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DOC. 342

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: MARK HARVEY

DATE: JULY 1992 PREVIOUS OUTLINE DATED: MAY 1991

APPROVED: 
DEAN

July 16/92
DATE

SILVICULTURE

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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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CODE NUMBER**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:

- 55% Unit tests(2); the 1st test will be worth 20%, the 2nd test will be worth 35%.
- 5% Dendrology Test
- 10% Class Participation
- 30% Lab Exercises;
 - Exercise #1 - Who's Looking After My Forest?
 - Exercise #2 - FEC Lab
 - Exercise #3 - Site Preparation and Scarification Test
 - Exercise #4 - Prescribed Burning Lab
 - Exercise #5 - Regeneration Survey Lab
 - Exercise #6 - Planting Inspection Assignment
 - Exercise #7 - Seeding Lab Report

V. REQUIRED STUDENT RESOURCES:

Silviculture Study Guide; 1992 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.