

Landscape Horticulturist Level 1

Landscape Horticulturist

Unit: A1 Learning About Work

Level: One

Duration: 7 hours

Theory: 7 hours

Practical: 0 hours

Overview:

One sign that an apprentice has become competent in a task or technique is to be asked to share this knowledge. Jobsite skills-exchange has long been fundamental to trade-learning. Even trade veterans rely on peers to refine their knowledge and skill. The opportunity to benefit from this process, however, is shaped by complex factors that include jobsite 'politics' and trade deadlines. As adult trade-learners, apprentices at all levels of training must use their observational, listening and interpersonal skills to benefit from the journey person's knowledge and experience. This requires an understanding of the trade's dynamics, as well as the roles and responsibilities which order workplace/jobsite work-life.

This unit profiles the trade's structure and scope as determined by the Apprenticeship and Certification Act through its regulations, Provincial Advisory Committees (PACs) and the Red Seal Occupational Standard (RSOS) from which the training standards are derived (core tasks and skill requirements), as well as its job-ladders and long-term career options and social competencies. This includes information about major areas of working knowledge, activities and interactions at work, and expansive and restrictive workplaces, stressing their application to apprenticeship on-the-job training.

A sound grasp of the roles, workplace relationships, and possibilities introduced in this unit are part of 'learning to learn' in Manitoba's apprenticeship system. Senior apprentices are later offered information about learning to teach in this system – a central and time-honored foundation of trades journeywork.

Please note: No percentage-weightings for test purposes are prescribed for this unit's objectives. Instead, a 'Pass/Fail' grade will be recorded for the unit in its entirety.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|---|--|
| 1. Describe the structure and scope of the Landscape Horticulturist trade. | n/a |
| a. The Apprenticeship and Certification Act | |
| • Apprenticeship and Certification Board and PACs | |
| • General and specific trade regulation | |
| • Policies regarding attendance, evaluation procedures, conduct and progression requirements (Apprenticeship Manitoba, Training Provider) | |
| b. Uses of the RSOS for Landscape Horticulturist | |
| • Technical training in-school curriculum | |
| • On-the-job record book of hours (Manitoba blue book) | |
| • Logbook of on-the-job task competencies | |
| • Examinations (level placement tests, final certification examinations) | |

- c. Opportunities and future career options
 - Generalists and specialists. The move toward specialization is well known to modern tradespeople. Some prefer to specialize and others want to do it all. Supervisory positions require a broad scope.
 - Lead hands and other immediate supervisors. Apprentices need to know how to become a lead-hand as much as they need to know the benefits and pitfalls of leadership between management and shop-floor workers.
 - Geographic mobility. What does it mean to a tradesperson to have to travel to find work? Are there more opportunities if they do? What are they? What are the drawbacks to being away from home for several weeks at a time?
 - Job hierarchies and innovations. What trade specific special training opportunities are available in your trade? Is there travel involved? Is there an opportunity to move up the ladder on a work crew as opposed to staying in the shop?

2. Describe two levels of workplace competency.

n/a

- a. Job competencies related workplace culture
 - Knowledge of workplace equipment and materials
 - Skills and techniques
- b. Social competencies related to workplace culture
 - Frame of reference for evaluation workplace events
 - Language of work
 - Workplace belief systems
 - Rules and meanings
 - Multiculturalism and equity in the workplace

3. Describe accommodation for apprentices with disabilities.

n/a

- a. Technical training
 - Requirements
 - Roles and Responsibilities
 - Services and information required by persons with disabilities
- b. On-the-job
 - Requirements
 - Roles and Responsibilities
 - Services and information required by persons with disabilities

Landscape Horticulturist

Unit: A2 Trade Safety Awareness

Level: One

Duration: 14 hours

Theory: 14 hours

Practical: 0 hours

Overview:

Safe working procedures and conditions, injury prevention, and the preservation of health are of primary importance to industry in Canada. These responsibilities are shared and require the joint efforts of government, employers, and employees. It is imperative that all parties become aware of circumstances that may lead to injury or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to incidents or injury. It is generally recognized that safety-conscious attitudes and work practices contribute to a healthy, safe, and accident-free working environment. It is imperative to apply and be familiar with the Workplace Safety and Health Act and Regulations. As well, it is essential to determine workplace hazards and take measures to protect oneself, co-workers, the public, and the environment. Safety education is an integral part of trade apprenticeship training both in school and on-the-job. Unit content is supplemented throughout Technical Training by trade-specific information about trade safety hazards and precautions presented in the appropriate contexts of discussion and study.

Please note: No percentage-weightings for test purposes are prescribed for this unit's objectives. Instead, a 'Pass/Fail' grade will be recorded for the unit in its entirety.

Objectives and Content:

Percent of Unit Mark (%)

1. Identify safety and health requirements.

n/a

- a. Overview of The Workplace Safety and Health Act
 - Rights and responsibilities of employees under the Act
 - Rights and responsibilities of employers under the Act
 - Rights and responsibilities of supervisors under the Act
- b. Fourteen (14) regulations
- c. Codes of practice
- d. Guidelines
- e. Right to refuse
 - Explanation of right to refuse process
 - Rights and responsibilities of employees
 - Rights and responsibilities of employers
 - Rights and responsibilities of supervisors under the Act

- 2. Identify personal protective equipment (PPE) and procedures.** n/a
- a. Employer and employee responsibilities as related to personal protective equipment.
 - b. Standards: Canadian Standards Association (CSA), American National Standards Institute (ANSI) and guidelines
 - c. Work protective clothing and danger if it fits poorly.
 - d. Gloves – Importance of proper glove selection (when handling chemicals, cold items, slivers, etc.)
 - e. Headwear – appropriate protective headwear when required and the approved type of headwear.
 - f. Eye protection – comparison and distinction of everyday eyeglasses, industrial safety glasses and safety goggles
 - g. Foot protection – when required according to safety standards
 - h. Hearing protection
 - Hazards of various noise levels (hearing protection must be worn)
 - Laws
 - Types of hearing protection
 - i. Respiratory protection – types, overview of proper selection
 - j. Fall protection – Manitoba requirements standards guidelines
 - CSA
 - ANSI
 - k. Ladders and scaffolding
 - l. Safety principles for working with or around industrial trucks site-specific (forklifts, pallet trucks, etc.)
- 3. Identify electrical safety.** n/a
- a. Effects of electric current on the human body
 - b. Three factors that affect the severity of an electric shock
 - c. The effects of arc and blast on the human body and on equipment
 - d. Hazards/precautions in working with energized equipment
- 4. Identify fire safety.** n/a
- a. Types of fires
 - b. Types of fire-fighting equipment
 - c. Classification of fire extinguishers (A,B,C)
 - d. Location of fire extinguishers and exits
 - e. Fire alarms and drills
- 5. Identify ergonomics.** n/a
- a. Definition of ergonomics and conditions that may affect the body
 - Working postures
 - Repetition
 - Force
 - Lifting (simple safety procedures and precautions related to material handling procedures on how to lift, carry and put down a load)
 - Tools
 - Identify tool and safety equipment
 - Causes of hand tool accidents
 - equipment

