
Course Name

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

Students will carry out practical exercises and perfect outdoor skills as they relate to a forest technician. Exercises are drawn from the Trees & Shrubs, Field Orientation, Timber Management, Forest Soils, Silviculture, Forest Mensuration and Surveys & Assessments courses. Students will investigate red pine thinning trials, plant trees and assess planter performance, visit a seed orchard and prepare for the white pine tree marking certification course. The use of brush saws will be demonstrated and practiced by each student. In addition, students will visit various research sites dealing with jack pine productivity.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Navigate accurately and quickly through a forested landscape using mechanical and electronic navigation aids.

Potential Elements of the Performance:

- Properly use a magnetic hand compass with declination set
- Properly use a GPS unit to locate field positions, mark locations and enter field coordinates
- Obtain directions from maps and aerial photographs using a navigational protractor and/or a compass.

2. Compare the effects of thinning a plantation at various spacing factors.

Potential Elements of the Performance:

- Measure tree numbers, heights and diameters.
- Establish plots of a designated size and calculate # of trees/ha and volume of trees/ha

3. Complete a description of a soil pit.

Potential Elements of the Performance:

- Establish a soil pit to the proper depth and dimension.
- Complete an analysis of soil horizons, both organic and mineral.
- Perform measurements and a texture test on all mineral horizons.
- Take a bulk density sample of the mineral soil.
- Establish the presence of free carbonates in the soil profile.

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- Complete tally sheets satisfactorily and collect a soil sample from each of the soil horizons.
- Identify the color of each mineral soil horizon using the Munsell color charts.

4. Understand the establishment and running of a seed orchard.

Potential Elements of the Performance:

- View an existing seed orchard and describe the configuration of planted trees and be familiar with the establishment procedures of a seed orchard.
- Identify the method of seed collection and extraction of seed from cone producing trees.
- Be familiar with activities related to the maintenance of the seed orchard.

5. Operate a brush saw for the purpose of removing unwanted, competing vegetation and/or the thinning of a plantation.

Potential Elements of the Performance:

- Be able to identify the parts of a brush saw.
- Perform a routine check relating to the operability of a brush saw.
- Operate a brush saw within the proper safety guidelines
- Understand the concept of directional felling of brush/trees.
- Change, sharpen and maintain the cutting blade.

6. Carry out operational silvicultural activities.

Potential Elements of the Performance:

- Plant forest tree seedlings according to specified standards.
- Assess tree planting according to a specified format.
- Calculate payment of a tree plant operation.
- Accurately mark white pine trees for removal and understand the underlying principles when selecting trees to be harvested.
- Be familiar with the use of fire as a tool in controlling unwanted vegetation as well as in the removal of excess litter/debris.
- Be familiar with the various methods of site preparation and the impacts of future forest crops.
- Determine the span/height of a potential bridge crossing.

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7. Be able to follow instructions and work as part of a cooperative, productive team in the forest.

Potential Elements of the Performance:

- Demonstrate ability to organize and complete work in an efficient and timely manner.
- Demonstrate the ability to work as part of a team.
- Conduct all work in a manner that respects the safety of other crew members.
- Wear all safety equipment (hardhat, safety boots) as required.
- Recognize potential hazards while working in the forest and the steps that can be taken to minimize risks to crew members

III. TOPICS:

1. Assessing a Red Pine thinning trial
2. Tree planting
3. Visit a White Pine seed orchard
4. White Pine tree marking
5. Brush sawing
6. Describing soils by establishing soil pits
7. Tour of Jack Pine productivity study (scarification alternatives)
8. Tree planting assessment
9. Estimating bridge span/height

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IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Fall Camp 2nd Yr Forestry NRT 252 course manual
- Forest Soils (NRT219) course manual & lab manual
- Field Manual for describing soils in Ontario
- Wetland plants of Ontario text
- Forest plants of Central Ontario text
- Ontario Tree Marking Guide text
- Compass
- Pocket Stereoscopes
- Clipboard
- Pencils/pen/paper
- Calculator
- Hardhat
- Safety boots (2 pair recommended – rubber and leather)
- Rain gear, small day pack
- Sleeping bag, pillow
- Extra clothing and personal items
- Pocket knife, flashlight, canteen (water bottle)
- Wrist watch
- Cup or coffee mug
- Prescription medicine if required

V. EVALUATION PROCESS/GRADING SYSTEM:

The following semester grades will be assigned to students:

Grade	Definition	<i>Grade Point Equivalent</i>
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)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	

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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 academic penalty.

Students must satisfactorily complete **ALL** of the following activities; Red Pine thinning trial exercise, White Pine tree marking exercise and test, tree planting, participate in the use of a brush saw, soils pit description, and estimating bridge span/height in order to obtain a satisfactory (S) grade in this course.

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 professor and/or the Special Needs office. Visit Room E1101 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 postsecondary 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.

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.