Apprenticeship Manitoba

Manitoba

Landscape Horticulturist
Level 3

Sept. 2018

Apprenticeship Manitoba

Landscape Horticulturist

Unit: C1 Tools and Equipment 3

Level: Three

Duration: 15 hours

Theory: 10 hours

Practical: 5 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of hand, power, measuring tools and equipment, vehicles/trailers, equipment and machinery, and their applications, maintenance and procedures for use. This unit also serves as a review and continuation of the content in *Tools and Equipment 1* and *2* in Levels One and Two.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Identify hazards and describe safe work practices pertaining to hand, power, measuring tools and equipment, vehicles/trailers, equipment and machinery.	**5%**
2. Describe the implications of hand, power, measuring tools and equipment, vehicles/trailers, equipment and machinery selection and use on the practice of environmental stewardship.	**5%**
3. Interpret codes and regulations pertaining to vehicles/trailers, equipment and machinery. a. Types of licenses required for operation	**5%**
4. Identify types of vehicles/trailers, equipment, machinery and components, and describe their applications, limitations and procedures for use. a. Operating procedures when hauling a trailer b. Procedures to load, unload, secure, and transport tools, equipment and machinery c. Drive and brake systems d. Control and safety systems	**55%**
5. Identify types of engines, and describe their characteristics, applications, and operation. a. Gasoline/propane b. Diesel c. Electric	**5%**

6. Describe the daily/seasonal operating procedures used to inspect, clean, maintain and store tools and equipment. **5%**

a. Safety checks
b. Manufacturer's specifications/operators equipment manual (OEM)

7. Demonstrate the operation, cleaning, maintenance and storage of hand and power tools, measuring equipment, engines, vehicles/trailers, equipment and machinery. **20%**

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Unit: C2 Plant Identification 3

Level: Three

Duration: 14 hours

Theory: 10 hours

Practical: 4 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of additional plants, their characteristics and cultural requirements. This unit also serves as a review and continuation of the content in *Plant Identification 1* and *2* in Levels One and Two.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Use plant morphology to categorize a plant to the family, genus and species levels. a. Leaves/needles b. Flowers/fruits/seeds c. Buds d. Bark e. Growth habits	**25%**
2. Describe the cultural requirements of these additional plants (see partial list below. Additional plant list to be supplied by instructor). a. Moisture b. Light c. Soil type d. Hardiness e. Nutrients f. Propagation g. Salt tolerance	**25%**
3. Identify the considerations for the selection of these additional plants for specific uses. a. Residential applications b. Commercial applications c. Reclamation/restoration d. Location and environment	**25%**
4. Select plants for specific applications.	**25%**

