

# HORTICULTURE (DHRT)

## **DHRT\*1000 Landscape Management Fall Only (LEC: 2, LAB: 3) [0.50]**

The use of hand tools, power machinery, and traditional and contemporary methods in the on-going maintenance of landscape installations will be presented, along with proper equipment operation and safety.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*1050 Plant Identification I Fall Only (LEC: 3, LAB: 2) [0.50]**

This course provides an introduction to the identification of common exterior and interior landscape plants and plant families. Students will learn to identify plants by sight through recognition of subtle differences. Botanical names will be taught. Growing requirements, physical features, ornamental characteristics and potential landscape uses will be discussed.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*2000 Greenhouse Management Fall Only (LEC: 3, LAB: 2) [0.50]**

Students will learn the basics of greenhouse design and use. Topics such as structures, ventilation, heating, supplemental lighting, relative humidity, irrigation, fertility management and CO<sub>2</sub> enrichment will be included. Management and cultural principles of commercial production of various horticultural crops in greenhouses will be used to illustrate management strategies.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*2090 Introduction to Landscape Construction Winter Only (LEC: 2, LAB: 3) [0.50]**

This course will examine materials and combinations of materials commonly used in landscape structures. Construction methods and common practices for a variety of landscape projects will be described and demonstrated. Use of the survey level and rod for taking elevations and for projects layout will be demonstrated. Information given will be suitable for taking pertinent Certified Horticultural Technician examinations.

**Prerequisite(s):** DHRT\*1000

**Restriction(s):** Intended for Horticulture Diploma students.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*2100 Landscape Design Winter Only (LEC: 2, LAB: 3) [0.50]**

Students will study the principles of landscape design and learn how to integrate different design styles, different types of landscape materials, structures and plants to create an attractive residential living environment. Students will learn how to identify the design requirements of a site, choose appropriate plants or structures, arrange landscape components and draw a plan of the proposed layout. Introductory drafting techniques will be practiced.

**Prerequisite(s):** DHRT\*1050

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*2160 Greenhouse Control Systems Winter Only (LEC: 2, LAB: 1) [0.50]**

This course will explore computerized environmental control systems that allows growers the ability to integrate the control of all the systems involved in manipulating the greenhouse environment. While recognizing that specific systems for environmental control can vary and change from one greenhouse to the next, as well as over time, there are basic requirements for environmental control that all greenhouses must meet to be able to produce a successful crop.

**Prerequisite(s):** DHRT\*2000

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*2200 Plant Propagation Winter Only (LEC: 2, LAB: 2) [0.50]**

This course covers the principles and practices of propagation for horticultural plants. Sexual (seed) propagation to include seed maturation, dormancy and seed germination; vegetative (asexual) propagation, including division, layering, budding, grafting and tissue culture are also discussed.

**Prerequisite(s):** DAGR\*1200

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*2230 Soil and Water Use in Agroecosystems Winter Only (LEC: 3, LAB: 2) [0.50]**

This course examines the role of agriculture, landscape horticulture and nursery production on soil processes and properties, and water resources. The course will examine best management practices to conserve soil and water resources and enhance the quality of the ecosystems of which they are a part. In the course, soil and water conservation techniques including plant selection, xeriscaping, the use of ground covers, and dry shade gardening will be covered. The student will also be introduced to various aspects of the hydrologic cycle in the context of designing landscapes and production systems to reduce water use.

**Equate(s):** DHRT\*3230

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*2250 Horticultural Equipment Management Winter Only (LEC: 2, LAB: 3) [0.50]**

This course examines common equipment used for horticultural practices. The student will develop the skills and knowledge to be able to maintain, adjust and repair equipment used in horticulture. A focus on shop practices and use of shop tools will be covered. This course will emphasize safety in all aspects of operation and use of equipment.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

## **DHRT\*3050 Plant Identification II Fall Only (LEC: 3, LAB: 2) [0.50]**

This course continues the identification of exterior and interior landscape plants. Growing requirements, physical features, approximate size at maturity and aesthetic and functional roles will be discussed for each plant. Additional plant families, less common taxa and plant groups like ferns, orchids and bromeliads will be highlighted.

