
Pre-Employment Plan of Training Landscape Horticulturist



Government of Newfoundland and Labrador
Department of Immigration, Population Growth and Skills
Apprenticeship and Trades Certification Division

March 2018

PLAN OF TRAINING

Landscape Horticulturist

March 2018



**Government of Newfoundland and Labrador
Department of Advanced Education, Skills and Labour
Apprenticeship and Trades Certification Division**

Approved by:

A handwritten signature in blue ink, appearing to read "Dave H.", written over a horizontal line.

Chairperson, Provincial Apprenticeship and Certification Board

Date: March 09, 2018

Preface

This curriculum standard is based upon the 2017 edition of the Red Seal Occupational Standard (RSOS) for the Landscape Horticulturist trade. It describes the curriculum content for the Landscape Horticulturist Pre-employment training program.

Acknowledgements

The Provincial Trade Advisory Committee (PTAC), industry representatives, instructors and apprenticeship staff provided valuable input to the development of this provincial plan of training. Without their dedication to quality apprenticeship training, this document could not have been produced.

We offer you a sincere thank you.

Contact Information

Department of Immigration, Population Growth and Skills
Apprenticeship and Trades Certification Division
Tel: 709-729-2729
Toll Free: 1-877-771-3737
Email: app@gov.nl.ca
Web: www.gov.nl.ca/atcd

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New	March 2018	September 2018 – Pre-employment	Aligned to the new 2017 RSOS and National Harmonization sequencing.
		September 2019 – Level 2	
		September 2020 – Level 3	
		September 2021 – Level 4	
Update	March 2019	September 2019 – Pre-employment	Updated Related Suite courses

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A. Program Structure

For each and every course, a formal assessment is required for which 70% is the pass mark. A mark of 70% must be attained in both the theory examination and the practical project assignment, where applicable as documented on an official transcript.

The order of course delivery within each level can be determined by the training institution, as long as pre-requisite conditions are satisfied.

Upon completion of this training program, individuals may be required to complete other certifications (employer or job site specific) in order to gain employment.

A Pre-employment student who becomes an apprentice will also be required to complete Level 2, 3 and 4 in the Newfoundland and Labrador Curriculum Standard (NLCS).

Pre-Employment				
Course No.	IPG No.	Course Name	Hours	Pre-requisite(s)
TS1510	LHT-100	Occupational Health and Safety	6	--
TS1520	LHT-100	WHIMIS	6	--
TS1530		Standard First Aid	14	--
HE1630	LHT-100	Transportation of Dangerous Goods	6	--
AJ1760	LHT-105	Chain Saw Safety	4	--
LT1100	LHT-100	Safety	9	--
LT1111	LHT-105	Tools and Equipment	12	LT1100
LT1130	LHT-110	Vehicles, Equipment and Machinery	30	HE1630 LT1100
LT1200	LHT-115	Plant Science	60	LT1100
LT1210	LHT-120	Plant Identification I	60	LT1200
LT1220	LHT-125	Soil Management	60	LT1200
LT1231	LHT-130	Fertilizers	25	LT1111 LT1130 LT1220
LT1241	LHT-215	Plans and Documentation	20	MA1047
LT1251	LHT-305	Plant Care and Maintenance	30	LT1210 LT1231

Pre-Employment				
Course No.	IPG No.	Course Name	Hours	Pre-requisite(s)
LT1260	LHT-315	Turf Maintenance	30	LT1200 LT1231
LT1291	LHT-240	Turf Establishment	30	LT1111 LT1130 LT1210 LT1241 LT1260
LT2110	LHT-225	Site Protection, Grading and Drainage	30	LT1111 LT1130
AM1000	-	Introduction to Essential Skills	9	None
AP1102	--	Introduction to Apprenticeship	12	--
AM1101	--	Math Essentials	42	--
AM1410	--	Landscape Math Fundamentals	42	AM1101
CM2161	--	Communication Essentials	36	--
SD1761	--	Workplace Essentials	24	--
MC1062	--	Computer Essentials	15	--
Total Pre-Employment Hours			612	

*A student who can meet the mathematics requirement through an ACUPLACER® test may be exempted from AM1101 - Math Essentials. Please check with your training institution.

Required Work Experience

Pre-Employment

TS1510 Occupational Health and Safety

Learning Outcomes:

- Demonstrate knowledge of interpreting the Occupational Health and Safety Act, laws and regulations.
- Demonstrate knowledge of understanding the designated responsibilities within the laws and regulations such as the right to refuse dangerous work; and the importance of reporting accidents.
- Demonstrate knowledge of how to prevent accidents and illnesses.
- Demonstrate knowledge of how to improve health and safety conditions in the workplace.