Landscape Horticulturist Plant List by Family

	FAMILY	Latin name	Common name	Character
1	ASTERACEAE	Rudbeckia hirta	Gloriosa Daisy	Annual
2	ASTERACEAE	Helianthus annuus	Sunflower	Annual
3	ASTERACEAE	Cosmos bipinnatus	Cosmos	Annual
4	ASTERACEAE	Dendranthema **x** morifolium	Garden Mum	Perennial
5	ASTERACEAE	Echinops bannaticus	Globe Thistle	
6	ASTERACEAE	Achillia millefolium	Common Yarrow	Perennial
7	ASTERACEAE	Artemesia schmidtiana	Silver Mound	Perennial
8	ASTERACEAE	Liatris spicata	Blazing Star	Perennial
9	BETULACEAE	Betula pendula	European White Birch	Tree / Shrub
10	BETULACEAE	Corylus cornuta	Beaked Hazelnut	Tree / Shrub
11	BRASSICACEAE	Arabis caucasica	Rock Cress	Annual
12	CAPRIFOLIACEAE	Sambucus racemosa	European Red Elder	Tree / Shrub
13	CARYOPHYLLACEAE	Cerastium tomentosum	Snow-in-Summer	Perennial
14	CORNACEAE	Cornus alba	White Dogwood	Tree / Shrub
15	CRASSULACEAE	Sempervivum tectorum	Hens and Chicks	Perennial
16	CUPRESSACEAE	Juniperus scopulorum	Rocky Mountain Juniper	Tree / Shrub
17	CUPRESSACEAE	Juniperus squamata	Squamata Juniper	Tree / Shrub
18	CUPRESSACEAE	Microbiota decussata	Siberian Cypress	Tree / Shrub
19	FABACEAE	Genista pilosa	Spreading Broom	Tree / Shrub
20	LAMIACEAE	Thymus pseudolanuginosus	Woolly Thyme	Perennial
21	OLEACEAE	Fraxinus pennsylvanica var. subintegerrima	Green Ash	Tree / Shrub
22	OLEACEAE	Syringa meyeri	Meyers Lilac	Tree / Shrub
23	PINACEAE	Larix laricina	Tamarack	Tree / Shrub
24	PINACEAE	Picea pungens	Colorado Spruce	Tree / Shrub
25	RANUNCULACEAE	Aconitum napellus	Monkshood	Perennial
26	RANUNCULACEAE	Aquilegia hybrida	Columbine	Perennial
27	ROSACEAE	Spiraea x vanhouttei	Bridal Wreath Spirea	Tree / Shrub
28	ROSACEAE	Alchemilla mollis	Lady's Mantle	Perennial
29	ROSACEAE	Physocarpus opulifolius	Common Ninebark	Tree / Shrub
30	SALICACEAE	Populus deltoides	Plains Cottonwood	Tree / Shrub

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Unit: C3 Plant and Inventory Management

Level: Three

Duration: 15 hours

Theory: 15 hours

Practical: 0 hours

Overview:

Upon completion of this unit the apprentice will demonstrate knowledge of the procedures for ordering, receiving, storing and transporting of plant materials, and for controlling inventory.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with ordering, receiving, storing and transporting plant materials.	**10%**
2. Identify hazards and describe safe work practices pertaining to handling and transporting plant materials and to inventory control.	**10%**
3. Interpret documentation relevant to ordering, receiving, storing and transporting plant materials and to inventory control. a. Plans b. Specifications c. Jurisdictional regulations d. Shipping documentation e. Movement certificates f. Import permits g. Purchase orders	**25%**
4. Describe the procedures for ordering, receiving and organizing plant materials and controlling inventory.	**15%**
5. Identify the standard relevant to ordering plants and materials.	**10%**
6. Explain the process for verifying and accepting plant material shipments. a. Required documentation b. Verification of order • Quantity • Variety • size c. quality	**10%**

7. Describe the procedures used for transporting and storing plant materials. 15%

a. Transportation methods
b. Loading
c. Securing
d. Protecting
e. Unloading
f. Holding area

8. Describe the documents and procedures used for controlling inventory. 5%

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Unit: C4 Job Planning 1

Level: Three

Duration: 10 hours

Theory: 10 hours

Practical: 0 hours

Overview:

Upon completion of this unit the apprentice will demonstrate knowledge of trade-related documentation and of the procedures used to plan job tasks.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with job planning.	**5%**
2. Identify hazards and describe safe work practices pertaining to job planning.	**5%**
3. Identify types of trade-related documentation and describe their applications and procedures for use. a. Drawings b. Qualifications c. Specifications d. Codes and standards e. Manuals f. Permits g. Regulations h. Policies i. Guidelines j. Tenders and contracts k. Site locates l. Product instructions	**40%**
4. Identify the project considerations and requirements when planning jobs and job tasks. a. Site assessment b. Materials and equipment c. personnel d. Sequence of work	**35%**
5. Explain the importance of accurate record keeping and describe the associated procedures.	**15%**

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Unit: C5 Sales and Customer Relations

Level: Three

Duration: 20 hours

Theory: 15 hours

Practical: 5 hours

Overview:

