Horticulture Student Information Packet

Naugatuck Valley Community College

750 Chase Parkway, Waterbury CT 06708

Contents

Program Contact Information

Christopher Tuccio
Program Coordinator, Instructor of Horticulture
(203) 596-8634
Office #: E424
Ctuccio@nvcc.commnet.edu

Robert Herman
Instructor of Horticulture
(203) 596-8776
Office #: 314
Rherman@nvcc.commnet.edu

Math/Science Division Office
(203) 575-8063
(203) 575-8065

Associate Degree Program Description | Horticulture

Program Description

The Horticulture Program is designed as a career program leading to the associate in science degree. The goal of the Horticulture Program is to prepare students for employment in landscaping, garden centers, greenhouses, or related businesses and for further education. The program includes the completion of two full years of study and an appropriate supervised cooperative work experience with cooperative nurseries, landscape businesses and greenhouses.

The transfer program articulated with UConn guarantees admission with complete transfer of NVCC courses. (See the NVCC website or the Horticulture Department for details.) This is a Professional Landcare Network (Planet) accredited program. NVCC is a member of the CT Nursing Landscape Association, CT Greenhouse Growers Association and CT Florist Association.

Program Course Track

First Semester

Course	Description	Credit Hours
ENG H101	Composition	3
BIO H155	General Botany	4
HRT H101	Landscape Mechanics	4
HRT H102	Woody Plants	3
HRT H103	Herbaceous Plants	3
		17

Second Semester

Course	Description	Credit Hours
COM H100	Introduction to Communication	3
PSY H111	General Psychology I	3
HRT H222	Greenhouse Management I	4
ENV H240	Principles of Soil & Water Resources	3
Elective +	Horticulture Elective A	3
		16

Third Semester

Course	Description	Credit Hours
ENG H102	Literature & Composition	3
HRT H215	Pest Control in Ornamentals/Turf	3
Elective +	Horticulture Elective B	3

Elective +	Horticulture Elective C	3-4
Elective +	Horticulture Elective D	3
		15-16

Fourth Semester

Course	Description	Credit Hours
HRT H290	CWE: Cooperative Work Experience	3
Elective +	Horticulture Elective E	3
Elective +	Horticulture Elective F	3
Elective +	Horticulture Elective G	3-4
Elective	Arts & Humanities Elective	3
Elective	Behavioral or Social Science Elective	3
		18-19

Electives +

Horticulture Elective (A)

MAT H121	App. For Business & Other Careers	3
MAT H135	Topics in Contemporary Mathematics	3

Horticulture Elective (B)

HRT H124	Floral Design I	3
HRT H202	Landscape Design I	3

Horticulture Elective (C)

HRT H115	Turf Management	3
HRT H223	Greenhouse Management II	4
HRT H204	Landscape Design III	3

Horticulture Elective (D)

HRT H105	Fruit & Vegetable Production	3
HRT H207	Landscape Maintenance	3

Horticulture Elective (E)

BBG H101	Introduction to Business	3
BES H118	Small Business Management	3

Horticulture Elective (F)		
HRT H125	Floral Design II	3
HRT H203	Landscape Design II	3
HRT H240	Nursery Management	3

Horticulture Elective (G)		
HRT H206	Landscaping Small Properties	3
HRT H219	Arboriculture	3
HRT H224	Plant Propagation & Hybridization	4

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Relate basic knowledge of botany, chemistry, and soils to plant growth and culture.
2. Identify the skills needed to organize thoughts and ideas, and demonstrate the ability to communicate, verbally and in writing, in a manner that can be easily understood.
3. Solve mathematics problems related to the use of soil amendments, fertilizers, and plant growth control chemicals, and apply effective cost estimating, pricing, and record keeping techniques.
4. Identify common trees and shrubs, ground covers, various annuals, biennials, and perennials by botanical and common names, and describe the outstanding characteristics of each; summarize landscape, garden center, and greenhouse uses and cultural requirements of these plants.
5. Identify foliage plants commonly used indoors by botanical and common names, state distinguishing characteristics of each, and describe their use and culture in various indoor landscape areas.
6. Select the proper procedures, define the physiological basis, and describe practical applications of the reproduction of plants by asexual and sexual methods.
7. Describe proper design and operation of greenhouse environmental systems, and evaluate their advantages and disadvantages in commercial production.