Duration: 6 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Interpret the Occupational Health and Safety Act laws and regulations.
 - i. explain the scope of the act
 - application of the Act
 - Federal/Provincial jurisdictions
 - Canada Labour Code
 - rules and regulations
 - private home application
 - conformity of the Crown by the Act
2. Explain responsibilities under the Act and Regulations.
 - i. duties of employer, owner, contractors, sub-contractors, employees, and suppliers
3. Explain the purpose of joint health and safety committees.
 - i. formation of committee
 - ii. functions of committee
 - iii. legislated rights
 - iv. health and safety representation
 - v. reporting endangerment to health
 - vi. appropriate remedial action
 - vii. investigation of endangerment
 - viii. committee recommendation
 - ix. employer's responsibility in taking remedial action

4. Examine right to refuse dangerous work.
 - i. reasonable grounds for refusal
 - ii. reporting endangerment to health
 - iii. appropriate remedial action
 - iv. investigation of endangerment
 - v. committee recommendation
 - vi. employer's responsibility to take appropriate remedial action
 - vii. action taken when employee does not have reasonable grounds for refusing dangerous work
 - viii. employee's rights
 - ix. assigning another employee to perform duties
 - x. temporary reassignment of employee to perform other duties
 - xi. collective agreement influences
 - xii. wages and benefits
5. State examples of work situations where one might refuse work.
6. Describe discriminatory action.
 - i. definition
 - ii. filing a complaint procedure
 - iii. allocated period of time a complaint can be filed with the Commission
 - iv. duties of an arbitrator under the Labour Relations Act
 - v. order in writing inclusion
 - vi. report to commission allocated period of time to request arbitrator to deal with the matter of the request
 - vii. notice of application
 - viii. failure to comply with the terms of an order
 - ix. order filed in the court
7. Explain duties of commission officers.
 - i. powers and duties of officers
 - ii. procedure for examinations and inspections
 - iii. orders given by officers orally or in writing
 - iv. specifications of an order given by an officer to owner of the place of employment, employer, contractor, sub-contractor, employee, or supplier
 - v. service of an order
 - vi. prohibition of persons towards an officer in the exercise of his/her power or duties
 - vii. rescinding of an order
 - viii. posting a copy of the order
 - ix. illegal removal of an order
8. Interpret appeals of others.
 - i. allocated period of time for appeal of an order
 - ii. person who may appeal order

- iii. action taken by commission when person involved does not comply with the order
 - iv. enforcement of the order
 - v. notice of application
 - vi. rules of court
9. Explain the process for reporting of accidents.
- i. application of act
 - ii. report procedure
 - iii. reporting notification of injury
 - iv. reporting accidental explosion or exposure
 - v. posting of act and regulations

Practical Requirements:

- 1. Conduct an interview with someone in your occupation on two or more aspects of the act and report results.
- 2. Conduct a safety inspection of shop area.

TS1520 Workplace Hazardous Materials Information System (WHMIS)

Learning Outcomes:

- Demonstrate knowledge of interpreting and applying the Workplace Hazardous Materials Information System (WHMIS) regulation under the Occupational Health and Safety Act.

Duration: 6 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Define WHMIS safety.
 - i. rational and key elements
 - ii. history and development of WHMIS
 - iii. WHMIS legislation
 - iv. WHMIS implementation program
 - v. definitions of legal and technical terms
2. Examine hazard identification and ingredient disclosure.
 - i. prohibited, restricted and controlled products
 - ii. classification and the application of WHMIS information requirements
 - iii. responsibilities for classification
 - the supplier
 - the employer
 - the worker - Classification: rules and criteria
 - information on classification
 - classes, divisions and subdivision in WHMIS
 - general rules for classification
 - class A - compressed gases
 - class B - flammable and combustible materials
 - class C - oxidizing material
 - class D - poisonous and infectious material
 - class E - corrosive material
 - class F - dangerously reactive material
 - iv. products excluded from the application of WHMIS legislation
 - consumer products
 - explosives
 - cosmetics, drugs, foods and devices
 - pest control products
 - radioactive prescribed substances
 - wood or products made of wood
 - manufactured articles

- tobacco or products of tobacco
 - hazardous wastes
 - products handled or transported pursuant to the Transportation of Dangerous Goods (TDG) Act
 - comparison of classification systems – WHMIS and TDG
 - general comparison of classification categories
 - detailed comparison of classified criteria
3. Explain labeling and other forms of warning.
- i. definition of a WHMIS label
 - supplier label
 - workplace label
 - other means of identification
 - ii. responsibility for labels
 - supplier responsibility
 - employer responsibility
 - worker responsibility
 - iii. introduce label content, design and location
 - supplier labels
 - workplace labels
 - other means of identification
4. Introduce material safety data sheets (MSDS).
- i. definition of a material safety data sheet
 - ii. purpose of the data sheet
 - iii. responsibility for the production and availability of data sheets
 - supplier responsibility
 - employer responsibility
 - workers responsibility

Practical Requirements:

1. Locate WHMIS label and interpret the information displayed.
2. Locate a MSDS sheet for a product used in the workplace and determine what personal protective equipment and other precautions are required when handling this product.

TS1530 Standard First Aid

Learning Outcomes:

- Demonstrate knowledge of recognizing situations requiring emergency action.
- Demonstrate knowledge of making appropriate decisions concerning first aid.

