SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE:	Trees and Shrubs Identification		
CODE NO. :	NRT101	**SEMESTER:**	Fall
PROGRAM:	Adventure Recreation and Parks Technician, Fish & Wildlife Conservation Technician, Forest Conservation Technician, Natural Environment Technician/Technologist		
AUTHOR:	Lesley Phillips		
DATE:	August, 2014	**PREVIOUS OUTLINE DATED:**	August, 2012
APPROVED:	"Colin Kirkwood" DEAN		August 2014
TOTAL CREDITS:	3		
PREREQUISITE(S):	None		
HOURS/WEEK:	3		

For additional information, please contact
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I. COURSE DESCRIPTION:

Field and laboratory 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.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Identify species of broad-leaved trees and shrubs native to Ontario (and a few introduced) in summer condition.

   Potential Elements of the Performance:

   - for a particular tree or shrub:
     - assess features including leaves, bark, flowering and fruiting structures, growth form and ecological associations
     - determine which features are best applied to the identification task at hand
     - apply knowledge of and experience with key features to correctly identify the tree or shrub
     - use correct terminology to describe key features
     - correctly spell common names (trees and shrubs) and scientific names (trees)

2. Identify northeastern (native and introduced), and some northwestern (native) North American, coniferous trees and shrubs

   Potential Elements of the Performance:

   - for a particular tree or shrub:
     - assess features including foliage, cones, bark, growth form and ecological associations
     - determine which features are best applied to the identification task at hand
     - apply knowledge of and experience with key features to correctly identify the tree
     - use correct terminology to describe key features
     - correctly spell common and scientific names

3. Identify the leaves of native broad-leaved trees encountered in southern Ontario's Deciduous (i.e., Carolinian) forest.

Potential Elements of the Performance:

- assess key leaf features to correctly identify to species
- correctly spell common names

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.

   Potential Elements of the Performance:

   - identify the range of selected species across Canada
   - identify which species may be present in an area given particular site conditions and disturbance history

5. Identify, collect, press and mount leaves of common Ontario broad-leaved tree and shrub species.

   Potential Elements of the Performance:

   - using available resources, identify trees and shrubs in the field
   - collect representative leaves from each species identified
   - using a press of the students own design, dry leaves in a manner that prevents discolouration and preserves the integrity of the leaf
   - neatly mount and label pressed leaves

6. Identify coniferous and broad-leaved branch/leaf samples to family, genus or species using dichotomous keys provided.

   Potential Elements of the Performance:

   - associate terminology with their definitions
   - evaluate options set forth in a dichotomous word key
   - follow a dichotomous word key in an orderly, systematic manner

7. Identify, using scientific names, foliage and/or fruiting structure/cone of Ontario predominate tree species (broad-leaved and coniferous) to 90% accuracy

   Potential Elements of the Performance:

   - for a particular foliage/ fruiting structure/cone sample:
     - apply knowledge of and experience with key features to correctly identify the foliage and/or fruiting structure/cone
     - correctly spell scientific names

III. TOPICS:

Note: These topics will not necessarily be explored as isolated learning units, or in the order presented below:

1. Identification of native (and a few introduced) Ontario broad-leaved trees and shrubs in summer condition.
2. Identification of cones and foliage of northeastern (native and introduced), and some northwestern (native) North American, coniferous trees and shrubs.
3. Identification of native broad-leaved trees encountered in southern Ontario's Deciduous (i.e., Carolinian) forest in summer condition.
4. Collection, pressing, mounting and labelling of herbarium specimens.
5. Aesthetic, cultural and historical values of Ontario trees and shrubs.
6. Silvical characteristics of native Ontario broad-leaved and coniferous trees.
7. Use of dichotomous keys.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Barnes, B. V. and Wagner, W. H. Jr. (2004). Michigan Trees, Revised and Updated, University of Michigan Press
- Chambers et al. (1996). Forest Plants of Central Ontario, Lone Pine Publishing
- 10x power loupe
- Hardhat, CSA approved safety boots, reflective vest

V. OPTIONAL RESOURCES/TEXTS/MATERIALS:

- Kershaw, L. J. (2001). Trees of Ontario, Including Tall Shrubs, Lone Pine Publishing
- Newmaster, S. G. (2013). Woodlot Biodiversity, 2nd Edition. Newmaster Publishing Ltd.

VI. COURSE CREDIT

- To obtain a credit for this course requires the achievement of **two (2) components**:

  (1) an overall course average of 50% (see VII. EVALUATION PROCESS/GRADING SYSTEM below); **and**

  (2) obtain a grade of 90% or greater on the 90% accuracy test administered at the end of the semester (see II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE, paragraph 7, above).

VII. EVALUATION PROCESS/GRADING SYSTEM:

Identification tests/quizzes	55 %
Collections	15 %
Lecture tests/quizzes	15 %
Assignments	15 %

Final Grade (College Equivalent)	**Final Letter Grade**	**Grade Point Equivalent**
49 % & below	**F**	0.00
50 - 59 %	**D**	1.00
60 - 69 %	**C**	2.00
70 - 79 %	**B**	3.00
80 - 89 %	**A**	4.00
90 - 100 %	**A+**	4.00

VIII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.