8. Summarize and assess plant growth requirements for commercial production of greenhouse crops, and economically produce a crop from seed or cutting to harvest and sales.
9. Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the world of work.
10. Select appropriate techniques for the establishment and management of lawns and utility turf areas.
11. Manage the procedures used in landscape constructions and in the maintenance of small engines.
12. Design flower beds, mixed borders, price trees and shrubs for a variety of gardens, for both residential and commercial properties.
13. Create, manage and gain profit from running a small landscaping business.
14. Access available resources to incorporate technological innovations.
15. Evaluate and design landscapes that compliment the community, highlight the home, and meet the needs of the client.
16. Demonstrate skills in planning and successfully producing fruit and vegetables commercially and residentially.

Horticulture Certificate

Program Description

The Horticulture certificate program is designed to develop the skills and understanding needed for students to take responsible positions in grounds maintenance, tree and shrub nurseries, wholesale plant growing, landscaping, garden centers and retail greenhouses, golf courses, lawn care, and parks/recreation departments. The certificate will be awarded on completion of all courses and a cooperative work experience.

Program Course Track

Course	Description	Credit Hours
HRT H101	Landscape Mechanics	4
HRT H102	Woody Plants	3
HRT H103	Herbaceous Plants	3
HRT H207	Landscape Maintenance	3
HRT H222	Greenhouse Management I	4
HRT H290	CWE: Cooperative Work Experience	3
Elective +	Horticulture Elective A	3
Elective +	Horticulture Elective B	3-4
Elective +	Horticulture Elective C	3-4
		29-31

Horticulture Elective (A)		
HRT H124	Floral Design I	3
HRT H202	Landscape Design I	3

Horticulture Elective (B)		
HRT H219	Arboriculture	3
HRT H224	Plant Propagation & Hybridization	4

Horticulture Elective (C)		
HRT H105	Fruit & Vegetable Production	3
HRT H115	Turf Management	3
HRT H203	Landscape Design II	3
HRT H204	Landscape Design III	3
HRT H206	Landscaping Small Properties	3

HRT H223	Greenhouse Management II	4
HRT H215	Pest Control in Ornamentals/Turf	3
HRT H240	Nursery Management	3

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify common trees and shrubs, ground covers, various annuals, biennials, and perennials by botanical and common names, and describe the outstanding characteristics of each; summarize landscape, garden center and greenhouse uses; and know the cultural requirements of these plants.
2. Identify foliage plants commonly used indoors by botanical and common names, state distinguishing characteristics of each, and describe their use and culture in various indoor landscape areas.
3. Control the common weeds, insects, pests and diseases of ornamentals and turf.
4. Select the proper procedures, define the physiological basis, and describe practical applications of the reproduction of plants by asexual and sexual methods.
5. Describe proper design and operation of greenhouse environmental systems, and evaluate their advantages and disadvantages in commercial production.
6. Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the world of work.
7. Select appropriate techniques for the establishment and management of lawns and utility turf areas.
8. Manage the procedures used in landscape constructions and in the maintenance of small engines.
9. Design flower beds, and mixed borders; place trees and shrubs for a variety of gardens for both residential and commercial properties.
10. Access available resources to incorporate technological innovations.
11. Demonstrate those skills, abilities and values which allow a person to function as a free and responsible citizen.
12. Apply mathematics to calculating area, volume and application rates of fertilizers and pesticides.
13. Evaluate site conditions to design attractive, functional landscapes.

Certificate Program Description | Landscape Design

Program Description

The Horticulture Landscape Design Certificate is designed to prepare students for certification as Professional Landscape Designers. The certificate is designed to develop those skills in plant identification and culture, landscape mechanical skills, maintenance of landscapes, as well as hand drawing and sketching, computer aided designing portfolio assessments, leading to certification by the American Professional Landscape Designers. This program is affiliated with American Professional Landscape Design Association (ALCA).

Program Course Track

Course	Description	Credit Hours
HRT H101	Landscape Mechanics	4
HRT H102	Woody Plants	3
HRT H103	Herbaceous Plants	3
HRT H202	Landscape Design I	3
HRT H203	Landscape Design II	3
HRT H204	Landscape Design III	3
HRT H206	Landscaping Small Properties	3
HRT H207	Landscape Maintenance	3
Elective +	Horticulture Elective A	3
		28

Horticulture Elective A

ART H111	Drawing I	3
HRT H290	CWE: Cooperative Work Experience	3

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify the current repertoire of trees, shrubs, ground covers, vines, annuals, biennials, and perennials by botanical and common names, describe the outstanding characteristics of each; summarize landscape

uses, know their cultural requirements; design herbaceous and mixed borders.

