

**SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY  
SAULT STE MARIE, ON**



**COURSE OUTLINE**


**Course Title: SILVICULTURE**

**Code No.: FOR200-4                      Semester: 3**

**Program: FORESTRY TECHNICIAN**

**Author: BOB CURRELL**

**Date: JUNE 1998      Previous Outline Date: JUN 96**

**Approved:**  JUNE 4, 1998  
**Dean, Natural Resources                      Date**  
**Programs**

**Total Credits: 4                      Prerequisite(s): NONE**  
**Length of Course: 3 hrs/ week X 16 weeks**  
**Total Credit Hours: 64**

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 For additional information, please contact Brian Punch, Dean, Natural Resources Programs,  
 (705) 759-2554, Ext. 688.

SILVICULTURE

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COURSE NAME

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COURSE NUMBER**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 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 system or systems would be most appropriate to use when managing a variety of different forest types.
4. Carry out surveys with electronic data records (DAPSS) to assess regenerating vegetation.
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.

**III. TOPICS TO BE COVERED:**

TOPIC NO.	TOPIC DESCRIPTION
1	Introduction to Silviculture <ul style="list-style-type: none"> <li>- Importance of forestry and reforestation</li> <li>- Ontario reforestation programs</li> </ul>

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## Ecological Site Classification

- The importance of classifying forest sites
- Introduction to Site classification systems used in Ontario
- Procedure for classifying North-eastern Ontario sites USING fec systems

**TEST 1**

3

## Silvicultural Harvesting Systems

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

4

## Regeneration Surveys

- Reasons for surveying regeneration
- Types of regeneration surveys carried out in Ontario
- Procedures for assessing competition to regenerating trees using electronic data recorders

**TEST 2**

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

6

## Mechanical Site Preparation (Scarification)

- Description, method of operation, results expected for common scarifying machines
- Sites where each machine is suited
- Prime movers identified and described

7

## Prescribed Burning

- Reasons for carrying out prescribed burns and results expected
- Prescribed burn plans
- Methods of carrying out prescribed burn

- ~~Cut to length harvesting~~
- Careful logging on lowland sites
- CLAAG, H.A.R.O.
- Careful logging of upland sites

### TEST 3

#### IV. REQUIRED STUDENT RESOURCES

Silviculture Study Guide, 1996 edition

#### V. EVALUATION METHODS:

50% Tests

- test 1, following topic 2
- test 2, following topic 4
- test 3, following topic 8

10% Dendrology Tests (2) Trees, shrubs and plants

N.B. students who have not completed FOR102 and FOR107 will not be on this component.

40% Assignments & Quizzes:

- Including:
- Video Reviews
- Silvicultural treatment selection
- FEC assignments
- Competition Survey
- Site Preparation Equipment identification
- Quizzes

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COURSE NUMBER**VI. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY:**

1. Many publications are available related to specific topics in the Government Documents Section.
2. Periodical section  
Forestry Chronicle
3. Audiovisual Section  
Site Preparation Equipment Slide Set  
Distance Education, Silviculture videotapes 1 and 2

**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.

Special Needs

If you are a student with special needs (eg. Physical limitations, visual impairments, hearing impairments, learning disabilities), you are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office, Room E1204, Ext. 493, 717 or 491 so that support services can be arranged for you.

Plagiarism

Students should refer to the definition of "academic dishonesty" in the "Statement of Students Rights and Responsibilities."

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Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course, as may be decided by the professor.

In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

#### Advanced Standing

Students who have completed an equivalent post-secondary course should bring relevant documents to the Coordinator, Natural Resources Programs.

#### Retention of Course Outlines

It is the responsibility of the student to retain all course outlines for possible future use in gaining advanced standing at other post-secondary institutions.

Substitute course information is available at the Registrar’s Office.

### **VII. PRIOR LEARNING ASSESSMENT:**

Please contact the Prior Learning Assessment Office (E2203) for further information.