



## COURSE OUTLINE: NRT252 - FALL CAMP-FOR-2ND YR

Prepared: Adam Hodgson

Approved: Sherri Smith, Chair, Natural Environment, Business, Design and Culinary

<b>Course Code: Title</b>	NRT252: FALL CAMP - FORESTRY - 2ND YEAR
<b>Program Number: Name</b>	5230: FORESTRY TECHNICIAN
<b>Department:</b>	NATURAL RESOURCES PRG
<b>Academic Year:</b>	2022-2023
<b>Course Description:</b>	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, Forest Management and Planning, Soils Analysis, Silviculture 1 & 2, Forest Mensuration, Forest Harvesting and Products, and Tree Marking courses. Students will investigate red pine plantations, plant trees, assess planter performance, conduct regen surveys, and tree mark for a regeneration harvest in white pine. Students will learn to select crop trees and utilize clearing saws to safely release them from competition. In addition, students will visit a long-term research site relating to jack pine productivity.
<b>Total Credits:</b>	2
<b>Hours/Week:</b>	3
<b>Total Hours:</b>	40
<b>Prerequisites:</b>	There are no pre-requisites for this course.
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Vocational Learning Outcomes (VLO's) addressed in this course:</b>	<b>5230 - FORESTRY TECHNICIAN</b>
<b>Please refer to program web page for a complete listing of program outcomes where applicable.</b>	VLO 1 Conduct forest inventory surveys and field measurements to determine forest resources and values in forests and woodlots.
	VLO 2 Assess soil characteristics, vegetation and wildlife habitats to identify their interactions within forest ecosystems.
	VLO 3 Perform technical functions in silvicultural operations and assist in the monitoring and evaluation of the effectiveness of silvicultural practices.
	VLO 4 Collect, analyze, interpret, and display spatial data using mapping technology and Geographical Information Systems (GIS) to contribute to forest resource management.
	VLO 5 Contribute to sustainable forest management plans, including conservation and rehabilitation measures, taking into consideration the perspectives of a variety of stakeholders and the requirements of relevant legislation and regulations.
	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.



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<b>Essential Employability Skills (EES) addressed in this course:</b>	<p>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.</p> <p>EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.</p> <p>EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.</p> <p>EES 10 Manage the use of time and other resources to complete projects.</p> <p>EES 11 Take responsibility for ones own actions, decisions, and consequences.</p>																
<b>Course Evaluation:</b>	<p>Satisfactory/Unsatisfactory &amp; A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>																
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	<p>Academic success is directly linked to attendance. Missing more than 1/4 of the field days in this course shall result in an F grade for the course.</p>																
<b>Course Outcomes and Learning Objectives:</b>	<table border="1"> <thead> <tr> <th data-bbox="424 903 694 943"><b>Course Outcome 1</b></th> <th data-bbox="694 903 1257 943"><b>Learning Objectives for Course Outcome 1</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="424 943 694 1060">Navigate accurately and quickly through a forested landscape using mechanical and electronic navigation aids.</td> <td data-bbox="694 943 1257 1060">           1.1 Properly use a magnetic hand compass with declination set.            1.2 Properly use a GPS unit to locate field positions, mark locations and enter field coordinates.         </td> </tr> <tr> <th data-bbox="424 1060 694 1090"><b>Course Outcome 2</b></th> <th data-bbox="694 1060 1257 1090"><b>Learning Objectives for Course Outcome 2</b></th> </tr> <tr> <td data-bbox="424 1090 694 1227">Compare the effects of thinning hardwood regeneration at various spacing factors.</td> <td data-bbox="694 1090 1257 1227">           2.1 Measure tree numbers, heights and diameters            2.2 Establish plots of a designated size and calculate # of trees/ha and volume of trees/ha.            2.3 Understand the yellow birch crop tree thinning technique.            2.4 Implement a trial yellow birch crop tree plot.         </td> </tr> <tr> <th data-bbox="424 1227 694 1257"><b>Course Outcome 3</b></th> <th data-bbox="694 1227 1257 1257"><b>Learning Objectives for Course Outcome 3</b></th> </tr> <tr> <td data-bbox="424 1257 694 1374">Understand and be capable of using the shelterwood system for tree marking white pine stands.</td> <td data-bbox="694 1257 1257 1374">           3.1 Identify defects and diseases.            3.2 Understand crop tree, crown spacing, bole spacing, etc.            3.3 Recognize wildlife values important to maintaining a healthy forest.            3.4 In teams, mark an area using the shelterwood system.         </td> </tr> <tr> <th data-bbox="424 1374 694 1405"><b>Course Outcome 4</b></th> <th data-bbox="694 1374 1257 1405"><b>Learning Objectives for Course Outcome 4</b></th> </tr> <tr> <td data-bbox="424 1405 694 1507">Complete a brushing or pre-commercial thinning exercise.</td> <td data-bbox="694 1405 1257 1507">           4.1 Mark crop trees to retain using crop tree criteria.            4.2 Safely operate a brush saw following a safety tailboard.            4.3 Audit the performance of other teams based on following guidelines provided.         </td> </tr> </tbody> </table>	<b>Course Outcome 1</b>	<b>Learning Objectives for Course Outcome 1</b>	Navigate accurately and quickly through a forested landscape using mechanical and electronic navigation aids.	1.1 Properly use a magnetic hand compass with declination set. 1.2 Properly use a GPS unit to locate field positions, mark locations and enter field coordinates.	<b>Course Outcome 2</b>	<b>Learning Objectives for Course Outcome 2</b>	Compare the effects of thinning hardwood regeneration at various spacing factors.	2.1 Measure tree numbers, heights and diameters 2.2 Establish plots of a designated size and calculate # of trees/ha and volume of trees/ha. 2.3 Understand the yellow birch crop tree thinning technique. 2.4 Implement a trial yellow birch crop tree plot.	<b>Course Outcome 3</b>	<b>Learning Objectives for Course Outcome 3</b>	Understand and be capable of using the shelterwood system for tree marking white pine stands.	3.1 Identify defects and diseases. 3.2 Understand crop tree, crown spacing, bole spacing, etc. 3.3 Recognize wildlife values important to maintaining a healthy forest. 3.4 In teams, mark an area using the shelterwood system.	<b>Course Outcome 4</b>	<b>Learning Objectives for Course Outcome 4</b>	Complete a brushing or pre-commercial thinning exercise.	4.1 Mark crop trees to retain using crop tree criteria. 4.2 Safely operate a brush saw following a safety tailboard. 4.3 Audit the performance of other teams based on following guidelines provided.
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	<b>Course Outcome 5</b>	<b>Learning Objectives for Course Outcome 5</b>
	Carry out tree planting activities as required on an operational level.	5.1 Plant forest tree seedlings according to specified standards. 5.2 Assess tree planting according to a specified format. 5.3 Calculate payment of a tree plant operation.
	<b>Course Outcome 6</b>	<b>Learning Objectives for Course Outcome 6</b>
	Be able to follow instructions and work as part of a cooperative, productive team in the forest.	6.1 Demonstrate ability to organize and complete work in an efficient and timely manner. 6.2 Demonstrate the ability to work as part of a team. 6.3 Conduct all work in a manner that respects the safety of other crew members. 6.4 Wear all safety equipment (hardhat, safety boots) as required. 6.5 Recognize potential hazards while working in the forest and the steps that can be taken to minimize risks to crew members
<b>Date:</b>	June 30, 2022	
<b>Addendum:</b>	Please refer to the course outline addendum on the Learning Management System for further information.	