

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

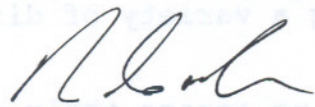
COURSE TITLE: SILVICULTURE

CODE NO.: FOR 200-4 **SEMESTER:** III

PROGRAM: FORESTRY/RENEWABLE RESOURCE/PARKS & OUTDOOR
RECREATION/FISH & WILDLIFE TECHNICIAN

AUTHOR: B. CURRELL

DATE: JUNE 1995 **PREVIOUS OUTLINE DATED:** AUGUST 1994

APPROVED: 
DEAN, SCHOOL OF SCIENCES &
NATURAL RESOURCES

June 20, 1995
DATE



SILVICULTURE

FOR 200-4

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

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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 3

IV. REQUIRED STUDENT RESOURCES

Silviculture Study Guide, 1994 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 graded on this component

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V. EVALUATION METHODS: (cont'd)

40% Assignments and Quizzes

- Including:
- Video Review
- Regeneration Survey Assignments (2)
- FEC assignments (2)
- Site preparation equipment identification
- Quizzes

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

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.

