COURSE OUTLINE: NRT203 - TREE MARKING

Prepared: Brent Attwell / Shaun Meakin / Laurie Thompson
Approved: Sherri Smith, Chair, Natural Environment, Business, Design and Culinary

Course Code: Title	NRT203: TREE MARKING
Program Number: Name	5230: FORESTRY TECHNICIAN
Department:	NATURAL RESOURCES PRG
Semesters/Terms:	18F
Course Description:	Tree Marking is designed to introduce students to basic concepts of tree marking in the partial harvest system. It will prepare students to meet provincial standards for operational tree marking in Ontario in both hardwood and pine. Students taking this course may be eligible for provincial tree marking certification through a cooperative arrangement with the Ontario Ministry of Natural Resources and Forestry (OMNRF). The provincial tree marking certification course is not a part of this course and must be completed separately by interested students on their own and at their own expense. The NEOS department may assist in providing opportunities for students to become certified.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course: Please refer to program web page for a complete listing of program outcomes where applicable.	**5230 - FORESTRY TECHNICIAN** VLO 1 Conduct forest inventory surveys and field measurements to determine forest resources and values in forests and woodlots. VLO 3 Perform technical functions in silvicultural operations and assist in the monitoring and evaluation of the effectiveness of silvicultural practices. VLO 6 Identify and analyze forest diseases, pests, invasive species and other disturbance events and implement mitigation strategies to maintain and improve forest ecosystems. VLO 7 Select, operate, troubleshoot and maintain tools and equipment in a variety of environmental conditions and in accordance with safety and operating standards. VLO 8 Work independently and in a collaborative environment while applying effective teamwork, leadership and interpersonal skills. VLO 9 Communicate technical information to a variety of stakeholders in oral, written, visual and electronic forms. VLO 10 Develop strategies for ongoing professional development to enhance work performance in the forestry sector.
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. EES 3 Execute mathematical operations accurately.

SAULT COLLEGE | 443 NORTHERN AVENUE | SAULT STE. MARIE, ON P6B 4J3, CANADA | 705-759-2554

	EES 4	Apply a systematic approach to solve problems.
	EES 5	Use a variety of thinking skills to anticipate and solve problems.
	EES 6	Locate, select, organize, and document information using appropriate technology and information systems.
	EES 7	Analyze, evaluate, and apply relevant information from a variety of sources.
	EES 8	Show respect for the diverse opinions, values, belief systems, and contributions of others.
	EES 9	Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
	EES 10	Manage the use of time and other resources to complete projects.
	EES 11	Take responsibility for ones own actions, decisions, and consequences.

Course Evaluation: Passing Grade: 50%, D

Books and Required Resources:
Ontario Tree Marking Guide by OMNR
Publisher: Ontario Ministry of Natural Resources
Version 1.1

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Understand and apply the silvicultural and management principles and guidelines for tolerant hardwood stands in Ontario.	1.1 List the silvical characteristics of tolerant hardwood species in Central Ontario. 1.2 Understand and identify timber and non-timber values found in tolerant hardwood stands. 1.3 List the key objectives of and components of the tolerant hardwood tree marking program in Ontario. 1.4 Properly identify key information sources available to assist tree markers in tolerant hardwoods. 1.5 Identify, describe and compare key silvicultural systems used to manage hardwood stands.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Mark trees in tolerant hardwood stands according to provincial standards.	2.1 Identify tree defects. 2.2 Identify stick nests, cavity trees and a wide range of other wildlife habitat values in tolerant hardwood stands. 2.3 Classify hardwood trees as AGS or UGS. 2.4 Use a prism to make basal area determinations. 2.5 Mark trees according to a silvicultural prescription and provincial requirements.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Understand and apply the silvicultural and management principles and guidelines for managing the white pine working group in Ontario.	3.1 List the silvical characteristics of conifer species found in the white pine working group in Ontario. 3.2 Understand and identify the timber and non-timber values found in the white pine working group. 3.3 List the key objectives of and components of the white pine tree marking program in Ontario. 3.4 Properly identify key information sources available to assist tree markers for the white pine working group. 3.5 Identify, describe and compare key silvicultural systems used to manage the white pine working group.
Course Outcome 4	**Learning Objectives for Course Outcome 4**

SAULT COLLEGE | 443 NORTHERN AVENUE | SAULT STE. MARIE, ON P6B 4J3, CANADA | 705-759-2554

| | 4. Mark trees in white pine stands according to provincial standard. | 4.1 Identify tree defects.
4.2 Identify stick nests, cavity trees and other wildlife habitat values.
4.3 Classify trees as AGS or UGS.
4.4 Using regeneration cut, uniform shelterwood specifications select crop trees, space and mark trees using % spacing factor and crown spacing as a guide.
4.5 Mark trees according to silvicultural prescriptions and provincial standards. |

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight	Course Outcome Assessed
Assignments	40%	1, 3
Tests	60%	1, 2, 3, 4

Date: June 25, 2018

Please refer to the course outline addendum on the Learning Management System for further information.