Duration: 14 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Complete a **St. John Ambulance or Canadian Red Cross** Standard First Aid Certificate course.

HE1630 Transportation of Dangerous Goods

Learning Outcomes:

- Demonstrate knowledge of the Training Requirements for TDG.
- Demonstrate knowledge of the criteria for handling, offering for transport or transporting dangerous goods.
- Demonstrate knowledge of employer guidelines for directing or allowing employees to handle, offer for transport or transport dangerous goods.

Duration: 6 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Identify the nine classifications of dangerous goods in 'Classifications'.
2. Identify and interpret the shipping names used for various products.
3. Understand the use of Schedules 1, 2 and 3.
4. Identify the required documents for shipping and handling dangerous goods in 'Documentation'.
5. Identify the safety mark requirements of dangerous goods in 'Dangerous Goods Safety Marks'.
6. Identify the packaging requirements for handling and shipping dangerous goods in "Means of Containment".
7. Identify the emergency response requirements in 'Emergency Response Assistance Plan (ERAP)'.
8. Identify the accidental release and imminent accidental release report requirements in 'Reporting Requirements'.
9. Describe the safe handling and transportation practices for dangerous goods, including the characteristics of the dangerous goods. Identify equipment used to handle or transport dangerous goods and state the competencies required in 'Basic Competency Checklist'.

10. Identify and describe the reasonable emergency measures that must be taken to reduce or eliminate any danger to public safety that results (or may reasonably be expected to result) from an accidental release of the dangerous goods in 'Emergency Actions'.
11. Identify where to find information on transporting dangerous goods via other modes of transportation.
 - i. air
 - ii. marine
 - iii. rail

Practical Requirements:

1. Complete the exercises and write an exam using the TDG Guide as a reference.

AJ1760 Chain Saw Safety

Learning Outcomes:

- Demonstrate knowledge of types of chain saws.
- Demonstrate knowledge of how to safely operate a chain saw.

Duration: 4 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Identify the types of chain saws.
2. Describe the safe operation, maintenance and storage of chain saws.

Practical Requirements:

1. Identify and select required safety equipment.
2. Demonstrate safe operation of a chain saw.
3. Demonstrate safe maintenance of a chain saw.
4. Demonstrate safe storage of a chain saw.

LT1100 Safety

Learning Outcomes:

- Demonstrate knowledge of safety equipment, their applications, maintenance and procedures for use.
- Demonstrate knowledge of safe work practices.
- Demonstrate knowledge of regulatory requirements pertaining to safety.
- Demonstrate knowledge of Back Injury Prevention Awareness.

Duration: 9 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Identify types of personal protective equipment and clothing (PPE) and describe their applications.
 - i. ear, eye, hand, foot and head protection
 - ii. high-visibility clothing
 - iii. breathing protection (mask)
2. Describe the procedures for care and maintenance of PPE.
3. Identify types of safety equipment and describe their applications.
 - i. ventilation fans
 - ii. spill kits
 - iii. fire extinguishers
 - iv. barriers
 - v. signage
 - vi. first-aid kit
4. Describe the procedures for care and maintenance of safety equipment.
5. Identify hazards, assess risk, describe safe work practices and recommend mitigation measures.
 - i. personal
 - ii. workplace
 - iii. environment
 - iv. pedestrian and vehicular

6. Identify jurisdictional workplace safety and health regulations.
 - i. Workplace Hazardous Material Information System (WHIMIS)
 - ii. Pest Management Regulatory Agency (PMRA)
 - iii. pesticide applicator and operator legislation
 - iv. Transportation of Dangerous Goods (TDG)
 - v. federal, provincial/territorial, municipal
 - vi. Occupational Health and Safety (OH&S)

Practical Requirements:

1. Complete Back Injury Prevention Awareness training.

LT1111 Tools and Equipment

Learning Outcomes:

- Demonstrate knowledge of hand, power and measuring tools and equipment, their applications, maintenance and procedures for use.

Duration: 12 Hours

Pre-Requisite(s): LT1100

Objectives and Content:

1. Identify hazards and describe safe work practices pertaining to hand tools, power tools, measuring tools and equipment.
2. Describe the implications of hand and power tool selection and use on the practice of environmental stewardship.
3. Identify types of hand tools and describe their applications and procedures for use.
4. Describe the procedures used to inspect, maintain, sharpen, clean and store hand tools.
5. Identify types of power tools and equipment and describe their applications, limitations and procedures for use.
 - i. electric
 - ii. gas
 - two-cycle engine
 - four-cycle engine
6. Describe the safe operation, maintenance and storage of cutting equipment.
 - i. chain saw
 - ii. circular saw
 - iii. concrete saw
 - iv. mitre/chop saw
 - v. reciprocating saw
 - vi. sabre saw
 - vii. table saw
7. Describe the daily/seasonal operating procedures used to inspect, maintain, sharpen, clean, and store power tools.

