

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



Sault College

**COURSE OUTLINE**

**COURSE TITLE:** Tree marking and scaling  
**CODE NO. :** NRT 203 **SEMESTER:** 3  
**PROGRAM:** FORESTRY TECHNICIAN  
**AUTHOR:** MARK HARVEY  
**DATE:** May 2004 **PREVIOUS OUTLINE DATED:** 2003  
**APPROVED:**

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|--|-------------|-------------|
|  | _____       | _____       |
|  | <b>DEAN</b> | <b>DATE</b> |

**TOTAL CREDITS:** 3  
**PREREQUISITE(S):**  
**HOURS/WEEK:** 3

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*For additional information, please contact Colin Kirkwood, Dean*  
*School of Technology, Skilled Trades & 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 Alqonguin 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 courses grade

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 a wide range of other wildlife habitat values 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 for tree marking .

This will constitute 30% of the courses 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 15% 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 values
- 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 courses 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 courses 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:**

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

**Resource materials supplied by the college**

- 1, A Silvicultural Guide for the Tolerant Hardwood Forest in Ontario
- 2, A Silvicultural Guide to Managing Southern Ontario Forests
- 3, Scaling manual
- 4, 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 quiz                    | 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%   | 4.00                          |
| B            | 70 - 79%   | 3.00                          |
| C            | 60 - 69%   | 2.00                          |
| D            | 50 - 59%   | 1.00                          |
| F (Fail)     | 59% or below   | 0.00                          |
| CR (Credit)  | Credit for diploma requirements has been awarded.                                  |                               |
| S            | Satisfactory achievement in field /clinical placement or non-graded subject areas. |                               |
| U            | Unsatisfactory achievement in  |                               |

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|    | field/clinical placement or non- graded subject area  |
| X  | A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course |
| NR | Grade not reported to Registrar's office. .   |
| W  | Student has withdrawn from the course without penalty   |

## 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 E11104 or call Extension 703 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

### Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material

### Course outline amendments:

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.

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

**CLASSES WILL START AT 8:30 AM SHARP** . Students who are late for class and as a result miss a field trip will be expected to complete the work on their own at their own expense.

There are no scheduled rewrite exams or tests in this course.

Students are expected to use college provided transportation to attend field trips

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 professor . Credit for prior learning will be given upon successful completion of a challenge exam or portfolio:

#### **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.