- 6. Hazard of confined space entry.** n/a
- a. Identification of a confined space
 - b. Hazards of a confined space
 - physical
 - biological
 - c. Working in a confined space
 - d. Emergency response plan
 - e. Self-contained breathing apparatus (SCBA)
- 7. Identify first aid/CPR.** n/a
- a. Overview of first aid regulation
 - b. Obligations of employers regarding first aid
 - Who is certified to provide first aid?
 - What to do while waiting for help?
 - Where is first aid kit?
 - c. Describe basic first aid requirements and techniques
 - Scope and limits of first aid intervention
 - Specific interventions (cuts, burns, abrasions, fractures, suffocation, shock, electrical shock, etc.)
 - What is it?
 - Interface with other services and agencies (eg. Workers Compensation claims)
 - d. Describe basic Cardiopulmonary Resuscitation (CPR) requirements and techniques
 - How do you get certified?
 - Scope and limits of CPR intervention (include varieties of CPR certification)
- 8. Identify the safety requirements as they apply to WHMIS with emphasis on:** n/a
- a. WHMIS is a system
 - b. Provincial regulation under the Safety and Health Act
 - Each province has a WHMIS regulation
 - c. Federal Hazardous Products Act
 - d. WHMIS generic training:
 - WHMIS defined and the format used to convey information about hazardous materials in the workplace
 - Information found on supplier and workplace labeling using WHMIS
 - Hazardous materials in accordance with WHMIS
 - Compliance with government safety standards and regulations
 - e. Description of WHMIS (include varieties of WHMIS Certification)
 - Typology of WHMIS labels, symbols, and classifications
 - Scope and use of Materials Safety Data Sheets (MSDS)
- 9. Identifying and controlling hazards.** n/a
- a. Basic control measures (injury prevention)
 - b. Safe work procedures
 - c. Explanation on the importance of industrial housekeeping
 - d. Employer responsibilities
 - e. How and where to store materials
 - f. Safety measures related to walkways, stairs and floor openings
 - g. Explanation of how to protect the worker and others when working in traffic paths

Landscape Horticulturist

Unit: A3 Tools and Equipment 1

Level: One

Duration: 30 hours

Theory: 25 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.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|---|--|
| 1. Identify hazards and describe safe work practices pertaining to hand, power, measuring tools and equipment, vehicles/trailers, equipment and machinery. | 10% |
| 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. Identify types of hand and measuring tools and equipment and describe their applications, limitations and procedures for use. | 15% |
| 4. Identify types of power equipment and describe their applications, limitations and procedures for use. | 20% |
| 5. Identify types of vehicles/trailers, equipment, machinery and components, and describe their applications, limitations and procedures for use. <ul style="list-style-type: none"> a. Components/attachments b. Drive and brake systems c. Control and safety | 20% |
| 6. Identify types of engines, and describe their characteristics, applications, and operation. <ul style="list-style-type: none"> a. Gasoline <ul style="list-style-type: none"> • Two cycle engine • Four cycle engine b. Propane c. Diesel d. Electric | 10% |

- 7. **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)

- 8. **Demonstrate the operation, cleaning, maintenance and storage of hand and power tools, measuring equipment, engines, vehicles/trailers, equipment and machinery.** 15%

Landscape Horticulturist

Unit: A4 Plant Science

Level: One

Duration: 50 hours

Theory: 40 hours

Practical: 10 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of plant growth and development and plant nutrient requirements.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|---|--|
| 1. Define terminology associated with plant science. | 10% |
| 2. Identify the factors which impact on plant growth and development | 20% |
| a. Temperature | |
| b. Hardiness | |
| c. Growing medium | |
| d. Air quality | |
| • Carbon dioxide | |
| • Oxygen | |
| • humidity | |
| e. Light | |
| f. Water | |
| g. Pests and disease | |
| h. Environmental stresses | |
| i. Plant life cycle | |
| 3. Identify plant anatomy and morphology. | 40% |
| a. Cell types | |
| b. Tissues | |
| c. organs | |
| • Leaves | |
| • Stems | |
| • Roots | |
| • Flowers | |
| • Fruits | |
| • seeds | |

4. **Explain the function of a plant as an organism.** **20%**
- a. reproduction
 - b. photosynthesis
 - c. Respiration
 - d. Transpiration
 - e. Hormones
 - f. dormancy
5. **Identify plant nutrients and describe the impact of nutrient deficiencies/excess on plants and plant growth.** **10%**