8. Identify types of measuring equipment and describe their applications and procedures for use.
 - i. pH meters
 - ii. builders' levels
 - iii. laser levels
 - iv. electrical conductivity (EC) meters
 - v. Global Positioning System (GPS)
 - vi. tape measure
 - vii. calibrated cylinders
 - viii. calipers
9. Describe the procedures used to inspect, clean, maintain and store measuring tools and equipment.

Practical Requirements:

1. Use and maintain various types of hand tools.
2. Use and maintain various types of power tools.
3. Use and maintain various types of measuring tools.

LT1130 Vehicles, Equipment and Machinery

Learning Outcomes:

- Demonstrate knowledge of vehicles/trailers, equipment and machinery, and their applications, operation and procedures for use.

Duration: 30 Hours

Pre-Requisite(s): HE1630, LT1100

Objectives and Content

1. Define terminology associated with transporting equipment.
2. Identify hazards and describe safe work practices pertaining to vehicles and motorized equipment attachments and trailer and transporting equipment.
 - i. lockout/tagout
3. Describe the implications of the selection and use of vehicles, motorized equipment, attachments and trailers on the practice of environmental stewardship.
4. Identify codes, jurisdictional regulations, type of licenses required pertaining to vehicles, motorized equipment, attachments and trailers and the transportation of equipment.
5. Identify engine systems and describe their characteristics, applications and operation.
 - i. gasoline/propane
 - ii. diesel
 - iii. electric
6. Identify basic vehicle systems and components and describe their characteristics and operation.
 - i. drive systems
 - ii. brakes
 - iii. control/safety systems
7. Identify the type of license required to operate vehicles, motorized equipment, attachments and trailers.

8. Identify types of vehicles, motorized equipment, attachments and trailers and describe their characteristics, applications and operation.
 - i. vehicles and motorized equipment
 - truck
 - turfgrass maintenance machines
 - skid steers
 - excavators
 - all-terrain vehicles (ATV)
 - tractors, hydro seeders
 - ii. attachments and trailers
 - drop spreaders
 - sprayers
 - buckets
 - mowers
 - aerators
 - cultivators
 - hydro seeders
 - flatbed trailers
 - dump trailers
9. Describe the daily and seasonal operating procedures used to inspect, clean, maintain and store engines, vehicles, motorized equipment and attachments and trailers.
 - i. pre-check
 - ii. post check
 - iii. maintenance checks
 - iv. circle checks
 - v. cold starts
 - vi. changing seasonal tires
 - vii. changing seasonal fluids
 - viii. cleaning vehicles
10. Describe the procedures used to load/unload, secure and transport tools, equipment and machinery.
11. Interpret documentation relevant to transporting equipment.

Practical Requirements:

1. Conduct daily and seasonal maintenance procedure on a 2 cycle machine.
2. Conduct daily and seasonal maintenance procedure on a 4 cycle machine.
3. Conduct daily and seasonal maintenance procedures for landscape tools and equipment.
4. Demonstrate the proper use of fire extinguishers.
5. Demonstrate the use and operation of a truck and trailer.
 - i. coupling and uncoupling
 - ii. loading, securing, unloading
 - iii. safe driving
 - iv. backing-up
 - v. set up warning triangles
6. Conduct pre-check and post-trip inspections.

LT1200 Plant Science

Learning Outcomes:

- Demonstrate knowledge of plant growth and development.
- Demonstrate knowledge of plant nutrient requirements.

Duration: 60 Hours

Pre-Requisite(s): LT1100

Objectives and Content:

1. Apply principles of basic plant science.
 - i. botany
 - ii. physiology
2. Define terminology associated with plant science.
3. Identify plant characteristics.
 - i. form
 - ii. foliage and foliage pattern
 - iii. stems and bark
 - iv. bud
 - v. fruit
 - vi. flower
 - vii. size
 - viii. colour
4. Identify the factors which impact on plant growth and development.
 - i. temperature
 - ii. hardiness
 - iii. growing medium
 - iv. air quality
 - carbon dioxide
 - oxygen
 - humidity
 - v. light
 - vi. water
 - vii. pests and disease
 - viii. environmental stresses
 - ix. plant life cycle

5. Identify plant anatomy and morphology.
 - i. cell types
 - ii. tissues
 - iii. organs
 - leaves/needles
 - stems
 - roots
 - flowers/fruits/seeds
 - buds
 - bark
 - growth habits
6. Explain the biological processes of a plant.
 - i. reproduction
 - ii. photosynthesis
 - iii. respiration
 - iv. transpiration
 - v. hormonal communication
 - vi. dormancy
7. Identify plant nutrients and describe the impact of nutrient deficiencies/excess on plants and plant growth.

Practical Requirements:

1. Identify plant nutrient deficiencies from samples.
2. Identify plant anatomy in dormancy and when in leaf.

LT1210 Plant Identification I

Learning Outcomes:

- Demonstrate knowledge of the International Code of Nomenclature for algae, fungi and plants used for plant identification.

