

MODULE AGR2060: LANDSCAPE/TURF MANAGEMENT 1 (MAINTENANCE PRACTICES)

Level: Intermediate

Theme: Technology and Applications

Prerequisite: AGR1070 Basic Landscape/Turf Care

Module Description: Students demonstrate the techniques used to provide landscape and turf maintenance services, focusing attention on plant identification, equipment maintenance, effective landscape practices, cost analysis and pricing. Potential areas of specialization include home landscapes, golf courses, recreational fields and parks, institutional/industrial grounds and roadside landscapes.

Module Parameters: Access to residential, recreational, institutional/industrial and/or roadside landscapes.

Facilities and hand and power equipment should permit students to perform practical tasks in landscape management; e.g., watering, cultivation/mulching, corrective pruning, mowing/trimming/edging of turfgrass, weed control, installation/removal of plant material.

Instructor training in first aid and in the use of pesticides is recommended; e.g., Standard First Aid, Pesticide Applicator/Dispenser Certificate.

Off-campus learning can support the development of practical skills in landscape/turf management; consultation with a work site supervisor ensures that relevant safety considerations are addressed and that student learning meets or exceeds the learner expectations in this module.

See the *Off-campus Education Guide for Administrators, Counsellors and Teachers* (Alberta Education, 1995) for further information regarding off-campus learning.

Note: This module can be combined with other modules from the Agriculture strand and/or from the Career Transitions strand to provide opportunities for students to develop technical competencies within the Landscape Gardener Apprenticeship Program (Alberta Advanced Education and Career Development). See Section H (Linkages/Transitions) of this guide for further information.

Supporting Module: CTR2210 Workplace Safety (Practices) [Career Transitions Strand]

Because of the practical nature of this module, students need a general knowledge of accepted practices and potential hazards when performing tasks related to landscape/turf management. See Planning for Instruction in Section C for further information on student safety.

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Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> • identify plants suitable for use in Alberta landscapes 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> • given access to on-site (or photographed) tree, shrub, ground cover, flower and turfgrass species/varieties used in Alberta landscapes, identifying selected specimens according to: <ul style="list-style-type: none"> – common and botanical names – general characteristics/growth habits – functional use in Alberta landscapes. <p><i>Assessment Tool</i> <i>Identification Guide: Landscape Plants, AGRIDE–LDS</i> <i>Information Sheet: Landscape Plants, AGRINF–LDS</i></p> <p><i>Standard</i> <i>Identify 10 landscape plant (including tree, shrub, ground cover, flower and turf grass specimens) in addition to those identified in AGR1070</i></p> <ul style="list-style-type: none"> • given access to on-site (or photographed) weed species found in Alberta landscapes and turfgrasses, identifying selected specimens according to: <ul style="list-style-type: none"> – common name – growth habit – management technique. <p><i>Assessment Tool</i> <i>Identification Guide: Landscape/Turfgrass Weeds, AGRIDE–WED</i> <i>Information Sheet: Landscape/Turfgrass Weeds, AGRINF–WED</i></p> <p><i>Standard</i> <i>Identify 5 common weeds (found in Alberta landscapes and/or turfgrasses) in addition to those identified in AGR1070</i></p>	<p>20</p>

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Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> • perform routine maintenance and safety checks on equipment used in landscape practices 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> • performing routine maintenance tasks on hand and power landscape/turfgrass equipment, including when applicable: <ul style="list-style-type: none"> – cleaning/sharpening of hand tools and mower blades – lubrication of hand and power tools – checking of oil, filters, battery, spark plugs and radiator on small engines – cleaning of air filters on small engines – checking tires and tire pressure – preparation of equipment for off-season storage. <p><i>Assessment Tool</i> <i>Task Checklist: Landscape/Turf Management 1, AGR2060-1</i> <i>Lab Assessment: Landscape and Turf Care, AGRLAB-LDS</i></p> <p><i>Standard</i> <i>Achieve a minimum performance rating of 2 on <u>three</u> pieces of equipment used in landscape/turfgrass maintenance, <u>one</u> of which is power driven</i></p>	<p>20</p>