Landscape Horticulturist

Unit: A5 Soil Management

Level: One

Duration: 33 hours

Theory: 28 hours

Practical: 5 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of soil types and soil amendments.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|---|--|
| 1. Identify physical soil characteristics that must be considered when determining the suitability for plant growth. | 25% |
| a. Soil formation | |
| b. Drainage | |
| c. Aeration/porosity | |
| d. Water retention | |
| e. Compaction | |
| f. Soil texture/structure | |
| 2. Describe the implications of soil management on the practice of environmental stewardship. | 5% |
| 3. Identify types of growing media and describe their characteristics and applications. | 25% |
| a. Native soil | |
| b. Soil-less medium | |
| c. Manufactured soil | |
| d. compost | |
| e. Inorganic and organic amendments | |
| 4. Identify the soil characteristics that impact soil chemical and biological properties. | 20% |
| a. Nutrient availability | |
| b. Chemical composition | |
| • Soil acidity/alkalinity | |
| • Soil salinity | |
| • Cation exchange capacity | |
| c. Organic matter | |
| d. Biological activity | |
| 5. Identify types of soil tests, describe their characteristics and applications, and the procedures used for taking soil samples. | 5% |

- | | |
|---|------------|
| 6. Identify the considerations when selecting soil amendments for plants, and describe the procedures used to apply and/or incorporate them. | 10% |
| 7. Describe the procedures used to store, transport and dispose of soil and soil amendment products and packaging according to jurisdictional regulations. | 5% |
| 8. Interpret soil test results and select and incorporate soil amendments. | 5% |

Landscape Horticulturist

Unit: A6 Trade Mathematics

Level: One

Duration: 25 hours

Theory: 25 hours

Practical: 0 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of trade mathematics and its applications to the trade of Landscape Horticulturist.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|--|--|
| 1. Perform the basic mathematical processes of addition, subtraction, multiplication and division. | 20% |
| 2. Calculate measurement. | 25% |
| 3. Solve problems involving ratios and proportions. | 25% |
| 4. Solve problems using basic algebra. | 25% |
| 5. Express values of quantity measurement in both English and Metric. | 5% |

Landscape Horticulturist

Unit: A7 Environmental Practices 1

Level: One

Duration: 21 hours

Theory: 14 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.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|--|--|
| 1. Define terminology associated with ecosystems. a. Meadows b. Ponds c. Parks d. Urban landscapes | 15% |
| 2. Describe the function, purpose and structure of natural ecosystems. | 10% |
| 3. Describe preservation, conservation and regeneration principles and their applications. a. Plant life b. Habitat c. Water table d. Water quality | 15% |
| 4. Describe the impact of the environment and landscapes on psychosocial health. | 5% |
| 5. Describe the methods to increase biodiversity and stormwater mitigation. | 10% |
| 6. Identify environmental waste management best practices. a. Reduce b. Reuse c. Recycle | 10% |

- | | |
|---|------------|
| 7. Identify site protection. | 5% |
| a. Silt fencing | |
| b. Erosion control | |
| c. Amending native soil | |
| d. Let it lay | |
| e. Adjusting mowing height | |
| 8. Identify products, practices and jurisdictional regulations for reducing harm and positively impacting the environment. | 5% |
| 9. Describe practices for maximizing green space and permeable surfaces. | 5% |
| 10. Participate in industry educational conferences related to environmental trends and best practices. | 5% |
| 11. Identify erosion and sediment control materials and describe their characteristics and applications and the procedures used to install them. | 5% |
| 12. Identify the methods used to establish protection zones. | 10% |

Landscape Horticulturist

Unit: A8 Plant Identification I

Level: One

Duration: 30 hours

Theory: 25 hours

Practical: 5 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge to identify plants and requirements to manage health, growing conditions, pest, diseases and invasive species, and to apply horticultural principles to sustain and promote plant life and the growing environment, and of the International System of Plant Nomenclature used for plant identification.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|---|--|
| 1. Explain the International System of Plant Nomenclature and its use in plant identification. | 15% |
| a. Family | |
| b. Genus | |
| c. Species | |
| d. Variety/cultivar | |
| e. Common name | |
| 2. Interpret the use of dichotomous keys to classify plants. | 10% |
| 3. Identify plant categories and describe their characteristics. | 15% |
| a. Herbaceous | |
| b. Woody | |
| c. Annual | |
| d. Perennial | |
| e. biennial | |
| 4. Use plant morphology to categorize a plant to the family, genus and species level. | 20% |
| a. Leaves/needles | |
| b. Flowers/fruits/seeds | |
| c. Buds | |
| d. Bark | |
| e. Growth habit | |