Upon completion of this unit the apprentice will demonstrate knowledge of customer relations, sales techniques and of products and services.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Explain the importance of advising clients about products and services.	**10%**
2. Identify jurisdictional regulations pertaining to customer record information.	**10%**
3. Identify marketing principles. a. Creating internet presence b. advertising	**10%**
4. Describe the procedures and techniques associated with maintaining customer relations. a. Qualifying customers b. Customer education c. Up-selling products and services d. Conflict resolution e. After-service follow-up f. Guarantees and warranties	**30%**
5. Describe the procedures associated with sales of products and services. a. Merchandizing b. Invoicing c. Receiving payments d. advertising	**20%**
6. Identify components of contracts	**10%**
7. Practice effective communication with clients.	**10%**

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Unit: C6 Pest and Disease Management 1

Level: Three

Duration: 30 hours

Theory: 25 hours

Practical: 5 hours

Overview:

Upon completion of this unit the apprentice will demonstrate knowledge of codes and regulations pertaining to pest and disease management, types of pests and diseases and the procedures used to manage them, the procedures to handle, transport, apply, store and dispose of pest and disease management products and tools, and of pest control products, formulations and application equipment.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with pest and disease management.	**5%**
2. Define the components of an Integrated Pest Management (IPM) program.	**5%**
3. Describe the implications of IPM on the practice of environmental stewardship.	**5%**
4. Identify methods used for pest and disease management and treatment. a. Regulatory b. Physical/mechanical c. Cultural d. Biological e. chemical	**5%**
5. Identify hazards and describe safe work practices pertaining to pest and disease management.	**5%**
6. Interpret and complete documentation pertaining to pest and disease management. a. Pest and disease monitoring b. Treatment and management records c. Evaluation of pest and disease management methods. d. Pesticide application records	**5%**
7. Interpret codes and jurisdictional regulations pertaining to pest and disease management methods and products.	**5%**

8. Identify causes of diseases. **5%**

a. Pathogens
   - Viruses
   - bacteria
   - Fungi

b. Nematodes
c. Animals

9. Identify biotic factors. **5%**

a. Diseases
b. Insects
c. Animals

10. Identify common types of pests and describe their characteristics and life cycles. **20%**

a. Arthropods
b. Nematodes
c. Birds and mammals
d. Weeds

11. Identify the considerations for selecting and applying pest and disease management measures. **5%**

a. Site analysis
b. Pest/disease populations
c. Injury levels
d. Action thresholds
e. Beneficial insect populations
f. Monitoring techniques

12. Identify specific tools and equipment relating to pest and disease management and describe their applications and procedures for use. **5%**

13. Describe the procedures used to implement pest and disease management measures. **10%**

a. Management techniques
b. Preparation
c. Equipment selection
d. Equipment calibration
e. Application techniques

14. Describe the procedures used to handle, transport, store and dispose of pest and disease management related products and materials. **5%**

15. Select, apply and record pest and disease management measures. **10%**

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Unit: C7 Irrigation

Level: Three

Duration: 30 hours

Theory: 25 hours

Practical: 5 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of irrigation equipment and systems, their applications and operation, and of the procedures to install, maintain, troubleshoot and repair irrigation equipment and systems.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with irrigation.	**5%**
2. Identify hazards and describe safe work practices pertaining to irrigation.	**5%**
3. Describe the implications of irrigation on the practice of environmental stewardship.	**5%**
4. Identify specific tools and equipment related to irrigation and describe their applications and procedures for use.	**5%**
5. Identify water sources for irrigation and describe the considerations and procedures for determining water quality and availability. a. Sample preparation b. Water testing c. Water pressure d. Flow rate e. Results interpretation	**5%**
6. Identify the factors that determine irrigation rates and methods. a. Plant materials • Growth stage • Mature size • Water use rate b. Root zone assessment c. Soil/water relationship d. Site conditions	**10%**

e. application
   - Time
   - Rate
   - Duration

f. Climate

g. Evapo-transpiration rates

7. Identify the types of irrigation systems. 5%

a. Drip/low water volume

b. sprinkler

8. Identify irrigation system components and describe their applications and procedures for use. 10%

9. Describe the procedures used to design and install irrigation equipment and systems. 15%

10. Describe the procedures used to maintain, troubleshoot, repair and adjust irrigation equipment and systems. 10%

a. Spring start-up

b. Seasonal operation

c. Fall shut-down

11. Demonstrate the ability to install, maintain, repair and adjust irrigation equipment and systems. 25%

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Unit: C8 Landscape Structures

