

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

COURSE OUTLINE

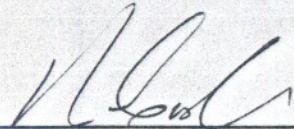
COURSE TITLE: SILVICULTURE

CODE NO.: FOR 200-4 SEMESTER: III

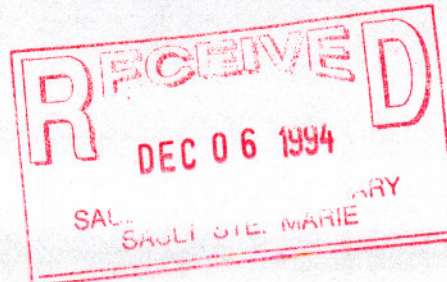
PROGRAM: ABORIGINAL RESOURCE TECHNICIAN

AUTHOR: B. CURRELL

DATE: NOVEMBER 1994 PREVIOUS OUTLINE DATED: AUGUST 1994

APPROVED: 
DEAN, SCHOOL OF SCIENCES &
NATURAL RESOURCES

November 29, 1994
DATE



SILVICULTURE

FOR 200-4

COURSE NAME

COURSE NUMBER

TOTAL CREDIT HOURS: 64

PREREQUISITE(S): NONE

I. PHILOSOPHY/GOALS:

This course will explain the silvicultural systems used in Ontario to manage both Boreal and Great-Lakes St. Lawrence forest region tree species.

Emphasis will be placed on harvesting methods as they affect subsequent regeneration, on methods of ecological site classification and on ways of evaluating regeneration success. A final, but important topic will describe site preparation options on ways of preparing the ground for subsequent reforestation.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will be able to:

1. Describe the importance of silviculture responsible in Ontario and explain who is responsible for its implementation.
2. Assess Northern Ontario forest sites and provide ecological descriptions of their vegetation and soils.
3. Explain which silvicultural harvesting systems or systems would be most appropriate to use when managing a variety of different forest types.
4. Carry out surveys of harvested areas to assess their regeneration success.
5. Describe the biological importance of site preparation and explain and evaluate the site preparation options available to Ontario forest managers.
6. Describe in what situations and how timber harvesting can be modified to encourage natural forest regeneration.

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III. TOPICS TO BE COVERED:

TOPIC NO.

TOPIC DESCRIPTION

1

Introduction to Silviculture

- Importance of forestry and reforestation
- Ontario reforestation programs
- Aboriginal reforestation programs

TEST 1

2

Ecological Site Classification

- The importance of classifying forest sites
- Introduction to Site classification systems used in Ontario
- Procedure for classifying clay belt and North-eastern Ontario sites

3

Silvicultural Harvesting Systems

- Silvicultural harvesting systems used in Ontario
- Logging Methods used in Ontario

TEST 2

4

Regeneration Surveys

- Reasons for surveying regeneration
- Types of regeneration surveys carried out in Ontario
- Procedures for carrying out O.M.N.R. 5th year stocking assessments

5

Site Preparation

- Reasons for site preparing cutover areas
- Description of how site preparation can change soil and site conditions
- Introduction to site preparation methods

TEST 3

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III. TOPICS TO BE COVERED: (cont'd)

TOPIC NO.	TOPIC DESCRIPTION
6	Mechanical Site Preparation (Scarification) <ul style="list-style-type: none">- Description, method of operation, results expected for common scarifying machines- Sites where each machine is suited- Prime movers identified and described
7	Prescribed Burning <ul style="list-style-type: none">- Reasons for carrying out prescribed burns and results expected- Prescribed burn plans- Methods of carrying out prescribed burns
8	Natural Regeneration Techniques in the Boreal Forest <ul style="list-style-type: none">- Group seed trees, patch cutting- Alternate strip cutting of Black spruce- Cut to length harvesting- Careful logging on lowland sites<ul style="list-style-type: none">- CLAAG, H.A.R.O.- Careful logging of upland sites

TEST 4

IV. REQUIRED STUDENT RESOURCES

Silviculture Study Guide, 1994 edition

Silviculture Videotape 1

- includes "Who's Looking After My Forest" plus slide tape presentations reinforcing topics 3, 5, 6 and 7

Silviculture videotape 2 - Careful Logging Techniques

2 computer diskettes containing scanned slides highlighting the Cut to Length logging method

Navigational Protractor

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V. EVALUATION METHODS:

Tests 70%

Test 1 (10%) - following topic 1
- an introductory test showing how tests will be prepared and evaluated

Test 2 (20%) - following topic 3

Test 3 (20%) - following topic 5

Test 4 (20%) - following topic 8

Assignments 30%

VI. SPECIAL NOTES:

Students with special needs (e.g. physical limitations, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.