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|  **SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY** **SAULT STE. MARIE, ONTARIO**New Logo - College BWCOURSE 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 |
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| *For additional information, please contact* *Colin Kirkwood, Dean, Environment, Technology and Business**(705) 759-2554, Ext. 2688* |
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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.  |

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| **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
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|  | 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
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|  | 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
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|  |  | 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
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|  |  | 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
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| **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. |
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| **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
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1. **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).

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| **VII.** | **EVALUATION PROCESS/GRADING SYSTEM:**

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

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| **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 |
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**VIII. COURSE OUTLINE ADDENDUM:**

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