

COURSE FOR1060: MEASURING THE FOREST 1 (MEASUREMENT SKILLS)**Level:** Introductory**Theme:** Technology and Applications**Prerequisites:** FOR1050 Mapping & Aerial Photos
Emergency First Aid (current certification)**Description:** Students demonstrate basic forest measurement skills, and apply these skills to sample fibre values in a forested region.**Parameters:** Access to a demonstration forest and forest measurement tools.

Instructor training (current certification) in Standard Level First Aid is required.

See Section C (Planning for Instruction) and Section H (Linkages/Transitions) for further information on instructor training and certification.

Supporting Course: CTR1210 Personal Safety (Management) [Career Transitions Strand]

Because of the practical nature of this course, students must have a general knowledge of basic first-aid and survival techniques relevant to forest environments. See Planning for Instruction in Section C for further information on student safety.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> explain the goals and techniques of conducting forest surveys 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> completing a research project on the goals and techniques of conducting a forest survey. Research to address: <ul style="list-style-type: none"> reasons for conducting forest surveys techniques used to sample a forested area how sample data is used to estimate forest populations. <p><i>Assessment Tool</i> <i>Research Process: Forest Surveys, FOR1060-1</i></p> <p><i>Standard</i> <i>Conduct research to a standard of 1 on the rating scale</i></p>	10

COURSE FOR1060: MEASURING THE FOREST 1 (MEASUREMENT SKILLS) (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> demonstrate basic competencies. 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> observations of individual effort and interpersonal interaction during the learning process. <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above.</i></p>	<p>Integrated throughout</p>

Concept	Specific Outcomes	Notes
<p>Forest Surveys</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> identify reasons for conducting a forest survey; e.g.: <ul style="list-style-type: none"> types of information gathered questions that are answered distinguish between forest samples and forest populations describe basic techniques used to sample a forested area; e.g.: <ul style="list-style-type: none"> layout of sample plots data collection techniques explain how sample data may be used to estimate fibre volumes and other nonfibre forest resources. 	<p>Invite resource persons from government, industry and/or professional associations.</p> <p>See <i>Alberta's Focus on Forests</i> (Activity 4.3– Surveying the Forest Resource).</p>
<p>Compass and Measurement Skills</p>	<ul style="list-style-type: none"> demonstrate basic compass skills to establish direction in the forest; e.g.: <ul style="list-style-type: none"> orient a map establish and follow a bearing calculate horizontal distance in the forest using pacing and chaining skills demonstrate open and closed traverses in the forest using compass and chaining skills calculate the diameter of trees using a diameter tape or other suitable equipment 	<p>Develop basic skills in measuring direction and distance in the forest.</p> <p>Invite resource persons from local government/ industry to demonstrate:</p> <ul style="list-style-type: none"> compass and chain skills techniques in measuring the forest.

COURSE FOR1060: MEASURING THE FOREST 1 (MEASUREMENT SKILLS) (continued)

Concept	Specific Outcomes	Notes
Compass and Measurement Skills (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • calculate the height of trees using a clinometre and measuring tape or other suitable equipment • demonstrate techniques used to determine the age of trees. 	<p>Borrow necessary equipment from local government/industry organizations.</p> <p>Use short pieces of logs.</p>
Sampling Technique	<ul style="list-style-type: none"> • demonstrate compass and chaining skills to establish boundaries for a sample forest plot • identify safety practices and policies relevant to gathering sample data in the forest • describe data regarding one or more aspects of the fibre resource within the sample forest plot; e.g.: <ul style="list-style-type: none"> – tree height/diameter – number and distribution of species – age of trees • record sample data in appropriate tables and/or charts • interpret sample data to make inferences regarding tree populations and fibre values in the forest region • manipulate sample data as required to estimate fibre volumes. 	<p>Contact local government/industry to obtain existing sample data.</p>