5. Describe the cultural requirements of these plants (see partial list below. Additional plant list to be supplied by instructor). **10%**
- Moisture
 - Light
 - Soil type
 - Hardiness
 - Nutrients
 - Propagation
 - Salt tolerance
6. Identify the considerations for the selection of these plants for specific uses. **10%**
- Residential applications
 - Commercial applications
 - Reclamation/restoration
 - Location and environment
7. Select plants for specific applications. **20%**

Landscape Horticulturist Plant List by Family

| | FAMILY | Latin name | Common name | Character |
|----|-----------------|--|--------------------------------|--------------|
| 1 | ASTERACEAE | <i>Gerbera jamesonii</i> | Transvaal Daisy | Annual |
| 2 | ASTERACEAE | <i>Aster</i> spp. | Common Aster | Perennial |
| 3 | ASTERACEAE | <i>Leucanthemum x superbum</i> | Shasta Daisy | Perennial |
| 4 | ASTERACEAE | <i>Rudbeckia fulgida</i> | Black Eyed Susan | Perennial |
| 5 | BERBERIDACEAE | <i>Berberis thunbergii</i> | Japanese Barberry | Tree / Shrub |
| 6 | BETULACEAE | <i>Betula papyrifera</i> | Paper Birch | Tree / Shrub |
| 7 | BRASSICACEAE | <i>Lobularia maritima</i> | Alyssum | Annual |
| 8 | BRASSICACEAE | <i>Iberis sempervirens</i> | Candytuft | Perennial |
| 9 | CAPRIFOLIACEAE | <i>Lonicera x brownii</i> 'Dropmore Scarlet' | Scarlet Trumpet Honeysuckle | Tree / Shrub |
| 10 | CAPRIFOLIACEAE | <i>Symphoricarpos albus</i> | Snowberry | Tree / Shrub |
| 11 | CARYOPHYLLACEAE | <i>Dianthus chinensis</i> | Dianthus / China Pink | Annual |
| 12 | CELASTRACEAE | <i>Euonymus alatus</i> | Winged Burning Bush | Tree / Shrub |
| 13 | CRASSULACEAE | <i>Sedum spectabile</i> | Stoncrop | Perennial |
| 14 | CUPRESSACEAE | <i>Juniperus horizontalis</i> | Horizontal Juniper | Tree / Shrub |
| 15 | CUPRESSACEAE | <i>Thuja occidentalis</i> | Eastern White Cedar | Tree / Shrub |
| 16 | CUPRESSACEAE | <i>Taxus x media</i> | Yew | Tree / Shrub |
| 17 | ERICACEAE | <i>Arctostaphylos uva-ursi</i> | Bearberry / Kinnikinnick | Tree / Shrub |
| 18 | FUMARIACEAE | <i>Dicentra spectabilis</i> | Bleeding Heart | Perennial |
| 19 | GERANIACEAE | <i>Pelargonium</i> spp. | Geranium | Annual |
| 20 | LAMIACEAE | <i>Salvia splendens</i> | Scarlet Sage | Annual |
| 21 | LAMIACEAE | <i>Monarda didyma</i> | Bee Balm | Perennial |
| 22 | LILIACEAE | <i>Hemerocallis</i> spp. | Daylily | Perennial |
| 23 | LILIACEAE | <i>Hosta</i> spp. | Hosta | Perennial |
| 24 | OLEACEAE | <i>Syringa vulgaris</i> | Common Lilac | Tree / Shrub |
| 25 | PINACEAE | <i>Picea glauca</i> | White Spruce | Tree / Shrub |
| 26 | PINACEAE | <i>Pinus mugo</i> | Mugo Pine, Swiss Mountain Pine | Tree / Shrub |
| 27 | POACEAE | <i>Miscanthus sinensis</i> | Maiden Grass | Perennial |
| 28 | POACEAE | <i>Calamagrostis x acutiflora</i> | Feather Reed Grass | Perennial |

