

COURSE FOR2070: HARVEST PRACTICES (FIBRE HARVEST & PROCESSING)**Level:** Intermediate**Theme:** Technology and Applications**Prerequisite:** None**Description:** Students research the steps involved in harvesting and processing the forest fibre resource.**Parameters:** Access to forest harvest areas and forest products industries.

Off-campus learning may support components of research related to forest harvest and fibre utilization; consultation with the work-site supervisor will ensure that relevant safety considerations are addressed.

See the *Off-Campus Education Guide for Administrators, Counsellors and Teachers* (Alberta Education, 1997) for further information regarding off-campus learning.

Supporting Course: CTR2210 Workplace Safety Practices [Career Transitions Strand]

Students must have a general knowledge of potential hazards and accepted safety practices relevant to forest harvest sites prior to engaging in off-campus learning experiences. See Planning for Instruction in Section C for further information regarding 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"> identify major components of a plan for a forest harvest 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> identifying major components of a plan for forest harvest, including: <ul style="list-style-type: none"> when and how much to cut methods of harvest (e.g., clearcutting, shelter wood method) and logging (e.g., hand, mechanical) regeneration and environmental protection. <p><i>Assessment Tool</i> <i>Knowledge/Application Assessment: Forest Harvest, FOR2070-1</i> <i>Sample Checklist: Forest Harvest Plans, FOR2070-2</i></p> <p><i>Standard</i> <i>Respond to a standard of 2 on the rating scale</i></p>	<p>15</p>

COURSE FOR2070: HARVEST PRACTICES (FIBRE HARVEST & PROCESSING)
(continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> describe career opportunities relevant to forest harvesting and fibre use demonstrate basic competencies. 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> given current information on career opportunities in forest harvest and fibre utilization, completing a research project on one or more occupations in related fields. <p><i>Assessment Tool</i> <i>Career Search: Intermediate Level, FORCAR-2</i></p> <p><i>Standard</i> <i>Conduct research to a standard of 2 on the rating scale</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>10</p> <p>Integrated throughout</p>

Concept	Specific Outcomes	Notes
Harvest Plan	<p><i>The student should:</i></p> <ul style="list-style-type: none"> identify major components of a plan for harvesting the forest: <ul style="list-style-type: none"> when and how much to cut method of harvest (e.g., clearcutting, shelter wood method) and logging (e.g., hand, mechanical) regeneration and environmental protection relate the concepts of allowable cut, sustained yield and multiple use to forest harvest practices 	<p>This course develops appropriate background knowledge for FOR2120 (Users in the Forest) and FOR3120 (Integrated Resource Management).</p> <p>Discuss essential components of a forest harvest plan—DO NOT make a plan. Use resource persons from government and industry if possible.</p>

COURSE FOR2070: HARVEST PRACTICES (FIBRE HARVEST & PROCESSING)
(continued)

Concept	Specific Outcomes	Notes
Harvest Plan (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • explain applications of forest inventory information in establishing a plan for harvest: <ul style="list-style-type: none"> – identification of tree species – determining timber quality, volume and age – layout of cutting area and landing sites – planning for forest access • describe applications of different methods of forest harvest: <ul style="list-style-type: none"> – clearcutting – selective cutting – shelter wood cutting • describe applications of different methods of forest regeneration: <ul style="list-style-type: none"> – natural – artificial • identify environmental concerns to be addressed through harvest plans: <ul style="list-style-type: none"> – protection of sensitive areas – impact on downstream values – landslide and erosion hazards. 	<p>Videos relevant to harvest planning and available from Alberta Pacific Forest Industries (telephone: 1-800-661-5210) include:</p> <ul style="list-style-type: none"> • <i>A Pledge to the Future: The Alberta Pacific Story</i> (23 minutes) • <i>With Eyes on Tomorrow</i> (38 minutes). <p>Identify considerations relevant to establishing the size and location of harvest tracts.</p> <p>Investigate road and landing requirements for a local harvest operation.</p> <p>Discuss the scheduling of equipment and completion dates for harvest operations.</p>
Harvest Techniques	<ul style="list-style-type: none"> • identify stages in the harvesting procedure from stump to mill: <ul style="list-style-type: none"> – falling, bucking and delimiting – skidding – loading and hauling • describe techniques and equipment used to fell, buck and delimit trees in a forest harvest operation • describe techniques and equipment used to transport logs from stump to landing site in a forest harvest operation • describe techniques and equipment used to transport logs from landing site to mill in a forest harvest operation 	<p>Plan for off-campus learning activities that will enable students to follow the tree from harvest to finished product.</p> <p>Ask students to describe the processes used in felling, bucking and delimiting a tree.</p> <p>For example,</p> <ul style="list-style-type: none"> • horses • mechanical skidders. <p>Contact local forest industry /forest industry suppliers for guest speakers and print material.</p>

COURSE FOR2070: HARVEST PRACTICES (FIBRE HARVEST & PROCESSING)
(continued)

Concept	Specific Outcomes	Notes
Harvest Techniques (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • describe techniques used in slash disposal and site rehabilitation following logging operations in a forest area • identify safety legislation and requirements relevant to visiting a forest harvest site. 	<p>Arrange for students to work with a local landowner in reclaiming an eroded forest area.</p> <p>Identify safety precautions relevant to felling and transporting trees. Contact Occupational Health and Safety for:</p> <ul style="list-style-type: none"> • <i>Logging Safety Manual</i> • <i>Chain Saw Safety Manual</i> • <i>Safety Log Transport Manual.</i>
Fibre Products	<ul style="list-style-type: none"> • identify major categories of forest products and give examples of each: <ul style="list-style-type: none"> – pulp and paper – lumber – veneer and plywood – board products – chemical and medicinal products • describe the steps and processes involved in log utilization at a sawmill • describe the steps and processes involved in fibre utilization at a pulp mill: <ul style="list-style-type: none"> – mechanical – chemical. 	<p>Visit a sawmill and pulp mill; prepare reports based on information gathered through visits.</p> <p>Make a list of the major tasks performed at a sawmill.</p> <p>Demonstrate and explain processes involved in producing a fibre product; e.g., paper.</p> <p>View <i>Weyerhaeuser - OSB Production</i>, a 30-minute video distributed by Ranson Productions, Edmonton (telephone: 403-437-3400).</p> <p>Identify safety regulations pertinent to sawmill and pulp mill operations.</p>

COURSE FOR2070: HARVEST PRACTICES (FIBRE HARVEST & PROCESSING)
(continued)

Concept	Specific Outcomes	Notes
Career Opportunities	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • describe potential careers in forest harvest and fibre utilization: <ul style="list-style-type: none"> – professional – technical – labour-based • describe employment statistics within one or more areas of specialization ; e.g.: <ul style="list-style-type: none"> – types of careers – number of workers – employment trends • infer career opportunities and trends from employment statistics • infer impacts of technology development and the marketplace on employment opportunities • predict possible forest harvest and/or fibre utilization industries in the future, and resulting career opportunities. 	<p>Interview people employed in forest harvest and fibre utilization industries. Identify general areas of industry specialization.</p> <p>Review National Occupational Profiles (NOC).</p> <p>Contact the “Career Hotline” (telephone 1-800-661-3753).</p> <p>Gather information from senior management people in the forest industry; also producers of value-added products.</p>