

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

COURSE OUTLINE

COURSE TITLE: SILVICULTURE

CODE NO.: FOR 200-4 SEMESTER: III

PROGRAM: FORESTRY TECHNICIAN

AUTHOR: B. CURRELL

DATE: AUGUST 1994 PREVIOUS OUTLINE DATED: MAY 1993

APPROVED:

*B. Currell*  
DEAN, SCHOOL OF SCIENCES &  
NATURAL RESOURCES

DATE

August 22, 1994





SILVICULTURE

FOR 200-4

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COURSE NAME

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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. Describe in what situations and how timber harvesting can be modified to encourage natural forest regeneration.
5. Carry out surveys of harvested areas to assess their regeneration success.
6. Describe the biological importance of site preparation and explain and evaluate the site preparation options available to Ontario forest managers.



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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>
2	Ecological Site Classification <ul style="list-style-type: none"><li>- The importance of classifying forest sites</li><li>- Introduction to Site classification systems used in Ontario</li><li>- Procedure for classifying clay belt and North-eastern Ontario sites</li></ul>
TEST 1	
3	Silvicultural Harvesting Systems <ul style="list-style-type: none"><li>- Silvicultural harvesting systems used in Ontario</li><li>- Methods used to encourage natural regeneration<ul style="list-style-type: none"><li>- shelterwood cutting, careful logging</li><li>- seed trees, selective logging</li></ul></li></ul>
4	Regeneration Surveys <ul style="list-style-type: none"><li>- Reasons for surveying regeneration</li><li>- Types of regeneration surveys carried out in Ontario</li><li>- Procedures for carrying out O.M.N.R. 5th year stocking assessments</li></ul>
TEST 2	
5	Site Preparation <ul style="list-style-type: none"><li>- Reasons for site preparing cutover areas</li><li>- Description of how site preparation can change soil and site conditions</li><li>- Introduction to site preparation methods</li></ul>



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

TOPIC NO.	TOPIC DESCRIPTION
6	<p>Mechanical Site Preparation (Scarification)</p> <ul style="list-style-type: none"><li>- Description, method of operation, results expected for common scarifying machines</li><li>- Sites where each machine is suited</li><li>- Prime movers identified and described</li></ul>
7	<p>Prescribed Burning</p> <ul style="list-style-type: none"><li>- Reasons for carrying out prescribed burns and results expected</li><li>- Prescribed burn plans</li><li>- Methods of carrying out prescribed burns</li></ul>

TEST 3

IV. REQUIRED STUDENT RESOURCES

Silviculture Study Guide, 1992 edition

V. EVALUATION METHODS:

50% Tests

- test 1, following topic 2
- test 2, following topic 4
- test 3, following topic 7

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

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

40% Assignments and Quizzes



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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

VII. 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.