Level: Three

Duration: 35 hours

Theory: 21 hours

Practical: 14 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of the procedures used to construct and maintain wood features.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with various landscape structure installation and maintenance.	**5%**
2. Identify hazards and describe safe work practices pertaining to landscape structure installation and maintenance.	**5%**
3. Describe the implications of landscape structures on the practice of environmental stewardship.	**5%**
4. Interpret codes, regulations and manufacturer's specifications pertaining to landscape structures.	**5%**
5. Interpret documentation pertaining to site layout. a. Plans b. Contract specifications c. Shipping documents	**10%**
6. Identify the methods and procedures used to perform site layout.	**5%**
7. Identify specific tools and equipment relating to landscape structure installation and maintenance and describe their applications and procedures for use.	**5%**
8. Identify products and materials used in landscape structure installation and maintenance and describe their applications and procedures for use.	**10%**
9. Describe the procedures used to prepare for installation of landscape structure materials.	**10%**
10. Describe the procedures used to estimate quantities of materials required to construct landscape structures.	**10%**

11.	**Describe the procedures and products used to install and maintain landscape structures.**	**15%**
12.	**Demonstrate the ability to construct, install and maintain landscape structures.**	**15%**

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Unit: C9 Water Features and Low Voltage Lighting

Level: Three

Duration: 30 hours

Theory: 25 hours

Practical: 5 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of the design, installation and maintenance of landscape water features and low voltage landscape lighting.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with water features and low voltage landscape lighting.	**5%**
2. Identify hazards and describe safe work practices pertaining to the installation and maintenance of water features and low voltage landscape lighting.	**5%**
3. Describe the implications of water features and low voltage landscape lighting on the practice of environmental stewardship.	**5%**
4. Interpret codes and regulations pertaining to the installation and maintenance of water features and low voltage landscape lighting.	**5%**
5. Interpret documentation pertaining to the installation and maintenance of water features and low voltage landscape lighting.	**5%**
6. Identify types of water features and low voltage landscape lighting and their components and describe their characteristics and applications.	**15%**
7. Describe voltage drop calculation, its application and procedure for use.	**10%**
8. Describe the procedures used to establish quantities of materials required to install water features and low voltage landscape lighting.	**5%**
9. Describe the procedures used to prepare site for installation of water features and low voltage landscape lighting.	**10%**
10. Describe the tools and procedures used to install water features and low voltage landscape lighting.	**20%**

11.	**Describe the procedures and products used to maintain, troubleshoot and repair water features and low voltage landscape lighting.**	**5%**
12.	**Demonstrate the ability to install, maintain, troubleshoot and repair water features and low voltage landscape lighting.**	**10%**

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Unit: C10 Interior Softscape

Level: Three

Duration: 25 hours

Theory: 22 hours

Practical: 3 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of interior plants, their characteristics and cultural requirements, and of the procedures to install and maintain interior softscapes.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with interior softscapes.	**5%**
2. Identify hazards and describe safe work practices pertaining to interior softscapes.	**5%**
3. Interpret codes and regulations pertaining to interior softscapes.	**5%**
4. Describe the implications of interior softscapes on the practice of environmental stewardship.	**5%**
5. Interpret and complete documentation pertaining to interior softscapes.	**5%**
6. Identify specific tools and equipment relating to interior softscapes, their applications and procedures for use.	**5%**
7. Identify the considerations for the selection of plants for interior uses. a. Morphology b. Cultural requirements	**5%**
8. Identify the considerations for determining suitability of planting site for plant material. a. Sun and light exposure b. Water availability c. Quality of growing medium d. Site accessibility e. Air quality and pollutants	**15%**
9. Describe the procedures used to prepare planting beds for herbaceous and woody plant material installation.	**10%**