Duration: 60 Hours

Pre-Requisite(s): LT1200

Objectives and Content:

1. Explain the International Code of Nomenclature for algae, fungi and plants and its use in plant identification.
 - i. family
 - ii. genus
 - iii. species
 - iv. variety/cultivar
2. Interpret the use of dichotomous keys to classify plants.
3. Identify plant categories and describe their characteristics.
 - i. herbaceous
 - ii. woody
 - iii. annuals
 - iv. perennials
 - v. biennials
 - vi. coniferous trees
 - vii. coniferous shrubs
 - viii. deciduous trees
 - ix. deciduous shrubs
 - x. broad leaf evergreen
 - xi. turfgrass
 - xii. vines
 - xiii. weeds
 - xiv. edibles
 - xv. native
 - xvi. non-native
 - xvii. invasive species
4. Explain the purpose of the Plant Hardiness Zone Map.

5. Use plant morphology to categorize a plant to the family level.
 - i. leaves/needles
 - ii. flowers/fruits/seeds
 - iii. buds
 - iv. bark
 - v. growth habits
6. Use plant morphology to categorize the plants on the list to the genus and species level.
7. Describe the cultural requirements of these plants (see chart below).
 - i. moisture
 - ii. light
 - iii. soil type
 - iv. hardiness
 - v. nutrients
 - vi. tolerance
 - vii. propagation
 - viii. salt tolerance
 - ix. pruning times
8. Identify the considerations for the selection of these plants for specific uses.
 - i. residential applications
 - ii. commercial applications
 - iii. reclamation/restoration
 - iv. location and environment

Landscape Horticulturist Plant List by Family

	FAMILY	LATIN NAME	COMMON NAME	CHARACTER
1	ASTERACEAE	Gerbera jamesonii	Transvaal Daisy	Annual
2	ASTERACEAE	Aster spp.	Common Aster	Perennial
3	ASTERACEAE	Leucanthemum x superbum	Shasta Daisy	Perennial
4	ASTERACEAE	Rudbeckia fulgida	Black Eyed Susan	Perennial
5	BERBERIDACEAE	Berberis thunbergii	Japanese Barberry	Tree / Shrub
6	BETULACEAE	Betula papyrifera	Paper Birch	Tree / Shrub
7	BRASSICACEAE	Lobularia maritima	Alyssum	Annual
8	BRASSICACEAE	Iberis sempervirens	Candytuft	Perennial

	FAMILY	LATIN NAME	COMMON NAME	CHARACTER
9	CAPRIFOLIACEAE	Lonicera x brownii 'Dropmore Scarlet'	Scarlet Trumpet Honeysuckle	Tree / Shrub
10	CAPRIFOLIACEAE	Symphoricarpos albus	Snowberry	Tree / Shrub
11	CARYOPHYLLACEAE	Dianthus chinensis	Dianthus / China Pink	Annual
12	CELASTRACEAE	Euonymus alatus	Winged Burning Bush	Tree / Shrub
13	CRASSULACEAE	Sedum spectabile	Stonecrop	Perennial
14	CUPRESSACEAE	Junipers horizontalis	Horizontal Juniper	Tree / Shrub
15	CUPRESSACEAE	Thuja occidentalis	Eastern White Cedar	Tree / Shrub
16	CUPRESSACEAE	Taxus x media	Yew	Tree / Shrub
17	ERICACEAE	Arctostaphylos uva-ursi	Bearberry / Kinnikinnick	Tree / Shrub
18	FUMARIACEAE	Dicentra spectabilis	Bleeding Heart	Perennial
19	GERANIACEAE	Pelargonium spp.	Geranium	Annual
20	LAMIACEAE	Salvia splendens	Scarlet Sage	Annual
21	LAMIACEAE	Monarda didyma	Bee Balm	Perennial
22	LILIACEAE	Hemerocallis spp.	Daylily	Perennial
23	LILIACEAE	Hosta spp.	Hosta	Perennial
24	OLEACEAE	Syringa vulgaris	Common Lilac	Tree / Shrub
25	PINACEAE	Picea glauca	White Spruce	Tree / Shrub
26	PINACEAE	Pinus mugo	Mugo Pine, Swiss Mountain Pine	Tree / Shrub
27	POACEAE	Miscanthus sinensis	Maiden Grass	Perennial
28	POACEAE	Calamagrostis x acutiflora	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

	FAMILY	LATIN NAME	COMMON NAME	CHARACTER
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

Practical Requirements:

1. Identify plants using the International Code of Nomenclature.
2. Identify plants for landscape installation according to site location and degree of sun and shade.

LT1220 Soil Management

Learning Outcomes:

- Demonstrate knowledge of soil types and soil amendments.

