

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



Sault College

**COURSE OUTLINE**

**COURSE TITLE:**           Scaling and Tree Marking

**CODE NO. :**                NRT2030                               **SEMESTER:**               3

**PROGRAM:**                Forestry Technician

**AUTHOR:**                 Mark Harvey

**DATE:**                     June 2002                       **PREVIOUS OUTLINE DATED:**   June 2001

**APPROVED:**

	DEAN	DATE
<b>TOTAL CREDITS:</b>	3	
<b>PREREQUISITE(S):</b>		
<b>LENGTH OF COURSE:</b>	16 WEEKS	48
	<b>TOTAL CREDIT HOURS:</b>	

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*For additional information, please contact the  
School of Natural Resources  
(705) 759-2554, Ext. 688*

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Course Name

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Code No.**I. COURSE DESCRIPTION:**

Tree Marking and Scaling is design to introduce students to the basic concepts of wood measurement and tree marking. It will prepare students to meet provincial standards for operational tree marking in Ontario. Students taking this course may be eligible to be tested for provincial tree marking certification through a cooperative arrangement with the Ont. Min. of Nat. Res. The wood measurement portion of this course will be according to the Provincial Scaling Manual and will serve to introduce students to scaling concepts. Interested students may complete the provincial scaler's licence immediately upon graduation through Algonquin college in Pembroke. The provincial tree marking certification course and the scaling licence are not a part of this course and must be completed separately by interested students on their own at their own expense. The natural resource department will assist in providing opportunities for students to be certified and licenced by the Ont. Min. of Nat. Res.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

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

1. Understand and apply the silvicultural and management principles and guidelines for tolerant hardwood stands in Ontario.

Potential Elements of the Performance:

- List the silvical characteristics of tolerant hardwood species in Central Ontario
- Understand and identify timber and non timber values found in tolerant hardwood stands
- List the key objectives of and components of the tolerant hardwood tree marking program in Ontario
- Properly identify key information sources available to assist tree markers in tolerant hardwoods
- Identify, describe and compare key silvicultural systems used to manage hardwood stands

This will constitute 15% of the course grade.

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2. Mark trees in tolerant hardwood stands according to provincial standards.

Potential Elements of the Performance:

- Identify tree defects
- Identify stick nests, cavity trees and other wildlife habitat in tolerant hardwood stands
- Classify hardwood trees as AGS OR UGS
- Use a prism to make basal area determinations
- Mark trees according to a silvicultural prescriptions and provincial requirements
- Complete a prism and tree classification cruise of a tolerant hardwood stand and write a silvicultural prescription.

This will constitute 30% of the course grade.

3. Understand and apply the silvicultural and management principles and guidelines for managing the white pine working group in Ontario.

Potential Elements of the Performance:

- List the silvical characteristics of conifer species found in the white pine working group in Ontario
- Understand and identify the timber and non timber values found in the White pine working group
- List the key objectives of and components of the white pine tree marking program in Ontario
- Properly identify key information sources available to assist tree markers for the white pine working group.
- Identify, describe and compare key silvicultural systems used to manage the white pine working group

This will constitute 20% of the courses grade.

4. Mark trees in white pine stands according to and provincial standards.

Potential Elements of the Performance:

- Identify tree defects
- identify stick nests, cavity trees and other wildlife habitat
- Classify trees as AGS or UGS
- Space marked and unmarked trees using % spacing factor and % crown spacing

- Mark trees according to silvicultural prescriptions and provincial standards.

This will constitute 15% of the course grade.

5. Measure wood according to the Crown Forest Sustainability Act and the provincial “Manual of Scaling Instructions”

Potential Elements of the Performance:

- List provincial scaler’s qualifications
- Measure wood using the cubic method
- Measure wood using the stacked wood method
- Measure wood using the cube-grade method
- Describe the mass scaling method
- Identify up to 25 commercial tree species using logs

This will constitute 20% of the course grade.

**III. TOPICS:**

1. Ecology, silviculture and management of tolerant hardwood stands
2. Ecology, silviculture and management of white pine stands
3. Marking hardwood stands field trips to Dennis TWP
4. Marking white pine stands field trips to Wells TWP
5. Principles of wood measurement
6. Wood measurement calculations
7. Measuring wood outside field trips to a mill or harvesting site
8. Commercial tree species log identification

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**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

- Provincial Tree Marking Guide.
- Forest Raptors, Their Nests in Central Ontario
- Provincial Scaling Manual

**Resource materials supplied by the college:**

- A Silvicultural Guide for the Tolerant Hardwood Forest in Ontario
- A Silvicultural Guide to Managing Southern Ontario Forests
- Scaling manual
- A Silviculture Guide for the Great Lakes –St. Lawrence Conifer Forest in Ontario

**V. EVALUATION PROCESS/GRADING SYSTEM:**

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

1, hardwood tree marking practical	15%
2, pine tree marking practical	15
3, defects quizz	5
4, defects test	10
5, tree marking written test	20
6, log identification test	10
7, scaling assignment # 1	5
8, scaling assignment # 2	5
9, cruise and prescription	<u>15</u>
	100%

<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.	

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X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see <i>Policies &amp; Procedures Manual – Deferred Grades and Make-up</i> ).
NR	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:

### Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 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.

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

There are no scheduled rewrite exams or tests in this course. Students are expected to use college provided transportation to attend field trips.

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Overlap in scheduling with other courses is not permitted.  
Students must attend 80% or more of the scheduled class time to receive a C grade or higher in the course.  
Outdoor field trips are scheduled classes  
Students must wear safety equipment while in the field unless the instructor indicates it is not required. Safety equipment includes as a minimum safety boots and a hard hat. The instructor may insist that additional safety equipment be used depending on conditions.

**VII. PRIOR LEARNING ASSESSMENT:**

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

**VIII. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.