**Prerequisite(s):** DHRT\*1050

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*3120 Applied Landscape Construction Fall Only (LEC: 1, LAB: 4) [0.50]**

This course provides training and practice in applied landscape construction techniques and safe work habits. Structures such as walls, paved areas, fences, lighting, water features and planting areas will be laid out and installed. Construction practices including base preparation, installation, backfilling and completion/finishing will be explored under supervision of trained landscape design-build experts. Skills will be evaluated at the Certified Horticultural Technician (CHT) level.

**Prerequisite(s):** DHRT\*2090

**Restriction(s):** Intended for Horticulture Diploma students.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*3150 Nursery Management Fall Only (LEC: 3, LAB: 2) [0.50]**

The course covers the setup and organization of a horticultural nursery and the methods of production for field and container-grown landscape nursery stock including cultural management and merchandising in wholesale and retail operations.

**Prerequisite(s):** DHRT\*2200

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*3170 Horticultural Weed Science Fall Only (LEC: 3) [0.50]**

Identification of common weeds in horticulture, herbicide selectivity, and integrating mechanical, cultural and chemical control measures are the primary areas included in this course.

**Prerequisite(s):** DAGR\*1200

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*3180 Greenhouse Structures and Engineering Winter Only (LEC: 2, LAB: 2) [0.50]**

This course describes the component parts of a typical production greenhouse and will focus on the set-up and organization of the greenhouse. This includes greenhouse design and how design affects the greenhouse environment with respect to ventilation, temperature control, light and heat loss. Designing greenhouse facilities for labour efficiency, space utilization, energy and water use efficiency will also be examined.

**Prerequisite(s):** DHRT\*2000

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*3270 European Landscaped Garden Tour Fall Only (LEC: 1) [0.50]**

This course involves a 7 day field study tour to locations in Europe to visit and view formally and naturally landscaped historical gardens. Students will become familiar with the historical background of specific gardens, styles of landscape design and their combinations, and gain an appreciation of the effort and skill required to maintain historical gardens. An additional fee will be assessed per-student to cover the cost of transportation and accommodation.

**Prerequisite(s):** 5.00 credits

**Restriction(s):** Instructor consent required.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*3300 Greenhouse Ornamental Production Fall and Winter (LEC: 3, LAB: 2) [0.50]**

Production practices of selected greenhouse ornamental crops, pot crops and cut flower crops will be demonstrated.

**Prerequisite(s):** DHRT\*2000, DHRT\*2200

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*3510 Experiential Learning in Horticulture Summer, Fall, and Winter (LEC: 3) [0.50]**

Student-initiated learning opportunities can be developed as a credit course in consultation with a supervising faculty member. Details of the activities included in the program will be outlined in a learning contract initiated by the student and agreed to by the faculty supervisor prior to the commencement of the work experience.

**Prerequisite(s):** 4.00 credits

**Restriction(s):** DAGR\*3510, DFN\*3510 Registration in the Diploma Program in Horticulture.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*3910 Special Study Project Summer, Fall, and Winter [0.50]**

A self-directed student project focusing on a topic of academic and/or practical interest to the student. The student will identify and propose a detailed course outline to be reviewed and approved by the faculty supervisor prior to the commencement of the project. The project could include a research assignment, a literature review, a hands-on assignment with specific learning objectives and milestones for achieving these objectives.

**Prerequisite(s):** 4.00 credits

**Restriction(s):** DAGR\*3900, DFN\*3910 Registration in the Horticulture Diploma Program Written permission of the faculty supervisor.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*4000 Ornamental Plant Protection Winter Only (LEC: 3, LAB: 2) [0.50]**

This course is a study of the biology and control of insects and diseases of nursery, landscape, turfgrass and greenhouse crops. Approaches to integrated pest management are incorporated into control methods.