10. Describe the procedures used to install and maintain herbaceous and woody plant material. **20%**

a. Pruning
b. Fertilizing
c. Irrigation

11. Demonstrate the ability to select plants for specific applications. **20%**

Landscape Horticulturist Plant List by Family

	FAMILY	Latin name	Common name	Character
1	AGAVACEAE	Dracaena marginata	Dragon Tree	Tropical / Indoor
2	AGAVACEAE	Aloe vera	Healing Plant	Tropical / Indoor
3	ARACEAE	Dieffenbachia **amoena**	Dumb Cane	Tropical / Indoor
4	ARACEAE	Epipremnum aureum	Pothos / Devil's Ivy	Tropical / Indoor
5	ARACEAE	Monstera deliciosa	Monster Plant	Tropical / Indoor
6	ARACEAE	Philodendron selloum	Tree Philodendron	Tropical / Indoor
7	ARACEAE	Spathiphyllum cannifolium	Peace Lily	Tropical / Indoor
8	ARALIACEAE	Hedera helix	English Ivy	Tropical / Indoor
9	ARALIACEAE	Schefflera arboricola	Hawaiian Elf Schefflera	Tropical / Indoor
10	ARAUCARIACEAE	Araucaria heterophylla	Norfolk (Island) Pine	Tropical / Indoor
11	CRASSULACEAE	Crassula ovata	Jade Plant	Tropical / Indoor
12	EUPHORBIACEAE	Codiaeum variegatum var. pictum	Croton	Tropical / Indoor
13	MORACEAE	Ficus benjamina	Weeping Fig	Tropical / Indoor
14	MORACEAE	Ficus elastica	India Rubber Plant / Rubber Tree	Tropical / Indoor

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Unit: C11 Growing Facilities (Not Common Core)

Level: Three

Duration: 35 hours

Theory: 28 hours

Practical: 7 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of growing facilities, their contents and the procedures used to manage them; of climate control systems and the procedures used to manage climate controls and components; of irrigation and fertigation systems, and the procedures used to manage them; of the principles, practices and equipment used to create and manage a sanitary environment.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with growing facilities.	**5%**
2. Identify hazards and describe safe work practices pertaining to building growing facilities and installing growing components.	**5%**
3. Describe the implications of growing facilities on the practice of environmental stewardship.	**5%**
4. Interpret code and regulations pertaining to building growing facilities and installing growing components.	**5%**
5. Interpret documentation relating to growing facilities.	**5%**
6. Identify the factors which impact site selection and growing facility design.	**5%**
7. Describe the procedures for site preparation, construction and installation of growing facilities and their contents, components, amenities and utilities.	**5%**
8. Identify the types of growing facilities and their related components, amenities and utilities. a. Greenhouses b. Nursery production • Field grown • Container grown	**20%**

c. Shade houses
d. Cold frames
e. Climate control storage
f. Sheds
g. Header houses

9.	**Identify specific tools and equipment used to manage and maintain growing facilities and describe their applications and procedures for use.**	**5%**
10.	**Describe growing facility structures and amenities and the procedures used to operate and maintain them.**	**5%**
11.	**Identify climate monitoring and control systems for growing facilities and describe their procedures for use.**	**20%**
12.	**Explain the procedures for winterizing growing facilities.**	**5%**
13.	**Identify irrigation and fertigation systems, water conservation and recapture systems and describe their procedures for use.**	**5%**
14.	**Identify and describe sanitation principles and practices for growing facilities, and the tools and products used to create and maintain a sanitary environment.**	**5%**

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Unit: C12 Pruning 2

Level: Three

Duration: 14 hours

Theory: 10 hours

Practical: 4 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of the procedures used to inspect, maintain, store and transport pruning tools and equipment, of the procedures for pruning, and for the disposal of diseased and infested tree parts. This unit also serves as a review and continuation of the content in *Pruning 1* in Level 2.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Define terminology associated with pruning and pruning related to the removal of diseased and infested plant parts.	**5%**
2. Identify hazards and describe safe work practices pertaining to pruning and pruning related to the removal of diseased and infested plant parts.	**5%**
3. Interpret and prepare documentation pertaining to pruning and pruning related to the removal of diseased and infested plant parts.	**5%**
4. Identify specific tools and equipment relating to pruning and pruning related to the removal of diseased plant parts and describe their applications and procedures for use.	**5%**
5. Describe the procedures used to clean and sanitize pruning tools and equipment.	**5%**
6. Describe the procedures used to inspect, maintain, store and transport pruning tools and equipment.	**5%**
7. Explain the purpose of pruning trees. a. Plant appearance b. Plant growth requirements • Coniferous • Deciduous c. Plant health d. Structure e. Unwanted growth f. Prevention of winter damage	**15%**

