|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**  **SAULT STE. MARIE, ONTARIO**  New Logo - College BW 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 | | | | | |
| Copyright ©2014 The Sault College of Applied Arts & Technology *Reproduction of this document by any means, in whole or in part, without prior* *written permission of Sault College of Applied Arts & Technology is prohibited.* | | | | | | | | |
| *For additional information, please contact* *Colin Kirkwood, Dean, Environment, Technology and Business**(705) 759-2554, Ext. 2688* | | | | | | | | |
|  | | | | | | | | |
|  | | | | | | | | |
| **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 |
|  |  | 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 |
|  |  | 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 | |

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).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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.