| | | | | |
|----|---------------|-----------------------------|-----------------------|--------------|
| 29 | POLYPODIACEAE | Matteuccia struthiopteris | Ostrich Fern | Perennial |
| 30 | RANUNCULACEAE | Delphinium elatum | Perennial Larkspur | Perennial |
| 31 | RANUNCULACEAE | Trollius europaeus | Globeflower | Perennial |
| 32 | ROSACEAE | Amelanchier alnifolia | Service Berry | Tree / Shrub |
| 33 | ROSACEAE | Rosa rugosa | Rugosa Rose | Tree / Shrub |
| 34 | ROSACEAE | Sorbus aucuparia | European Mountain Ash | Tree / Shrub |
| 35 | ROSACEAE | Spiraea japonica | Japanese Spirea | Tree / Shrub |
| 36 | SALICACEAE | Populus tremuloides | Trembling Aspen | Tree / Shrub |
| 37 | SAPINDACEAE | Acer ginnala | Amur Maple | Tree / Shrub |
| 38 | SAPINDACEAE | Acer saccharinum | Silver Maple | Tree / Shrub |
| 39 | TILIACEAE | Tilia cordata | Little Leaf Linden | Tree / Shrub |
| 40 | VITACEAE | Parthenocissus quinquefolia | Virginia Creeper | Tree / Shrub |

Landscape Horticulturist

Unit: A9 Drafting

Level: One

Duration: 22 hours

Theory: 15 hours

Practical: 7 hours

Overview:

Upon completion of this unit the apprentice will demonstrate knowledge of landscape plans and associated documentation.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|---|--|
| 1. Identify types of landscape drawings and documentation and describe their characteristics and applications. | 20% |
| 2. Interpret information and design principles on landscape plans. | 80% |
| a. Title block | |
| b. Legend | |
| c. Scale | |
| d. Symbols | |
| e. Elements | |
| f. Hazards | |
| g. Details | |
| h. Plant material | |

Landscape Horticulturist

Unit: A10 Turf Establishment and Maintenance

Level: One

Duration: 40 hours

Theory: 40 hours

Practical: 0 hours

Overview:

Upon completion of this unit the apprentice will demonstrate knowledge of turf establishment methods and their associated procedures, as well as of the procedures to care for and maintain turf.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|--|--|
| 1. Define terminology associated with turf establishment and maintenance. | 5% |
| 2. Identify hazards and describe safe work practices pertaining to turf maintenance products and their use. | 5% |
| 3. Identify the grass species that are sustainable in various jurisdictions. | 5% |
| 4. Identify the considerations when selecting turf grass seed and sod types, and when determining turf maintenance techniques. a. Environmental conditions b. Site use c. Site size (calculations required for determining seed and sod quantities) d. Cultural requirements | 5% |
| 5. Identify specific tools and equipment relating to turf establishment and maintenance and describe their applications and procedures for use. | 5% |
| 6. Identify the methods of turf establishment and post-establishment care and describe their applications. a. Seeding b. Sodding | 15% |

- 7. Describe the procedures used to maintain turf. 35%**
- a. Mowing
 - b. Fertilizing
 - c. Irrigation
 - d. Cultivation
 - Aeration
 - Dethatching
 - e. Top dressing
 - f. Overseeding
 - g. Edging/trimming
- 8. Identify possible turf problems and describe their causes and the procedures used to correct them. 20%**
- a. Compaction
 - b. Thatch build-up
 - c. Poor drainage
 - d. Winter kill
 - e. Pests and diseases
 - f. Shade
 - g. Salt
- 9. Describe the procedures used for harvesting and post-harvest handling of sod. 5%**