2. Evaluate landscape areas and needs; select and place plants in a design; design and place hardscape features in a landscape; draw plans using traditional equipment and computer-aided tools; outline techniques for low maintenance needs in both residential and commercial properties.
3. Transfer portions of aerial designs into perceptual designs, using sketching techniques; develop a plan for pricing out landscape projects and bids; demonstrate oral skills to clients on design ideas; design landscape garden plans using computer design programs; manipulate computer designs to illustrate to landscape design development over time.
4. Demonstrate how to bring color to the landscape through the four seasons with herbaceous and woody plants; how to establish and manage mass planting through the year.
5. Demonstrate and explain how to prune deciduous and evergreen trees and shrubs for a variety of purposes.
6. Interpret fertilizer needs for particular plants from the general recommendations of a soil analysis; recognize signs of nutrient deficiency.
7. Demonstrate techniques for designing small properties; plan and select plants for different kinds of gardens (examples: for woods, meadows, marshes, water, rock gardens).
8. Relate the historical development of the garden through the ages and be able to recognize the contributions and influences of great designers on gardens today.
9. Relate and demonstrate how to use all the subtleties of color and design in the garden in two dimensional and three dimensional formats.
10. Initiate, develop and present a significant design as an independent study project.
11. Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the world of work.
12. Access available resources to incorporate technological innovations.
13. Be prepared for certification as a Professional Landscape Designer.
14. Initiate landscape design through computer-aided programs.

Course Descriptions

HRT*H101 Landscape Mechanics 4 Credits
This course provides applied experiences in assorted construction techniques necessary in the development of landscapes and the selection and maintenance of small engines. Included are a survey of construction materials, deck design and construction, patio and walkway installation, stone wall construction, fencing, retaining wall design and construction. Earthwork calculations, measuring and materials estimating are included. Actual field exercises will be provided.

HRT*H102 Woody Plants 3 Credits
This is a basic introduction to common desirable, deciduous and evergreen trees, shrubs and vines for the natural and cultivated landscape. The course emphasizes identification as well as learning the attributes, growth habits and cultural needs of the plants. Nomenclature and fundamental tree biology are discussed.

HRT*H103 Herbaceous Plants 3 Credits
This course provides instruction in the identification and selection of annual and perennial herbaceous plants for various habitats. Students will develop an understanding of the plants' ornamental value in garden and landscape design, based on flowers, foliage, form and adaptability to the environment.

HRT*H105 Fruit and Vegetable Production 3 Credits
Primarily a course for residential vegetable and fruit cultivation, the course provides basic knowledge and methods that can be applied on the commercial level as well. Included are topics on site selection and soil preparation, planting, pruning, fertilization and general cultivation of vegetables, small bush and large tree fruits.

HRT*H115 Turf Management 3 Credits
The establishment and maintenance of turf grass are studied in the course. Lawn, golf course, and athletic field care are emphasized. Students will also learn to identify the turf grasses, identify and control weeds, insects, pests and diseases.

HRT*H124 Floral Design I 3 Credits
The basic principles of design as applied to the art of floral arranging are examined and flower shop management operation.

HRT*H125 Floral Design II 3 Credits
This is a continuation of HRT*H124. Emphasis will be placed on commercial floral design.

HRT*H202 Landscape Design I 3 Credits
Pre-requisite: HRT*H102. This course provides students with the basic knowledge and skills to create a successful landscape plan. Starting with the proper placement and design of driveways and walkways, it guides the student through the stages of developing an entire residential property. Appropriate plant selection is based on site characteristics and design principles and elements.

HRT*H203 Landscape Design II 3 Credits
Prerequisite: HRT*H202 or permission of instructor. This course is designed as a continuation of HRT*H202. This course will aid students in developing skills in perceptual design, job bidding, as well as give an introduction to computer aided drafting, as related to horticulture landscaping.

HRT*H204 Landscape Design III 3 Credits
Prerequisite HRT*H203. This course is designed as a continuation of HRT*H203. It prepares students for portfolio assessment and capstone projects using hand sketching skills and Pro- Landscape, CAD design software. Within this CAD program students will learn 2 dimensional landscape design, overhead design, (Planner Drawing), and development of pricing quotes. This course is designed for students interested in preparation for certification as Professional Landscape Designers.

HRT*H206 Landscaping Small Properties 3 Credits
This course complements and enhances HRT*H202, Landscape Design. It covers the evolution of garden design, an analysis of color relationships in design, and how to plan different kinds of gardens.

HRT*H207 Landscape Maintenance 3 Credits
This course is designed to assist the professional and amateur landscape gardener to maintain their gardens through an understanding of plant growth, pruning, nutrition, propagation, etc. The course also includes landscape estimating.