Duration: 60 Hours

Pre-Requisite(s): LT1200

Objectives and Content:

1. Identify physical soil characteristics to consider when determining the suitability for plant growth.
 - i. soil formation
 - ii. drainage capacity
 - iii. aeration/porosity
 - iv. water retention
 - v. compaction
 - vi. soil texture/structure
 - vii. pH
 - viii. nutrients
 - ix. organic matter
 - x. contaminants
 - xi. electrical conductivity
2. Describe the implications of soil management on the practice of environmental stewardship.
3. Identify types of growing media and describe their characteristics and applications.
 - i. native soil
 - ii. soilless medium
 - iii. manufactured soil
 - iv. compost
4. Test to identify the soil characteristics that impact soil chemical and biological properties.
 - i. nutrient availability
 - ii. chemical composition
 - soil acidity/alkalinity
 - soil salinity
 - cation exchange capacity

- iii. organic matter
 - iv. biological activity
 - v. texture
5. Explain the procedures used for taking soil samples.
 6. Identify types of soil tests, describe their characteristics and applications, interpret test results and explain how to develop recommendations based on test results.
 7. Identify types of soil amendments and describe their characteristics, and procedures used to apply and/or incorporate them.
 - i. organic
 - ii. inorganic
 8. Identify the considerations when selecting soil amendments for plants.
 9. Describe the procedures used to apply and incorporate soil amendments.
 10. Describe the procedures for storing, transporting and disposing of soil, soil amendment products and packaging according to jurisdictional regulations.
 11. Identify specific tools and equipment relating to growing media installation and describe their applications and procedures for use.
 12. Describe the procedures used for installing growing media.
 13. Describe the procedures used to estimate quantities of materials required to install growing media.

Practical Requirements:

1. Take a soil sample.
2. Hand texture a soil sample.
3. Interpret soil sample test results.

LT1231 Fertilizers

Learning Outcomes:

- Demonstrate knowledge of the codes and regulations pertaining to fertilizers.
- Demonstrate knowledge of the characteristics of fertilizers.
- Demonstrate knowledge of the procedures and equipment used for the application, handling, transport, storage and disposal of fertilizers.

Duration: 25 Hours

Pre-Requisite(s): LT1111, LT1130, LT1220

Objectives and Content:

1. Define terminology associated with fertilizers.
2. Identify hazards and describe safe work practices pertaining to fertilizers and their use.
3. Describe the implications of fertilizer management on the practice of environmental stewardship.
4. Identify types of fertilizers and describe their characteristics and applications.
5. Interpret codes and describe jurisdictional regulations pertaining to fertilizers.
6. Describe the analysis and formulation of fertilizers.
7. Describe the procedures and equipment used and calibration for the application of fertilizers and amendments.
8. Describe the procedures and equipment used to store, dispose and transport fertilizers.

Practical Requirements:

1. Calibrate application equipment.
2. Calculate application rate as per specifications.
3. Determine fertilizer rates for a fertigation system.

LT1241 Plans and Documentation

Learning Outcomes:

- Demonstrate knowledge of landscape plans and associated documentation.
- Demonstrate knowledge of trade related documentation and their use.

Duration: 20 Hours

Pre-Requisite(s): MA1047

Objectives and Content:

1. Identify types of landscape drawings and associated documentation and describe their characteristics and applications.
2. Define and interpret information and design principles on landscape plans.
 - i. title block
 - ii. legend
 - iii. scale
 - iv. symbols
 - v. elements
 - vi. hazards
 - vii. details
 - viii. plant material
 - colour
 - texture
 - scale
 - form
 - ix. scope of work
 - x. site access
 - xi. work/site limits
3. Interpret and extract information from landscape drawings and documentation related to construction site specifications.
 - i. general conditions
 - ii. supplementary conditions
 - iii. contract personnel

Practical Requirements:

1. Interpret landscape construction plans.
2. Interpret landscape specifications.

LT1251 Plant Care and Maintenance

Learning Outcomes:

- Demonstrate knowledge of the procedures to care and maintain plant materials.

Duration: 30 Hours

Pre-Requisite(s): LT1210, LT1231

Objectives and Content:

1. Define terminology associated with exterior softscape.
2. Identify hazards and describe safe work practices pertaining to the care, maintenance and repair of plants and softscapes.
3. Interpret codes and regulations pertaining to exterior softscape.
4. Describe the implications of plant care and maintenance on the practice of environmental stewardship.
5. Identify specific tools and equipment relating to plant care, maintenance and repair and describe their applications and procedures for use.
6. Describe the procedures used to maintain and repair all plant materials.
 - i. dead-heading/pruning
 - ii. edging
 - iii. cultivating
 - iv. mulching
 - v. dividing
 - vi. fertilizing
 - vii. weeding
7. Describe the procedures used for winterization of plant materials.
 - i. wrapping/screening
 - ii. rodent protection
 - iii. bed cleaning
 - iv. cutting back/ pruning
 - v. mulching
8. Describe the procedures used for recycling and disposing of related waste materials.

Practical Requirements:

1. Select, maintain, clean and store tools and equipment for plant care and maintenance.
2. Prepare a seasonal planting area.
3. Maintain a local garden.

LT1260 Turf Maintenance

Learning Outcomes:

- Demonstrate knowledge of turf equipment and its care and maintenance.
- Demonstrate knowledge of maintenance practices and procedures.