**Prerequisite(s):** DAGR\*1200, DHRT\*1050

**Restriction(s):** DHRT\*4200

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*4050 Certification and Safety Winter Only (LEC: 3, LAB: 2) [0.50]**

Students will learn the necessary information required to write examinations which are a legal requirement for anyone wishing to apply or sell pesticide products in Ontario. For interested students, licensing exams can be arranged with licensing authorities upon payment of relevant fees. Students will be introduced to federal and provincial legislation governing worker health and safety in the workplace. In particular WHMIS, risk analysis, poisoning, First Aid, labeling and storage & disposal are covered.

**Prerequisite(s):** DAGR\*1600

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*4150 Landscape Construction Project Winter Only (LEC: 2, LAB: 3) [0.50]**

Students will develop the capacity to develop a typical landscape construction structure and project installation through the preparation of working document and specification information. Codes, bylaws, and regulations governing the landscape construction segment of the horticulture industry will be discussed. Real-life scenarios - client wish lists, suitable sites, project requests - will be used to develop the skills and capabilities to outline typical landscape construction projects, including walls, decks, patios, fences and screens, water features, lighting, irrigation, and drainage.

**Prerequisite(s):** DHRT\*2090, DHRT\*3120

**Restriction(s):** Enrolment in the Horticulture Diploma program.

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*4190 Greenhouse Vegetable Production Winter Only (LEC: 3, LAB: 2) [0.50]**

This course covers production practices for major and some minor greenhouse vegetable crops. Students will apply management techniques to greenhouse vegetable production including fertility, production systems unique to vegetable production, insect and disease control, advanced computer controls of the environment and irrigation techniques.

**Prerequisite(s):** DHRT\*2000

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*4200 Greenhouse Vegetable Integrated Pest Management Winter Only (LEC: 3, LAB: 2) [0.50]**

This course will introduce students to integrated pest management (IPM) in the greenhouse, including cultural, biological, and chemical controls. Key components of effective pest and disease control programs include: crop monitoring, cultural control, resistant cultivars, biological control and chemical control.

**Prerequisite(s):** DHRT\*2000

**Restriction(s):** DHRT\*4000

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*4290 Advanced Greenhouse Management Winter Only (LEC: 3, LAB: 3) [0.50]**

This course will examine greenhouse production practices and how they integrate at the facility level with food safety, traceability, and biosecurity programs, and environmental regulations, with a particular focus on water and wastewater treatment in recirculation systems and sanitation procedures. Studies will also focus on greenhouse management strategies to optimize energy use, plant health, and quality, based on Next Generation Growing concepts. Concepts and strategies learned are applicable to both edible and ornamental crops, although practical demonstration will be with vegetable production. Production systems for alternative crops such as small fruits will also be examined.

**Prerequisite(s):** DHRT\*4190

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*4300 Arboriculture Winter Only (LEC: 2, LAB: 3) [0.50]**

This course will provide students with the opportunities to learn both the principles and the skills necessary to manage and care for trees in the landscape. Case studies will be used to help students develop the skills necessary to assess tree problems.

**Prerequisite(s):** DHRT\*1050

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus

**DHRT\*4320 Cannabis Production Winter Only (LEC: 3) [0.50]**

This course introduces the fundamental concepts for the production of Cannabis in Canada, from propagation to profit. We will cover the industry standard production techniques and laws governing Cannabis in Canada such as Cannabis tracking software, Integrated Pest Management, propagation, growth mediums, nutrient schedules, and lighting methods. Students will learn the anatomy, morphology and taxonomy of Cannabis indica, and Cannabis sativa.

**Prerequisite(s):** DHRT\*2000, DHRT\*2200

**Department(s):** Ridgetown Academic

**Location(s):** Ridgetown Campus