

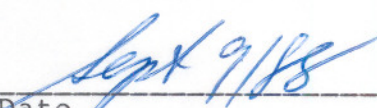
SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: TREE IMPROVEMENT
Code No.: FOR 352-3
Program: FOREST MANAGEMENT TECHNOLOGY
Semester: 6
Date: SEPTEMBER, 1988
Author: MARK HARVEY

New: Revision: _____

APPROVED: 
Chairperson


Date

CALENDAR DESCRIPTION

TREE IMPROVEMENT

FOR 352-3

COURSE NAME

COURSE NUMBER

PHILOSOPHY/GOALS:

This course is designed so that students will:

1. understand the principles and practices used in tree improvement.
2. understand tree improvement techniques such as hybridization, selection, vegetative propagation and production of genetically improved seed.
3. integrate practical tree improvement practices with other forest management considerations.
4. apply some basic genetic concepts to tree improvement

METHOD OF ASSESSMENT:

Test #1	10%
Test #2	20%
Test #3	20%
Assignments/Quizzes	15%
Participation	15%
Technical Report	20%
	<hr/>
	100%

TREE IMPROVEMENT

FOR 352-3

<u>COURSE NAME</u>		<u>COURSE NUMBER</u>
<u>TOPIC NUMBER</u>	<u>PERIODS</u>	<u>TOPIC DESCRIPTION</u>
1	2	Define the scope of forest tree improvement programs.
2	4	<u>Genetic and Tree Improvement</u> - basic genetics - natural variation - mutations - hybridization - heritability
	1	- TEST
3		<u>Applied Tree Improvement Selection</u>
3 (a)	4	- traits used in selection - plus tree selection - juvenile selection - provenance testing - seed sources
3 (b)	1	<u>Breeding Systems & Design</u> - open pollination - polycross - collection and handling of pollen
3 (c)	2	<u>Seed Production Areas</u> - establishment - maintenance - maximizing seed production
3 (d)	3	<u>Seed Orchards</u> - design and establishment - maintenance - special techniques for enhancing seed production
	1	- TEST
4	2	State of the art seed orchard management in B.C.

TREE IMPROVEMENT

FOR 352-3

COURSE NAME

COURSE NUMBER

TOPIC NUMBER

PERIODS

TOPIC DESCRIPTION

5	2	<u>Gene Conservation</u> - seed bank - clone banks - monocultures - through natural regeneration programs
6	2	<u>Advances in Tree Improvement & Genetics</u> - new propagation techniques - research
	2	FINAL TEST

If time permits, one half day field trip will be scheduled for plus tree selection.