

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE


COURSE TITLE: SILVICULTURE

CODE NO.: FOR 200-4 SEMESTER: 3

PROGRAM: FORESTRY TECHNICIAN

AUTHOR: BOB CURRELL

DATE: MAY 1991 PREVIOUS OUTLINE DATED: JUNE 1990

APPROVED:  DATE May 17 1991
DEAN

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TOTAL CREDIT HOURS: 64

PREREQUISITE(S): None

I. PHILOSOPHY/GOALS:

A study of Silviculture and its place in forestry. The emphasis of the course will be to study the forest once it has been harvested, specifically it will deal with the techniques available to grow a new forest crop.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

- 1) Be able to participate effectively in carrying out silvicultural operations.
- 2) Be able to plan silvicultural projects.
- 3) Be competent to instruct unskilled silvicultural work crews.

III. TOPICS TO BE COVERED:

TOPIC NO.	TOPIC DESCRIPTION
UNIT 1	Introduction to Silviculture Silvicultural Harvesting Systems
	TEST 1
UNIT 2	Site Classification: Methods of classifying the productivity of forest sites; specifically the claybelt FEC system will be examined in detail
UNIT 3	Site Preparation: The reasons for carrying out forest site preparation will be explained and a description of how S.I.P. can change soil and site conditions will be provided.

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

TOPIC NO.	TOPIC DESCRIPTION
UNIT 4	Mechanical Site Preparation (Scarification): A description of over 20 types of scarifying machines and prime movers will be provided including how each operates, results expected and sites where each is best suited.
UNIT 5	Prescribed Burning: This site preparation technique will be explained in terms of usefulness, results expected, pre-burn planning and ignition procedures.
	TEST 2
UNIT 6	Regeneration Surveys; types of regeneration surveys used and the reasons for carrying them out will be discussed. Stocking assessments and in particular, the O.M.N.R. 5th year systematic assessments of both hardwood and conifer cutovers and other disturbed lands will be explained.
UNIT 7	Seed Collection and Seeding; tree seed collection, extraction and storage methods will be explained. Direct seeding methods including aerial and ground seeding will be discussed.
UNIT 8	Forest Tree Nurseries; types of nursery stock grown and the production of each type of nursery stock will be explained.
	TEST 3
UNIT 9	Tree Planting; in this unit a discussion of field storage and care of nursery stock will be provided. The Tree planting operation and methods of assessing treeplanting quality will be described.
UNIT 10	Forest Tending; in this unit the types of tending carried out in Ontario will be described.
UNIT 11	Tree Improvement; the steps in establishing a successful tree improvement program will be described. A discussion of micropropagation and genetic engineering will conclude this unit.
	TEST 4

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IV. EVALUATION METHODS:

- 50% Unit tests(4); the 1st test will be worth 5%, the other 3 are worth 15%
- 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
- 10% Fall camp exercises
- 30% Lab Exercises and Quizzes

V. REQUIRED STUDENT RESOURCES:

Silviculture Study Guide; 1991 edition
Navigational Protractor
Compass

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

Periodical Section

Silviculture Magazine
Forestry Chronicle

Audiovisual Section

Site preparation equipment slide set
Distance Education silviculture videotape 1 (units 1 to 5); videotape 2 (units 7 to 11)

VII. SPECIAL NOTES:

During field camp a compulsory day of silviculture tours and exercises will be held.

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.