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Module Learner Expectations	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 Learner Expectations	Notes
Plant Identification	<p><i>The student should:</i></p> <ul style="list-style-type: none"> describe methods of identifying landscape plants; e.g.: <ul style="list-style-type: none"> using common names using botanical nomenclature identify and select appropriate trees, shrubs and ground covers for given applications in Alberta landscapes; e.g.: <ul style="list-style-type: none"> herbaceous and woody evergreen and deciduous identify and select appropriate flowers for given applications in Alberta landscapes; e.g.: <ul style="list-style-type: none"> annual, biennial and perennial bulbs, tubers and rhizomes identify and select appropriate turfgrasses for given applications in Alberta landscapes; e.g.: <ul style="list-style-type: none"> rhizome producing, stolon producing and bunch type fine, medium and course leaf texture. 	<p>Identify 10 or more landscape plants on site. Collect/mount a weed display.</p> <p>Identify specialty plants, including bulbs, corms, tubers and fleshy roots.</p> <p>Choose and plant bare root, ball and burlap, and container grown stock.</p> <p>Relate anatomy of turfgrass to appropriate management practices.</p> <p>Distinguish between single species turf plantings and grasses that are mixtures or blends.</p>
Equipment Maintenance	<ul style="list-style-type: none"> perform daily maintenance on hand and power equipment used in landscape practices; e.g.: <ul style="list-style-type: none"> clean/sharpen hand tools and mower blades lubricate hand and power tools check oil, oil filter, battery and radiator on small engines clean air filters on small engines check tires and tire pressure 	<p>CAUTION: Review safety knowledge and skills from AGR1070 prior to practical activities.</p>

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Concept	Specific Learner Expectations	Notes
Equipment Maintenance (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • perform safety checks on equipment and report malfunctions • diagnose and troubleshoot equipment failure • show appropriate records regarding the use of power equipment; e.g.: <ul style="list-style-type: none"> – hours of operation – periodic servicing • prepare equipment for off-season storage; e.g.: <ul style="list-style-type: none"> – cleaning – draining – oil change – repair. 	<p>Potential linkages exist with the “Landscape Gardener Apprenticeship Training Program” (see Section H: Linkages/Transitions).</p>
Installation/ Maintenance Tasks	<ul style="list-style-type: none"> • demonstrate proper planting and/or transplanting techniques for landscape plants; e.g.: <ul style="list-style-type: none"> – handling of plant materials – preparing the growing media and seed bed – installing plants and turf – staking and guying the plants • demonstrate proper techniques for preparing turfgrasses in the spring season; e.g.: <ul style="list-style-type: none"> – clean-up – dethatching – first cutting – patching the lawn – aeration and top dressing – fertilizing • explain the reasons for pruning trees, shrubs and other landscape plants • demonstrate proper techniques for pruning trees, shrubs and other landscape plants; e.g.: <ul style="list-style-type: none"> – corrective – heading back – thinning – jump cuts 	<p>Perform general landscape and turf installation / maintenance services.</p> <p>Keep a daily log that details maintenance services performed.</p> <p>Demonstrate correct use of core aerator and power rake.</p> <p>Calculate fertilizer requirements for turfed areas.</p> <p>Demonstrate corrective pruning on trees and shrubs:</p> <ul style="list-style-type: none"> • thinning, heading back, jump cuts • hedge shearing • pruning of conifers.

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Concept	Specific Learner Expectations	Notes
Installation/ Maintenance Tasks (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • explain types of winter damage to landscape plants and ways to protect against winter injury; e.g.: <ul style="list-style-type: none"> – windburn and sunscald – temperature extremes – ground heaving – damage owing to ice, snow and salt – snowplow and vehicle damage • demonstrate proper techniques for winterizing trees, shrubs, perennials and turfgrasses. 	<p>Explain winterizing techniques for trees, shrubs and turf.</p> <p>Potential linkages exist with various pesticide applicator/dispenser certificate courses (see Section H: Linkages/Transitions).</p>
Cost Analysis	<ul style="list-style-type: none"> • identify factors that determine the cost of a landscape/turfgrass service; e.g.: <ul style="list-style-type: none"> – material costs – labour costs – equipment usage costs – overhead costs • prepare simple cost analyses for basic landscape/turfgrass services. 	<p>Consider daily work ethic in assessing landscape services performed:</p> <ul style="list-style-type: none"> • attendance • punctuality • use of time • group skills/attitudes • respect for property • clean-up.