HRT*H215 Pest Control in Ornamentals and Turf 3 Credits
This course teaches students how to control pests in trees, shrubs, gardens and greenhouses. Detailed studies of the life histories of the pests are a background to learning some of the techniques of integrated pest management. However, the responsible and safe use of pesticides is emphasized throughout the course. This is a useful preparation for the certification of commercial pesticide applicators and arborists.

HRT*H219 Arboriculture 3 Credits
This course is designed to prepare landscapers for the State Arborist Exam. Topics include the biology, identification, selection, planting, management, preservation of trees and diagnosis of tree problems. It is recommended that if students lack extensive work experience they should have taken HRT*H102 (Woody Plants) and HRT*H215 (Pest Control) before taking the State Arborist Exam.

HRT*H222 Greenhouse Management I 4 Credits
This course focuses on the selection, production and management of greenhouse and bedding plants, interior plantscape management and design, management of annuals and perennials. Plant physiology is related to the Environmental effects on plant growth.

HRT*H223 Greenhouse Management II 4 Credits
Prerequisite: HRT*H222 or permission of instructor. This course is a continued in-depth study of the commercial greenhouse industry. It is a complement to

HRT*H222. Included in the course is an in-depth look at the production of greenhouse crops, disease, and insect control. Interior plant maintenance, soils testing, and development of production programs with the use of computer aided programs will be used to better understand plant growth.

HRT*H224 Plant Propagation & Hybridization 4 Credits
This course is an in-depth study of the world of plant reproduction and genetics. This course is a complement to other courses offered in the Horticulture degree and certificate program. This course will give students the theoretical and practical skills needed to reproduce plants asexually, and through micropropagation. Included will be the use of the college propagation facilities to facilitate learning.

HRT*H240 Nursery Management 3 Credits
Pre-requisites: HRT*H102 Woody Plants and HRT*H103 Herbaceous Plants or permission of program coordinator. This course provides a basic understanding of how to start and manage a commercial plant nursery. Site and Crop selection, irrigation and nutrition management will be addressed. Students will study the principles and practices of nursery crop production as well as fundamental business organization and marketing. Course activities include field trips to nursery sites.

HRT*H290 CWE/Horticulture Co-Op 3 Credits
Prerequisite 12 credits in Horticulture, “C” or better, and permission of Horticulture Coordinator, or Division Director. This course involves a work experience, special project, independent study or course substitution which will vary according to the student's needs and interests. A written report and weekly journal will be required and evaluated at the end of the course. Conferences among students, work study supervisory agency, and faculty facilitator will be held during the semester. A 2 hour orientation/planning workshop at the beginning of the Co-Op is required.

UCONN Transfer Equivalencies

Revised: April 13, 2011

Description

Transfer courses are either considered ***equivalent*** to courses offered at UConn (the course is assigned a four-digit course number in a UConn department and you will find the equivalent course listed in the UConn General Catalog); **or**, are assigned a generic five-digit course number beginning with the number '9' (e.g., PSYC 91000 indicates credit for a Psychology 1000 level elective).

NVCC Recommended Courses for Associate of Horticulture Degree

HRT H101	Landscape Mechanics	4
UCONN: PLSC 91000 Level		
HRT H102	Woody Plants	3
UCONN: PLSC 91000 Level		
HRT H103	Herbaceous Plants	3
UCONN: HORT 2430 (Herbaceous Ornamental Plants)		
HRT H105	Fruit & Vegetable Production	3
UCONN: PLSC 91000 Level		
HRT H115	Turf Management	3
UCONN: TURF 1100 (Turfgrass Management)		
HRT H124	Floral Design I	3
UCONN: HORT 2520 (Floral Art)		
HRT H125	Floral Design II	3
UCONN: HORT 3530 (Advanced Floral Design)		
HRT H202	Landscape Design I	3
None		
HRT H203	Landscape Design II	3

None

HRT H204 Landscape Design III 3
None

HRT H206 Landscaping Small Properties 3
None

HRT H207 Landscape Maintenance 3
UCONN: PLSC 92000 Level

HRT H215 Pest Control in Ornamentals/Turf 3
UCONN: PLSC 3830 (Insect Pests of Ornamentals and Turf)

HRT H219 Arboriculture 3
None

HRT H222 Greenhouse Management I 4
UCONN: PLSC 91000 Level

HRT H223 Greenhouse Management II 4
UCONN: PLSC 92000 Level

HRT H224 Plant Propagation & Hybridization 4
UCONN: PLSC 92000 Level

HRT H240 Nursery Management 3

HRT H290 CWE: Cooperative Work Experience 3