COURSE OUTLINE: NRT101 - TREES AND SHRUBS I

Prepared: Maxime Gerin-Ouellet / Barry Oja
Approved: Bob Chapman - Dean

Course Code: Title	NRT101: TREES AND SHRUBS I
Program Number: Name	5212: ADVENTURE RECREATION 5214: FISH/WILD CONSERVATN 5220: NAT ENVIRONMENT TN 5230: FORESTRY TECHNICIAN
Department:	NATURAL RESOURCES PRG
Academic Year:	2025-2026
Course Description:	In field and laboratory, students will practice in the identification, nomenclature and ecology of trees and shrubs native to Ontario, some introduced species and a few major coniferous species native to Western Canada. Predominately delivered outdoors in the field in all weather conditions.
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.
Substitutes:	NRT102
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**5212 - ADVENTURE RECREATION** VLO 1 Demonstrate clear, concise and industry appropriate written, spoken and visual communication skills. VLO 2 Identify, discuss, organize and assess common Flora & Fauna species found throughout ON, including biological and physiological characteristics. **5214 - FISH/WILD CONSERVATN** VLO 1 Demonstrate clear, concise and industry appropriate written, spoken and visual communication skills VLO 2 Identify, discuss, organize and assess common flora and fauna species found throughout Ontario, including biological characteristics **5220 - NAT ENVIRONMENT TN** VLO 2 Utilize natural resources equipment and technology to accurately identify ecosystem components for purposes of conserving and managing natural resources. **5230 - FORESTRY TECHNICIAN** VLO 2 Assess soil characteristics, vegetation and wildlife habitats to identify their

		interactions within forest ecosystems.
	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.
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 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.
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.
Books and Required Resources:		Michigan Trees, Revised and Updated by Barnes, B. V. and Wagner, W. H. Jr. (2004) Publisher: University of Michigan Press Michigan Vines and Shrubs by Barnes, B. V. et al. (2016) Publisher: University of Michigan Press

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Identify, predominately outdoors in the field, species of broad-leaved trees and shrubs native (and a few introduced) to Ontario in summer conditions.	1.1 For a particular tree or shrub: a) assess features including leaves, bark, flowering and fruiting structures, growth form and ecological associations. b) determine which features are best applied to the identification task at hand. c) apply knowledge of and experience with key features to correctly identify the tree or shrub. d) use correct terminology to describe key features. e) correctly spell common and scientific names.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Identify, predominately outdoors in the field, species of coniferous trees and shrubs native (and a few introduced) to Northeastern, and some to Western, North American.	2.1 For a particular tree or shrub: a) assess features including foliage, bark, cones, growth form and ecological associations. b) determine which features are best applied to the identification task at hand. c) apply knowledge of and experience with key features to correctly identify the tree or shrub. d) use correct terminology to describe key features. e) correctly spell common and scientific names.

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Course Outcome 3	Learning Objectives for Course Outcome 3
3. Identify the leaves of native broad-leaved trees encountered in Southern Ontario`s Deciduous (e.g., Carolinian) forest.	3.1 Assess key leaf features to correctly identify to species. 3.2 Correctly spell common names.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Associate broad-leaved and coniferous trees with silvical characteristics such as longevity, shade tolerance, site requirements (e.g., soil moisture) and range in Canada.	4.1 Identify the range of selected species across Canada. 4.2 Identify which species may be present in an area given particular site conditions and disturbance history.
Course Outcome 5	**Learning Objectives for Course Outcome 5**
5. Identify, collect (from outdoors in the field), press and mount leaves of common Ontario broad-leaved tree and shrub species.	5.1 Using available resources, identify trees and shrubs in the field. 5.2 Collect representative leaves from each species identified. 5.3 Using a press of the students own design, dry leaves in a manner that prevents discolouration and preserves the integrity of the leaf. 5.4 Neatly mount and label pressed leaves.
Course Outcome 6	**Learning Objectives for Course Outcome 6**
6. Identify coniferous and broad-leaved branch/leaf samples to family, genus or species using dichotomous keys provided.	6.1 Associate terminology with their definitions. 6.2 Evaluate options set forth in a dichotomous word key. 6.3 Follow a dichotomous word key in an orderly, systematic manner.
Course Outcome 7	**Learning Objectives for Course Outcome 7**
7. Identify, using scientific names, foliage and/or fruiting structure/cone of Ontario predominate tree species (broad-leaved and coniferous) to 90% accuracy. A maximum of three (3) attempts to achieve is permitted.	7.1 For a particular foliage/fruiting structure/cone sample: a) apply knowledge of and experience with key features to correctly identify the foliage and/or fruiting structure/cone. b) correctly spell scientific and common names.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	15%
Collections	15%
Identification tests/quizzes	55%
Lecture tests/quizzes	15%

| **Date:** | August 20, 2025 |
| **Addendum:** | Please refer to the course outline addendum on the Learning Management System for further information. |