

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE


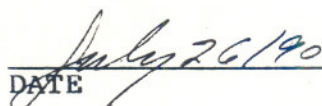
COURSE TITLE: DESCRIPTIVE DENDROLOGY

CODE NO.: FOR 102-3 SEMESTER: I

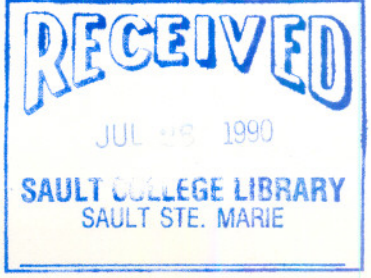
PROGRAM: FORESTRY

DATE: JULY 1990 PREVIOUS OUTLINE DATED: JUNE 1989

AUTHOR: DERROLL MURPHY

APPROVED:  

DEAN DATE



DESCRIPTIVE DENDROLOGY

FOR 102-3

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TOTAL CREDIT HOURS: 48

PREREQUISITE(S): None

I. PHILOSOPHY/GOALS:

A systematic study of structural characteristics of trees and shrubs, the identification of Canadian species by leaf features, their relationships to one another and a recognition of their dynamic role in forest ecology. Coniferous species will be looked at in considerable detail including twig bark and growth characteristics.

After successfully completing this course, students should be able to recognize all Ontario commercial tree species when trees are in the leafy condition as well as a considerable number of less important species.

II. STUDENT PERORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

1. Identify all major Ont. deciduous tree species in the leafy condition.
2. Identify all native Ont. coniferous tree species as well as the more common exotics and Western Canadian species.
3. Construct and use a key for ID.
4. Know scientific names for commercial Ont. tree species.
5. Discuss forest regions of Canada and the major tree species of each region.
6. Discuss nomenclature and classification of trees and shrubs.

III. TOPICS TO BE COVERED:

1. Identification of deciduous trees by leaf features.
2. Identification of coniferous trees by leaf, bark silhouette and fruit.
3. Silvics of major Western Canadian tree species.
4. Preparation of a leaf collection.
5. How trees are named and classified.
6. Ranges of tree species.

DESCRIPTIVE DENDROLOGY

FOR 102-3

COURSE NAME

CODE NUMBER

IV. LEARNING ACTIVITIES:

1. Construct a dichotomous key for the identification of seven predetermined tree species.
2. Describe physiological functions of tree tissue, such as: buds, roots, leaves, bark and wood.
3. Describe physiological processes such as: tropisms and sprouting.
4. Explain derivation of common names for tree species.
5. Explain derivation and use of scientific names for the flora.
6. Explain history and use of plant classification systems.
7. Compare and contrast flowers and fruit under the following headings: Features, Types and Functions.
8. List silvical characteristics common to coniferous species.
9. Identify, locate and describe major forest regions, and list the major tree species of each.
10. Describe silvical characteristics of major, Western Canadian tree species.
11. Identify the following twenty commercially important tree species in the leafy condition to a 90% accuracy:

Ce	Ew	Po	Bd	Bf	Mh	Ms	Ta	Aw	Ab	Or
	Ow	He	Pj	Pr	Pw	Sb	Sw	Bw	By	
12. Given the scientific name for twenty commercially important tree species, write the common name.
13. Given the common name for twenty tree species, write the accepted species abbreviations.
14. Identification, collection, and preservation of neatly labelled dendrology specimens will be demonstrated by submission of a leaf collection of twenty predetermined species of tree leaves. (Science notebook required)
15. Identify up to fifty-five deciduous tree and shrub species by leaf, and up to twenty-five coniferous species by leaf, twig and fruit. (Required resources - Riker mounts, laminations, field trips)

DESCRIPTIVE DENDROLOGY

FOR 102-3

COURSE NAME

CODE NUMBER

V. EVALUATION METHODS:

Identification of species - 60% of mark

A+	95
A	90
B	80
C	70

Lecture tests(2) - 20% of mark

A+	85
A	75
B	65
C	55

Descriptive sheets, drawings, quizzes - 10% of mark.

Leaf collection - 10% of mark.

Lab and field tests will be frequent and accumulative. If a test is missed for a good reason, be sure and notify the instructor so you will not be given zero for that particular test. If more than two tests are missed without a satisfactory reason, student will be subject to a fast R.

A rewrite will be necessary if a minimum of a C grade is not obtained in Tree Ident or lecture tests. To be eligible for a rewrite, marks must be within 10% of a C grade.

The highest grade obtainable if a rewrite is required is a C. Handins are required at most classes therefore students should attend all classes.

VI. REQUIRED STUDENT RESOURCES:

Hosie, R.C., 1979. Native Trees of Canada, 8th. ed, Canadian Forestry Service, 380 pp.

Lab Manual (available in bookstore) - Dendrology 102-3

DESCRIPTIVE DENDROLOGY

FOR 102-3

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CODE NUMBER

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY
BOOK SECTION:

Harlow & Harran & White - Textbook of Dendrology - 6th ed. McGraw Hill
510 pp.
QK481H32

Montgomery F. H. Trees of the Northern United States & Canada Frederick
Wayne & Co., NY 144 pp.
QK486C2M6

Urquhart F. A. The Ontario Leaf Album Univ. of Toronto Press 72 pp.
QK486O5U7

White J. H. Hosie R.C. The Forest Trees of Ontario 7th ed., MNR
QK486.05W48

Grimm W.C. Recognizing Native Shrubs Stackpole P.A.
Qk481.G8

VIII. SPECIAL NOTES:

Hard hats must be worn on all field trips. Snowshoes may be needed.