

# TURFGRASS MANAGEMENT (DTM)

## **DTM\*1000 The Turf Industry Fall Only (LEC: 1, LAB: 4) [0.50]**

This course introduces the turfgrass industry and the many disciplines within the industry. Economic and social importance of turfgrass is emphasized as is the complicated interactions among the different industry sectors. The course emphasizes learning through field trips to various turfgrass operations and operations that supply the turfgrass industry.

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

## **DTM\*1010 The Identification and Care of Landscape Plants in Turf Environments I Fall Only (LEC: 2, LAB: 2) [0.50]**

This course studies the recognition, identification, naming, physical features and cultivar adaptation of woody and herbaceous plants found in cultivated landscapes combined with turf. This course also practices maintenance techniques of herbaceous and woody plants (trees specifically) in golf courses, parks, lawns and other urban landscapes where trees and turfgrasses are featured. The focus of this course is to study and review plant examples in outdoor environments.

**Restriction(s):** DTM\*1400, DTM\*2500. Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

## **DTM\*1100 Plant Biology Fall Only (LEC: 3, LAB: 2) [0.50]**

This course covers the basic structure and function of plants and the major functions involved in growth and reproduction as they relate to the production of plants. Topics to be discussed will include: plant processes such as photosynthesis, respiration, transpiration, nutrient uptake and reproduction, basic genetic principles, basic chemistry and the relationship and importance of plant science to the agricultural, horticultural and turfgrass industries.

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

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

## **DTM\*1200 Turf Equipment Fall Only (LEC: 2, LAB: 2) [0.50]**

This course covers the equipment used as part of a turfgrass maintenance operation. The course emphasizes safe, efficient operation of equipment along with selection of equipment in a maintenance operation. The course also introduces the maintenance of small engines, hydraulic and electrical systems common to turfgrass equipment.

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

## **DTM\*1300 Turf Soil Principles Fall Only (LEC: 3, LAB: 2) [0.50]**

This course covers the basic concepts of naturally occurring soils and constructed rootzones used for turfgrass and landscapes. Physical, chemical and hydrological properties of soils and rootzones are emphasized in how they interact with turfgrass management. In addition, the course introduces primary and secondary nutrients and how soils impact their availability. Specific understanding of rootzones used in golf and sports turf is emphasized.

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

## **DTM\*1500 Turf Communication Skills Fall Only (LEC: 3) [0.50]**

The course provides students with practical communication skills required for supervisory positions in the turfgrass industry. Regular reading, writing and presenting exercises will enable students to develop skills in executing practical business communication strategies. Course content and delivery will reflect current trends in the turfgrass industry. Students will be required to work independently as well as in groups and may be required to meet and complete assignments outside of scheduled class time.

**Co-requisite(s):** DTM\*1000

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

## **DTM\*2000 Turf Management I Winter Only (LEC: 2, LAB: 3) [0.50]**

The course covers cultural management of turfgrasses used for different sectors of the turfgrass industry including: home lawns, industrial sites, roadsides, athletic fields, municipal sites, golf courses, and reclamation of land. Students in the course learn to properly identify cool season turfgrass species. Students are also introduced to the scientific method and will gain planning and organizational skills through the development of an independent experiment during the lab session.

**Prerequisite(s):** DTM\*1100, DTM\*1300

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

## **DTM\*2010 The Identification and Care of Landscape Plants in Turf Environments II Winter Only (LEC: 2, LAB: 2) [0.50]**

With a focus on teaching in classroom environments this course extends studies in the identification and understanding of biological and physical features of woody and herbaceous plants found in landscapes where healthy turf is a critical factor. Preferred growing requirements of such plants are also reviewed and evaluated. This course further explores the practice of, and the science behind, maintenance techniques for herbaceous and woody plants grown alongside turf.

**Prerequisite(s):** DTM\*1010

**Restriction(s):** DTM\*1400, DTM\*2500. Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*2100 Turf Irrigation and Drainage Winter Only (LEC: 2, LAB: 3) [0.50]**

This course covers water management through irrigation and drainage at sites including golf, sports and lawn turf. Students learn principles of drainage including design and installation of drainage systems. Design and maintenance of irrigation systems to provide effective water delivery are also emphasized.

**Prerequisite(s):** DTM\*1300

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*2200 Computers and Math for Turf Winter Only (LEC: 2, LAB: 3) [0.50]**

This course requires students to become proficient in the mathematical skills necessary to properly apply fertilizers and chemicals. The course also requires students to understand how to calculate areas and other skills essential in calibration of turfgrass equipment. The course introduces students to the variety of computing skills and information technologies prevalent in the turfgrass industry today. In addition, emerging technologies that assist the turfgrass professional moving into the future are discussed.

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

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*2400 Landscape Design Winter Only (LEC: 1, LAB: 3) [0.50]**

This course covers the principles of landscape design and how different designs, landscape materials, structures and plant materials are integrated to create attractive and functional outdoor environments. The course consists of an introduction to the theory of landscape design and incorporates significant studio time in which students create designs.

**Prerequisite(s):** DTM\*1010 or DTM\*1400

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*2600 Turf Environmental Management Winter Only (LEC: 2, LAB: 3) [0.50]**

This course covers the many environmental issues encountered by professional turfgrass managers in golf, sports and lawn turfgrass operations. The course addresses regulatory issues, waste management, environmental protection and monitoring, including both the turf and non-turf elements of the landscape. The course is designed to prepare students for landscape pesticide applicator licence exams in a number of jurisdictions.