Duration: 30 Hours

Pre-Requisite(s): LT1200, LT1231

Objectives and Content:

1. Define terminology associated with turf maintenance.
2. Identify hazards and describe safe work practices pertaining to turfgrass maintenance products and their use.
3. Identify types of turfgrass maintenance products and describe their characteristics and applications.
4. Interpret codes and regulations pertaining to turfgrass maintenance products.
5. Describe the implications of turf maintenance on the practice of environmental stewardship.
6. Interpret and complete documentation relating to turf maintenance.
7. Identify specific tools and equipment used for turf maintenance and describe their applications and procedures for use.
8. Identify the considerations for determining turfgrass maintenance techniques.
 - i. grass type
 - ii. site use
 - iii. site size
 - iv. cultural requirements
 - v. contract documents
9. Describe the procedures used to inspect and maintain turf maintenance equipment.

10. Identify the considerations for equipment operation on turf.
 - i. surface slope
 - ii. obstructions
 - permanent
 - portable
 - iii. site conditions
 - iv. turf use
11. Describe the procedures used to maintain turfgrass.
 - i. mowing
 - ii. fertilizing
 - iii. irrigating
 - iv. cultivating
 - aeration
 - dethatching
 - v. top dressing
 - vi. overseeding
 - vii. edging/trimming
12. Identify possible turfgrass problems and describe their causes and the procedures used to correct them.
 - i. compaction
 - ii. soil considerations
 - iii. thatch build-up
 - iv. poor drainage
 - v. winter kill
 - vi. pests and diseases
 - weeds
 - insects
 - diseases
 - animals
 - vii. shade

Practical Requirements:

1. Select a lawn area, diagnose turf problems and implement procedures to correct them.
2. Implement turf maintenance procedures.

LT1291 Turf Establishment

Learning Outcomes:

- Demonstrate knowledge of turf establishment methods and their associated procedures.
- Demonstrate knowledge of turf establishment from seed and installation procedures.
- Demonstrate knowledge of turf establishment from sod methods and the installation procedures.

Duration: 30 Hours

Pre-Requisite(s): LT1111, LT1130, LT1210, LT1220, LT1241, LT1260

Objectives and Content:

1. Define terminology associated with turf establishment.
2. Describe the implications of turf establishment on the practice of environmental stewardship.
3. Identify the grass species that are sustainable in various jurisdictions.
4. Identify the considerations when selecting turf grass types.
 - i. environmental conditions
 - ii. site use
 - iii. site size
 - iv. cultural requirements
5. Identify the considerations when selecting sod types.
 - i. peat sod
 - ii. mineral soil sod
6. Interpret and complete documentation relating to turf establishment.
7. Identify tools and equipment used to establish turfgrass and describe their applications and procedures for use.
8. Identify the methods of turf establishment and describe their applications.
 - i. seeding / hydro seeding
 - ii. sodding
9. Identify the methods used for post-establishment care of seeded and sodded turf and describe their applications.

10. Describe the procedures used to install and establish turf by seeding.
11. Identify calculations required for determining seed quantities.
12. Describe the procedures used to install and establish turf by sodding.
13. Identify calculations required for determining sod quantities.
14. Identify possible turf establishment problems and describe solutions.
15. Describe the procedures used for harvesting and post-harvest handling of sod.

Practical Requirements:

1. Prepare the area for seed and install seed.
2. Prepare the area for sod and install sod.
3. Install sod.

LT2110 Site Protection, Grading and Drainage

Learning Outcomes:

- Demonstrate knowledge of the procedures used to protect features on the site.
- Demonstrate knowledge of the procedures used to perform grading and install drainage systems.
- Demonstrate knowledge of the installation of erosion control materials.

Duration: 30 Hours

Pre-Requisite(s): LT1111, LT1130

Objectives and Content:

1. Define terminology associated with site protection, grading and drainage systems.
2. Identify hazards and describe safe work practices pertaining to site layout, surveying, grading and drainage.
3. Describe the implications of site protection, grading and drainage on the practice of environmental stewardship.
4. Describe how drainage system maintenance protects the site features.
5. Identify and describe site protection measures that minimize environmental impact.
6. Interpret codes, CLS and regulations pertaining to site protection, grading and drainage.
7. Interpret documentation pertaining to site protection, grading and drainage.
 - i. grading plans
 - existing grades
 - proposed grades
 - rough grades
 - finished grades
 - ii. drainage plans
 - iii. specifications
8. Identify specific tools and equipment relating to site protection, grading and drainage, and describe their applications and procedures for use.
9. Identify types of grading and drainage systems.

10. Describe the procedures used to perform site grading.
 - i. rough grading
 - ii. grading for drainage
 - iii. finish grading
11. Describe the procedures used to install drainage systems.
 - i. sub-surface drains
 - ii. surface drainage
12. Identify erosion and sediment control materials and describe their characteristics and applications.
13. Describe the procedures used to install erosion and sediment control materials.

Practical Requirements:

1. Install weeping tile.
2. Install drainage stone.
3. Grade site using grading control tools and equipment.
4. Install erosion control and sediment control materials.
5. Demonstrate knowledge of using level instrumentation.