Landscape Horticulturist

Unit: A11 Grading and Drainage 1

Level: One

Duration: 25 hours

Theory: 25 hours

Practical: 0 hours

Overview:

Upon completion of this unit the apprentice will demonstrate knowledge of the procedures used to perform grading and install drainage systems.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|---|--|
| 1. Define terminology associated with grading and drainage systems. | 10% |
| 2. Identify hazards and describe safe work practices pertaining to grading and drainage | 5% |
| 3. Describe the implications of grading and drainage on the practice of environmental stewardship. | 5% |
| 4. Identify calculations required to determine slope. | 5% |
| 5. Interpret codes and regulations pertaining to grading and drainage. | 5% |
| 6. Interpret documentation pertaining to grading and drainage. | 20% |
| a. Grading plans | |
| • Existing grades | |
| • Proposed grades | |
| • Rough grades | |
| • Contour plans | |
| b. Drainage plans | |
| c. Specifications | |
| 7. Identify specific tools, equipment and attachments relating to grading and drainage, and describe their applications and procedures for use. | 5% |
| 8. Identify types of grading and drainage systems. | 25% |

9. Describe the procedures used to perform site grading.

20%

- a. Rough grading
- b. Grading for drainage
- c. Finish grading

Landscape Horticulturist

Unit: A12 Plant Care and Maintenance 1

Level: One

Duration: 10 hours

Theory: 10 hours

Practical: 0 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of the procedures to care and maintain exterior plants and plant materials.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|--|--|
| 1. Identify hazards and describe safe work practices pertaining to the care and maintenance of exterior plants and plant materials. | 5% |
| 2. Interpret codes and regulations pertaining to exterior plants and plant materials. | 5% |
| 3. Describe the implications of exterior plant and plant material care and maintenance on the practice of environmental stewardship. | 5% |
| 4. Describe the cultural requirements of exterior plants and plant materials and identify the considerations in their selection for exterior uses. | 10% |
| 5. Identify specific tools and equipment relating to care and maintenance of exterior plants and plant materials and describe their applications and procedures for use. | 5% |
| 6. Describe the procedures used to maintain exterior plants and plant materials. | 70% |

Landscape Horticulturist

Unit: **A13 Communication**

Level: One

Duration: 14 hours

 Theory: 10 hours

 Practical: 4 hours

Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of effective communication practices in the workplace.

| Objectives and Content: | <u>Percent of Unit Mark (%)</u> |
|--|--|
| 1. Define terminology used in the trade. | 10% |
| 2. Describe the importance of using effective verbal and non-verbal communication with people in the workplace. | 10% |
| 3. Identify types of information which require effective communication in the workplace. | 15% |
| a. Regulations and codes | |
| b. Standards | |
| c. Occupational health and safety | |
| d. Plans and drawings | |
| e. Specifications | |
| f. Company and client documents | |
| g. Mentors | |
| 4. Identify communication and learning styles. | 10% |
| a. Seeing | |
| b. Hearing | |
| c. Doing | |
| 5. Describe effective listening and speaking skills. | 10% |

- 6. Identify personal responsibilities and attitudes that contribute to on-the-job success. 10%**
- a. Asking questions
 - b. Working safely
 - c. Accepting constructive feedback
 - d. Time management and punctuality
 - e. Respect for others
 - f. Good stewardship of materials, tools and property
 - g. Efficient work practices
- 7. Identify the value of diversity in the workplace. 10%**
- 8. Identify communication that constitutes harassment and discrimination. 15%**
- a. Objectionable conduct, comment or display made either on a one-time or continuous basis that demeans, belittles or causes personal humiliation or embarrassment to recipient(s)
 - b. Actions that are prohibited based on race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, family status, disability or conviction for which a pardon has been granted
- 9. Prepare and deliver an informal presentation related to an industrial topic. 10%**