**Prerequisite(s):** DTM\*1000, DTM\*1300

**Restriction(s):** DTM\*4100. Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*3000 Turf Management II Fall Only (LEC: 3, LAB: 2) [0.50]**

This course emphasizes interactions between turfgrass and its environment and how management impacts turfgrass playability and survival. This course addresses management of turfgrasses in highly managed areas of golf courses, sports fields and lawns. Students learn the principles of plant nutrition and the technologies and methods of proper fertilization. This course specifically addresses rootzone management and remediation of poor rootzones.

**Prerequisite(s):** DTM\*2000, DTM\*2100

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*3100 Current Turf Practices Fall Only (LEC: 3) [0.50]**

This course discusses and reflects on summer co-op work term experiences in the context of current trends in turfgrass management including golf courses, sports fields, parks and recreation, sod production, home lawn care and landscaping. This course includes discussions and presentations led by students and facilitated by the DTM Program Manager which cover emerging trends in the turfgrass industry. Guest speakers, field trips and various hands-on workshops will be incorporated when possible.

**Prerequisite(s):** COOP\*1020, DTM\*1000, DTM\*2000, 4.00 credits

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*3200 Turf Diseases Fall Only (LEC: 2, LAB: 2) [0.50]**

This course covers the ecology and management of turfgrass diseases and disorders and cultural, biological and chemical means of control. Identification and diagnosis of common turfgrass diseases and disorders are emphasized along with the impact of control methods on the environment and ecology of the turfgrass system.

**Prerequisite(s):** DTM\*1100

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*3300 Turf Insects and Weeds Fall Only (LEC: 2, LAB: 2) [0.50]**

This course discusses the biology, ecology and management of turfgrass insects and weeds, emphasizing cultural methods of management as well as chemical and biological controls. Field recognition and diagnosis of weeds and insect pests are taught and the impact of control methods on the environment and the ecology of turfgrass systems are discussed.

**Prerequisite(s):** DTM\*1100

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*3400 Landscape Construction Fall Only (LEC: 2, LAB: 3) [0.50]**

This course examines the physical properties and the appropriate uses of landscape construction materials. The impact of design, construction techniques and selection of materials are emphasized in relation to urban landscape, golf course and sports field settings. Field trips, outdoor workshops and a variety of small-scale construction projects will be incorporated when possible.

**Prerequisite(s):** DTM\*2400

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*3800 Special Study Project I Summer, Fall, and Winter [0.50]**

A self-directed student project focussing 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, and/or a hands-on assignment with specific learning objectives and milestones for achieving these objectives.

**Prerequisite(s):** 4.00 credits

**Equate(s):** DHRT\*3910

**Restriction(s):** Enrolment in the Associate Diploma in Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*4000 Turf Management III Winter Only (LEC: 2, LAB: 3) [0.50]**

This course emphasizes the differences between abiotic and biotic stressors and their management. The course reinforces the principles of integrated pest management and focuses on how environmental conditions, management practices and turfgrass biology impact playability and survival of turfgrasses.

**Prerequisite(s):** DTM\*3000, DTM\*3200, DTM\*3300

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*4200 Design and Construction of Golf Courses and Sports Fields Winter Only (LEC: 1, LAB: 4) [0.50]**

Students will examine design and construction techniques practiced in golf course and sports field development. The course focuses on design with the aesthetics, function and management of such facilities as priorities. Designing to conserve and reduce water use for such facilities is emphasized.

**Prerequisite(s):** DTM\*2400, DTM\*3400

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*4300 Turf Case Studies Winter Only (LEC: 3) [0.50]**

This course uses case studies, debates and discussion to address management, political and philosophical issues in the turfgrass industry. The course integrates knowledge of current turfgrass management practices and social awareness to solve problems and effectively communicate solutions. Problem solving skills are introduced and applied to case studies. Communication skills are emphasized including formal writing and succinct presentation skills.

**Prerequisite(s):** DTM\*3000, DTM\*3200, DTM\*3300

**Co-requisite(s):** DTM\*4000

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*4400 Human Resources Management Winter Only (LEC: 3) [0.50]**

The course introduces students to the principles of human resource management including personnel planning, regulations, recruiting and hiring of employees. Students develop supervisory and problem solving skills in employee relations. Proper employee training and regulatory considerations of both private and municipal government operations is covered.

**Prerequisite(s):** DTM\*1500

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*4500 Business and Finance for Turf Winter Only (LEC: 3) [0.50]**

This course covers the basic aspects of business management and finance as they apply to turf-related enterprises. Case studies in capital expenditures and operational budgeting will be used to help students understand how business decisions affect operations. Examples from earlier courses and the summer work experience will also be used. Purchasing procedures in both private and municipal government settings will be discussed.

**Prerequisite(s):** DTM\*3000

**Restriction(s):** DTM\*2300. Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*4600 Computer Assisted Design Winter Only (LEC: 1, LAB: 4) [0.50]**

Landscape designs and visualizations will be prepared with computer technology using landscape and turfgrass related projects. Drafting, design, visualization or modeling software will be taught and used to create plans, views, pictures and/or models.

**Prerequisite(s):** DTM\*2200, DTM\*2400, (DTM\*1400 or DTM\*2010)

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph

**DTM\*4800 Special Study Project II Winter and Summer [0.50]**

This is a self-directed student project focusing on a topic of academic and/or practical interest to the students. 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, and/or a hands-on-assignment with specific learning objectives and milestones for achieving these objectives.

**Prerequisite(s):** 6.00 credits

**Equate(s):** DHRT\*3910

**Restriction(s):** Restricted to Associate Diploma students in the Turfgrass Management program.

**Department(s):** Department of Plant Agriculture

**Location(s):** Guelph