8. Identify pruning methods and techniques and describe their associated procedures. **25%**

a. Heading
b. Clearing/thinning
c. Crown raising
d. reduction
e. restoration
f. Specialized methods
g. 3-cut method
h. Flush cut
i. Removal

9. Identify the factors that affect pruning times. **5%**

a. Dormancy
b. Flower period
c. Growth response
d. Wind and frost damage
e. Scorch

10. Demonstrate the ability to perform basic pruning techniques and to clean and sanitize pruning tools and equipment. **25%**

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Unit: C13 Environmental Practices 3

Level: Three

Duration: 22 hours

Theory: 15 hours

Practical: 7 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of the procedures to identify and apply environmental best practices to develop, conserve, preserve**,** protect and reclaim natural habitats and ecosystems to sustain a healthy environment.
This unit also serves as a review and continuation of the content in *Environmental Practices 1* and *2* in Levels One and Two.

Objectives and Content:		**Percent of Unit Mark (%)**
1.	**Identify water retention and weed prevention materials.**	**5%**
2.	**Identify water retention practices.**	**5%**
3.	**Identify LID practices.**	**5%**
4.	**Describe the benefits and application of efficient irrigation systems.**	**5%**
5.	**Identify xeriscape principles.**	**15%**
6.	**Explain methods for protecting endangered species in waterways.**	**5%**
7.	**Explain methods for preventing the spread of invasive species in waterways.**	**5%**
8.	**Explain methods to prevent pesticides, fertilizers and pollutants from reaching waterways.**	**5%**
9.	**Describe the benefits of preserving urban forest tree canopy to maintain leaf surface and promote water infiltration.**	**5%**
10.	**Describe riparian restoration.**	**5%**
11.	**Describe the benefits and use of reclaimed water systems.**	**25%**

12.	**Identify jurisdictional regulations relating to water stewardship.**	**10%**
13.	**Participate in industry educational conferences related to environmental trends and best practices.**	**5%**

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Unit: C14 Softscape and Hardscape Repair

Level: Three

Duration: 10 hours

Theory: 7 hours

Practical: 3 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of the procedures associated with softscape and hardscape repair.

Objectives and Content:	**Percent of Unit Mark (%)**
1. Identify hazards and describe safe work practices pertaining to repairing softscape and hardscape.	**10%**
2. Interpret documentation pertaining to hardscape repair.	**10%**
3. Identify specific tools and equipment related to repairing softscape and describe their applications and procedures for use.	**10%**
4. Describe the procedures and products used to repair softscape and hardscape.	**70%**

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Unit: C15 Snow and Ice Control

Level: Three

Duration: 10 hours

Theory: 7 hours

Practical: 3 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of the procedures associated with snow and ice control.

Objectives and Content:		**Percent of Unit Mark (%)**
1.	**Identify hazards and describe safe work practices pertaining to snow and ice control practices and products.**	**5%**
2.	**Describe the implications of snow and ice control on the practice of environmental stewardship.**	**5%**
3.	**Interpret and complete documentation pertaining to snow and ice control.**	**10%**
4.	**Identify products used for snow and ice control.**	**5%**
5.	**Identify jurisdictional regulations pertaining to snow and ice control procedures and products.**	**5%**
6.	**Identify specific tools and equipment used for snow and ice control and describe their applications and procedures for use.**	**20%**
7.	**Identify sources used to gather weather information.**	**5%**
8.	**Describe the procedures used to control snow and ice.**	**30%**
9.	**Describe the impact of snow and ice control practices and products on plants and landscape features.**	**15%**