SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: Trees and Shrubs Identification

CODE NO. : NRT101   **SEMESTER:** Summer

PROGRAM: Adventure Recreation and Parks Technician

AUTHOR: Rob Routledge

DATE: May, 2012   **PREVIOUS OUTLINE DATED:** June, 2011

APPROVED:

"B.Punch"

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CHAIR   DATE

TOTAL CREDITS: 3

PREREQUISITE(S): None

TOTAL HOURS: 45

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 broad-leaved (summer condition) and coniferous trees and shrubs native and introduced to northeastern North America and a few coniferous trees native to western Canada.

       Potential Elements of the Performance:

       • for a particular tree or shrub:

         □ assess growth form and ecological associations and taxonomically important features including foliage, bark and reproductive structures
         □ determine which features are best applied to the identification task at hand
         □ apply knowledge of and experience with taxonomically important features to correctly identify the tree or shrub
         □ use correct terminology to describe taxonomically important features
         □ correctly spell common names and scientific names

2.   Recognize the placement of specific broad-leaved and coniferous trees and shrubs in secondary succession using silvical characteristics such as longevity, shade tolerance and site requirements (e.g., soil moisture) and identify their occurrence in relation to major forest regions.

       Potential Elements of the Performance:

       • identify the dominant tree species across Ontario's forest regions (Boreal, Great Lakes-St. Lawrence and Deciduous)
       • identify which species may be present in an area given particular site conditions and site disturbance history

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

    Potential Elements of the Performance:

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

4. Identify, collect, press and mount leaves of selected broad-leaved tree and shrub species.

    Potential Elements of the Performance:

    - identify trees and shrubs in the field using available resources
    - 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 leaves
    - mount and label pressed leaves and present in a professional herbarium format

5. Identify and digitally photograph taxonomically important features of selected broad-leaved and coniferous tree and shrub species.

    Potential Elements of the Performance:

    - identify trees and shrubs in the field using available resources
    - take digital images of taxonomically important features for each species identified
    - present images in a digital herbarium format using PowerPoint or similar presentation software

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 reproductive structures of Ontario's commercial tree species (broad-leaved and coniferous) to 90% accuracy

Potential Elements of the Performance:

- for a particular foliage or reproductive structure sample:

  ☐ apply knowledge of and experience with key features to correctly identify to species
  ☐ 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 broad-leaved trees and shrubs in summer condition using taxonomically important features.
2. Identification of cones and foliage of coniferous trees and shrubs using taxonomically important features.
3. Identification of broad-leaved trees encountered in southern Ontario's Deciduous forest region (i.e., Carolinian forest) using leaf features.
4. Collection, pressing, mounting and labelling of herbarium specimens.
5. Digital photographing of taxonomically important features of trees and shrubs.
6. Aesthetic, cultural and historical values of Ontario trees and shrubs.
7. Silvical characteristics of native Ontario broad-leaved and coniferous trees.
8. Dichotomous key use.
9. Major insects and diseases affecting native trees.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Farrar, J.L. (1995). Trees in Canada, Fitzhenry and Whiteside Limited/Canadian Forest Service
- Hardhat, safety boots, reflective vest

V. EVALUATION PROCESS/GRADING SYSTEM:

Identification tests/keying exercises	65%
Herbarium collections	20%
Lecture tests/quizzes	15%

Late assignments will be penalized -10% per day late. Late assignments will not be accepted once they have been returned in class.

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VI.   SPECIAL NOTES:

Attendance

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

Course Outline Amendments

• The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

• Hard hats, reflective vests and CSA approved safety boots must be worn on all field trips unless specified otherwise.

• Transportation is provided for all field trips away from the main campus. Use of personal vehicles on field trips will only be allowed with the permission of the instructor provided sufficient notice is provided.

• If a class is missed for a good reason, the instructor must be contacted via phone or email ASAP to discuss make-up options. Students not contacting the instructor prior to a missed class or within a day afterwards will get a zero grade on a given assessment for that particular day (except under extenuating circumstances).

Disability Services

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office.

Communication

The College considers *LMS* as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information.