COURSE OUTLINE: NRT244 - URBAN FORESTY

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Approved: Karen Hudson, Dean, Community Services and Interdisciplinary Studies

Course Code: Title	NRT244: URBAN FORESTRY
Program Number: Name	5230: FORESTRY TECHNICIAN
Department:	NATURAL RESOURCES PRG
Academic Year:	2024-2025
Course Description:	The focus of this course is on the care, health and protection of municipal trees, forests and green spaces. Students will be versed in arboriculture practices and techniques, tree inventories and appraisals and as well have an understanding of the planning, policies, programs, by-laws and public education required to maintain urban trees.
Total Credits:	3
Hours/Week:	3
Total Hours:	42
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**5230 - FORESTRY TECHNICIAN** VLO 1 Conduct forest inventory surveys and field measurements to determine forest resources and values in forests and woodlots. VLO 2 Assess soil characteristics, vegetation and wildlife habitats to identify their interactions within forest ecosystems. VLO 4 Collect, analyze, interpret, and display spatial data using mapping technology and Geographical Information Systems (GIS) to contribute to forest resource management. VLO 6 Identify and analyze forest diseases, pests, invasive species and other disturbance events and implement mitigation strategies to maintain and improve forest ecosystems. VLO 7 Select, operate, troubleshoot and maintain tools and equipment in a variety of environmental conditions and in accordance with safety and operating standards. VLO 8 Work independently and in a collaborative environment while applying effective teamwork, leadership and interpersonal skills. VLO 9 Communicate technical information to a variety of stakeholders in oral, written, visual and electronic forms. VLO 10 Develop strategies for ongoing professional development to enhance work performance in the forestry sector.
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective

	communication. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others. EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. EES 10 Manage the use of time and other resources to complete projects. EES 11 Take responsibility for ones own actions, decisions, and consequences.
General Education Themes:	Civic Life Social and Cultural Understanding Science and Technology
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation & Assessment Requirements:	Academic success is directly linked to attendance. Missing more than 1/3 of the course hours in a semester shall result in a F Grade for this Course.

Course Outcomes and Learning Objectives:

Course Outcome 1	**Learning Objectives for Course Outcome 1**
1. Describe what urban forestry means and what the benefits and values are to maintaining a healthy forest within the urban environment.	1.1 The urban forest concept and definition 1.2 Environmental benefits improved air quality, reduced noise pollution, improved water quality, reduced wind and soil erosion, wildlife diversity, reducing climate change effects 1.3 Economical benefits favourable first impression, economic stability, attractive districts, occupancy rates and property values 1.4 Energy benefits, provision of shade, reduced glare 1.5 Health benefits, feeling of relaxation, green and recreational spaces, walking trails and parks
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Identify the elements required to start and maintain a successful urban forestry program.	2.1 Developing a program and standards. 2.2 Establishing a tree board or committee 2.3 Adopting a tree/landscape ordinance 2.4 Developing a program budget 2.5 Staffing a program 2.6 Developing a management plan/inventory 2.7 Public outreach
Course Outcome 3	**Learning Objectives for Course Outcome 3**

3. Describe the urban forest environment and how it differs to the environment provided by a natural forest.	3.1 Competing values, new construction, presence of utilities, human desire 3.2 Densities and space 3.3 Light availability 3.4 Wind effects
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Describe the biology of an urban forest and how it differs to the biology of a natural forest.	4.1 Soil quality and compaction 4.2 Air quality 4.3 Water quality and availability 4.4 Invasive species 4.5 Exotic or non-natural species 4.6 Other pests
Course Outcome 5	**Learning Objectives for Course Outcome 5**
5. Manage the urban forest.	5.1 Executing the urban forestry program 5.2 Tree and landscape ordinance 5.3 Coping with environmental and biological challenges 5.4 Planting/maintaining/removing trees or other vegetation 5.5 Use of pesticides 5.6 Tree nutrition and fertilization 5.7 Selecting the right tree 5.8 Tree inventory and appraisal, long term planning 5.9 Risk management
Course Outcome 6	**Learning Objectives for Course Outcome 6**
6. Describe accepted arboricultural practices and their application in the execution of a successful urban forestry program.	6.1 Arborist practices, focus on planting, trimming/pruning, tree removal and pesticide applications 6.2 Arborist hand tools and equipment 6.3 Health and safety, environment and public safety 6.4 Overhead and underground utilities 6.5 Working at heights 6.6 Other workplace hazards

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	65%
Final Exam	35%

Date: June 21, 2024

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.