-vegetation and repair of degraded and abandoned land as well as mitigating urbanization.

**Horticultural Restoration**

HORT 251, 5 Credits

Learn the horticultural details associated with ecological restoration with applied projects in re-vegetation and habitat restoration supported with classroom instruction.

**Horticultural Seminars**

HORT 255, 5 Credits

Subject matter of topical interest. S/U grade option.

**Landscape Design I**

HORT 262, 6 Credits

Residential landscape design based on a seven step process. This class is for the professional with emphasis on usable outdoor spaces.

**Prerequisite:** Placement into BRDGE 93 or higher, HORT 120 and 224 or instructor's permission

**Landscape Design II**

HORT 263, 6 Credits

Continuation of planting design principles from HORT 262 applied to residential and small commercial landscapes. Design and preparation of planting plans and schedules. Professional presentation emphasized. **Prerequisite:** Placement into BRDGE 093 or higher, HORT 106, 107, 108, 224, 262 or instructor's permission.

**CADD for Landscape**

HORT 264, 3 Credits

Intro to computer-aided drafting using professional CADD software as a tool for landscape design. Navigate CADD to generate base and planting plans, import/export to AutoCAD, and utilize a labeling program that provides plant lists and bid packages. **Prerequisite:** Placement into BRDGE 093 or higher and MATH 080 or higher. Basic proficiency in navigating a MS Windows 98/2000/XP environment. HORT 262 or equivalent.

**History of Garden Design**

HORT 266, 3 Credits

An overview of cultural expressions on the land from ancient to modern times. Emphasis mainly on Western cultures but also on Japanese and Chinese influences. The modern American garden and landscape will be studied in context to its origins and potentials. S/U grade option.

**Landscaping for Wildlife**

HORT 267, 3 Credits

How to design, install, and maintain landscapes that benefit both people and wildlife. Information on Puget Sound wildlife, wildlife plants, and wildlife enhancement features will be presented. S/U grade option.

**Horticulture Business Practices**

HORT 269, 3 Credits

Introduction to business practices essential to the operation of a successful landscape or nursery business. Basic record keeping, planning, bidding, contracts, and responsibilities. **Prerequisite:** Placement into BRDGE 093 or higher and MATH 080 or higher. Knowledge of Word and Excel recommended.

**Restorative Design**

HORT 270, 3 Credits

Survey of designed features, mitigations, and other constructs to enhance and/or restore ecological function in the landscape.

**Prerequisite:** HORT 251.

**Community Development**

HORT 271, 2 Credits

Professional development training, organizational capacity-building, project planning, and leadership training in community development with a focus on mobilizing residents, enhancing community social and natural capital, and locating project funding.

**Landscape Construction Techniques-Wood**

HORT 275, 3.5 Credits

Introduces basic wood construction techniques and the use of basic hand and power tools. Students will become familiar with choosing appropriate wood products and fasteners as well as practice skills through the construction of some simple carpentry projects.

**Prerequisite:** Placement into MATH 080 or higher, HORT 103, 174.

**Landscape Construction Techniques-Concrete/Stone**

HORT 276, 3.5 Credits

Introduces basic concrete and masonry construction techniques. Appropriate material choices and site preparation included. Students practice skills through construction of simple projects. **Prerequisite:** Placement into MATH 080 or higher, HORT 103, 174.

**Landscape Lighting**

HORT 277, 1 Credit

Technical knowledge and skills to create more garden visibility, drama and exotic nighttime effects with lights. S/U grade.

**Prerequisite:** MATH 080 placement or instructor's permission.

**Landscape Construction Design**

HORT 278, 4 Credits

Covers the preparation of landscape construction drawings including layout, grading and construction details. Basic drafting conventions and techniques are also taught and practiced. This course parallels landscape construction classes, HORT 275 and 276. **Prerequisite:** HORT 174 and placement into MATH 080 or higher.

**Landscape Bidding and Estimating**

HORT 279, 3 Credits

Learn how to sell jobs, write contracts, cost out time, materials, and job overhead as well as profit and loss calculations, and managing change orders. S/U grade option. Prerequisite: HORT 174 or departmental permission; placement into MATH 130 or higher.

**Weed Identification and Management**

HORT 280, 3 Credits

Know your weeds and their weak points to better manage them in landscapes and nurseries; chemical and non-chemical programs. Prerequisite: HORT 110 or instructor's permission and placement into MATH 080 or higher.

**Lawn Establishment**

HORT 281, 1 Credit

Class covers lawn installation, including soil and site preparation, sodding and seeding. Students will practice techniques.

**Lawn Maintenance**

HORT 282, 1 Credit

Best practice techniques to keep lawns looking great with minimum damage to the environment. Topics include watering, fertilizing, thatching and aerating, topdressing and mowing. Students will practice techniques.

**Groundcovers**

HORT 283, 1 Credit

Viable alternatives to turf as well as plantings beneath shrubs and trees; consideration given to difficult sites where turf is not an option. A field trip is integral to this class. Be prepared to arrive and depart on your own.

**Irrigation Design**

HORT 284, 5 Credits

Wise use of water from proper system design and installation through maintenance and management. Learn the most effective way to water a landscape including head spacing, hydraulics, installation and controller scheduling. Efficient water use stressed.

**Landscape Maintenance and Renovation**

HORT 286, 4 Credits

Design and maintenance are blended into renovation issues. Site analysis of existing plants and problems such as insects, diseases, spacing, etc. are worked into projected plans and management scheduling. Hands-on project and site project required.

Prerequisites: HORT 106, 107, 108, 109, 117, 118.

Placement into MATH 080 or higher.

**Low Volume Irrigation**

HORT 287, 2 Credits

Interpret, assemble, and design low-volume irrigation, including drip systems, in context with landscape design/existing gardens as a designer, installer, and maintenance professional. Prerequisite: Placement into MATH 080 or higher.

**Irrigation Auditing**

HORT 288, 1 Credit

The newest phase of water management including how to audit existing and proposed landscapes. Includes both theory and demonstrations. Prerequisite: MATH 080 placement or instructor's permission.

**Final Project**

HORT 295, 1 Credit

The second year project is oriented toward career goals using training and experience in a practical demonstration of competency. The project should be taken during the last two quarters of your program and arranged with your advisor. S/U grade option. Prerequisite: Registration by entry code only.

**Greenhouse/Nursery Practicum I**

HORT 296, 3 Credits

The summary course for second year nursery/greenhouse students involving the production of crops. HORT 297 should follow. S/U grade option.

**Greenhouse/Nursery Practicum II**

HORT 297, 3 Credits

Continuation of HORT 296 focusing on the continued production and growth of greenhouse and/or nursery crops. S/U grade option. Prerequisite: HORT 296 or instructor's permission.

**Individual Project in Horticulture**

HORT 298, 1-5 Credits

Study of student-selected project or approved experience in the field of horticulture. S/U grade option. Prerequisite: Instructor's permission.