

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON



COURSE OUTLINE

COURSE TITLE: APPLIED FOREST MANAGEMENT

CODE NO.: FOR 357

SEMESTER: SIX

PROGRAM: INTEGRATED RESOURCE MANAGEMENT TECHNOLOGY

AUTHOR: BOB CURRELL

DATE: January 2000 PREVIOUS OUTLINE DATED: December 1998

APPROVED: _____
DEAN

DATE

TOTAL CREDITS: 4

PREREQUISITE(S):

LENGTH OF COURSE: 16 WEEKS

TOTAL CREDIT HOURS: 64

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For additional information, please contact Joe Fruchter, Dean
School of Natural Resources, (705) 759-2554, Ext.688

I. COURSE DESCRIPTION:

Combining lectures, field trips and student exercises this course provides the knowledge a Resource Technologist needs to carry out tolerant hardwood, Red pine and White pine management and provides training in operational tree marking in Ontario. The student will be introduced to the process of Forest Management Planning and in particular will learn how non-timber values are identified and protected while forest management activities are carried out.

Students taking this course may be eligible to be tested for Provincial Tree Marking Certification through a co-operative arrangement with the Ontario Ministry of Natural Resources. The provincial tree marking examination is not a part of this course and must be completed separately by interested students who pass this course, at their own expense. The School of Natural Resources will assist in providing opportunities for students to be tested for tree marking certification.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course the student will demonstrate the ability to:

- 1) Explain how Forest Management Planning is carried out in Ontario

Potential Elements of the Performance:

- summarize the current responsibilities for forest management
- summarize the responsibilities and rights conveyed by Sustainable Forest Licences
- explain the process to prepare a Forest Management Plan

This learning outcome will constitute 10% of the course's grade.

- 2) Plan for the protection of non-timber forest values

Potential Elements of the Performance

- describe the importance of terrestrial and aquatic ecosystem interactions
- describe how non-timber values are identified and reported in management plans
- produce Area of Concern prescriptions and maps for identified forest values

This learning outcome will constitute 15% of the course's grade.

- 3) Explain the silvicultural principles applied in Ontario to manage the White and Red pine

Working group

Potential Elements of the Performance

- List the silvical characteristics of conifer species found in the White pine working group in Ontario
- Identify and describe the non-timber values found in Red and White pine forests
- Identify and describe the management systems used to manage White and red pine forests depending on their characteristics
- List the key objectives and components of the white pine tree marking program in Ontario

This learning outcome will constitute 15% of the course grade

- 4) Mark White and Red pine stands according to provincial standards

Potential Elements of the Performance

- Identify tree defects
- Identify stick nests, cavity trees and other wildlife habitat features in pine forests
- Classify trees as AGS or UGS according to provincial standards
- Space trees using a % spacing factor and % crown spacing according to silvicultural prescriptions

This learning outcome will constitute 20% of the course grade

- 5) Prescribe acceptable silvicultural systems for the management of Tolerant Hardwoods

Potential Elements of the Performance

- List the silvical characteristics of the Tolerant hardwood species found in Central Ontario
- Identify and describe non timber values found in tolerant hardwood stands
- Describe the silvicultural systems available to manage Tolerant hardwoods
- Evaluate forest stands and choose the appropriate silvicultural harvesting system to use in their management

This learning outcome will constitute 15% of the course's grade.

- 6) Illustrate the ability to correctly mark a block of tolerant hardwoods following a prescription for Improvement Cutting

Potential Elements of the Performance

- Evaluate the grade of Tolerant Hardwood trees and identify defects on these trees
- Identify wildlife habitat trees
- Use a wedge prism to make basal area measurements
- Mark a block of hardwoods leaving an acceptable basal area of trees per hectare while removing defective trees and leaving predetermined 'critical' trees

This learning outcome will constitute 25% of the course's grade.

III. TOPICS:

1. Forest Management Planning
 - current status of forest management in Ontario
 - Sustainable Forest Licences
 - Crown Forest Sustainability Act
 - preparing Forest Management Plans

2. Protecting Forest Values
 - terrestrial/aquatic ecosystem interactions
 - Area of Concern planning

Test 1

3. White and Red pine Management
 - silvics of Pr , Pw and associated species
 - ecology, silviculture and management of Red pine and White pine
 - identifying and protecting non-timber values found in the Pr and Pw working groups
4. Tolerant hardwood management
 - management systems
 - selection management
 - defect identification and tree classification
 - wildlife values to be protected in hardwood forests

Tree Marking

- field trips and practice marking

Test 2

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Hard hats, winter boots, snowshoes
Forest Raptors and Their Nests in Central Ontario
Other books will be supplied to the student

V. EVALUATION PROCESS/GRADING SYSTEM

Tests(2) 40% ; 20% each following topic2 and topic 4

Assignments 50% - including:

- AOC layout mapping
- Basal Area estimation
- Protecting wildlife values report
- White pine tree marking
- Hardwood stand analysis
- Defect assessment
- Hardwood prescription writing
- Hardwood tree marking

10% PER DAY WILL BE DEDUCTED FOR LATE ASSIGNMENTS

Quizzes 10% - there will be 4 to 6 short quizzes to evaluate information gained from guest lectures and reading assignments.

The following semester grades will be assigned to students in post-secondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
U	Unsatisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete	

NR the requirements for a course (see *Policies & Procedures Manual – Deferred Grades and Make-up*).
Grade not reported to Registrar's office. This is used to facilitate transcript preparation when, for extenuating circumstances, it has been impossible for the faculty member to report grades.

VI. SPECIAL NOTES:

- Several field trips will be taken during this course. Students without snowshoes, suitable winter boots and hardhats will not be allowed to attend these sessions and will receive a zero grade on any tests or assignments associated with these trips.
- Tests and field trips will be announced 1 week in advance. Students must contact the instructor before the trip/test with an acceptable reason if they are unable to attend or they will receive a zero for that assignment/test.
- **Special Needs**
If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, learning disabilities), you are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office, Room E1204, Ext. 493, 717, 491 so that support services can be arranged for you.
- **Retention of Course Outlines**
It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other post-secondary institutions.
- **Course Modification**
The instructor reserves the right to modify the course as deemed necessary to meet the needs of students.
- Disclaimer for Meeting the Needs of the Learners
- Substitute Course Information is available at the Registrar's Office.

VII. PRIOR LEARNING ASSESSMENT

Students who wish to apply for advanced credit in the course should consult the instructor.