AM1000 Introduction to Essential Skills

Learning Outcomes:

- Demonstrate knowledge of the nine nationally recognized essential skills.
- Demonstrate knowledge of the essential skills levels of complexity.
- Demonstrate knowledge of the essential skills required for the learners chosen trade.
- Demonstrate an awareness of essential skills assessments.

Duration: 9 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Identify and describe the essential skills recognized by the Government of Canada through the Office of Literacy and Essential Skills (OLES).
 - i. reading
 - ii. document use
 - iii. numeracy
 - iv. writing
 - v. oral communication
 - vi. working with others
 - vii. thinking
 - viii. computer use
 - ix. continuous learning
2. Describe the Levels of Complexity measurement assigned to essential skills.
3. Identify the essential skills, along with their complexity level, identified as necessary for the learner's trade.
 - i. RSOS / NOA content¹
 - ii. OLES Essential Skills Profiles²
 - iii. OLES tools and support for apprentices and tradespersons³
4. Describe the nature and purpose of essential skills assessment.
 - i. self-assessment & formal assessment tools
 - ii. indicators of deficiencies
 - iii. suggestions for improvement

5. Describe the benefits of essential skills improvement.
 - i. confidence at work
 - ii. employability
 - iii. success in apprenticeship
 - iv. wage & job advancement

Practical Requirements:

1. Complete an essential skills self-assessment addressing numeracy, document use and reading. The online **Government of Canada Essential Skills Indicator⁴ and Essential Skills self-assessment for the trades⁵** are to be used unless the instructor provides a similar assessment tool or tools.
2. Participate in a group discussion about the impact of gaps in essential skills that may be revealed by the self-assessments completed, and the value of improving essential skills.

*Students are graded complete or incomplete on this practical work, no grade is permitted for self-assessment performance. However, completion of the practical requirements is mandatory for completion of this unit.

Resources:

All footnotes are in the companion document “Resources for Introduction to Essential Skills” which is available online from Apprenticeship and Trade Certification.

AP1102 Introduction to Apprenticeship

Learning Outcomes:

- Demonstrate knowledge of how to become a registered apprentice.
- Demonstrate knowledge of the steps to complete an apprenticeship program.
- Demonstrate knowledge of various stakeholders in the apprenticeship process.
- Demonstrate knowledge of the Red Seal Program.

Duration: 12 Hours

Pre-Requisite(s): None

Objectives and Content:

1. Define terminology associated with apprenticeship.
 - i. apprentice
 - ii. registered apprentice
 - iii. trade qualifier
 - iv. journeyperson
 - v. certified journeyperson
 - vi. Certificate of Apprenticeship
 - vii. Certificate of Qualification
 - viii. dual certification
 - ix. compulsory trades
2. Explain the roles and responsibilities of those involved in the apprenticeship system in Newfoundland and Labrador.
 - i. registered apprentice
 - ii. training institution
 - iii. employer
 - iv. journeyperson
 - v. mentor
 - vi. Department of Immigration, Population Growth and Skills
 - Industrial Training section
 - Standards and Curriculum section
 - vii. Provincial Trade Advisory Committees (PTAC)
 - viii. Provincial Apprenticeship and Certification Board (PACB)
3. Describe the training components of an apprenticeship.
 - i. in-school
 - Pre-employment / Level 1
 - advanced levels
 - ii. workplace experience

4. Explain the steps in the registered apprenticeship process.
 - i. meet entrance requirements
 - education
 - employment
 - Recognition of Prior Learning (RPL) - if applicable
 - ii. complete the registration process
 - application
 - required documents
 - iii. complete the Memorandum of Understanding (MOU)
 - contract responsibilities
 - probation period
 - cancellation
 - iv. maintain Record of Occupational Progress (Logbook)
 - sign off skills
 - record hours
 - update Apprenticeship Program Officer (APO) on progress
 - v. class calls
 - hour requirements
 - EI eligibility
 - training schedule
 - vi. level examinations - if applicable
 - vii. progression schedule
 - apprenticeship level
 - wage rates
 - viii. certification examinations
 - Provincial
 - Red Seal
 - written
 - practical - if applicable
 - ix. certification
 - Certificate of Apprenticeship
 - Certificate of Qualification
 - Provincial journeyperson - Blue Seal
 - Interprovincial journeyperson - Red Seal endorsement (RSE)
5. Identify the Conditions Governing Apprenticeship.
6. Discuss cancellation of apprenticeship.
 - i. failure to notify of address change
 - ii. extended periods of unemployment
 - iii. lack of contact with an APO for an extended period
 - iv. failure to respond to class calls
 - v. declining of multiple class calls

7. Explain the Red Seal program.
 - i. designated Red Seal trades
 - ii. the Red Seal Occupational Standard (RSOS)
 - iii. relationship of RSOS to Red Seal examination
 - iv. national qualification recognition and mobility
8. Identify the current financial incentives available to apprentices.
 - i. Federal
 - ii. Provincial
9. Explain the Provincial / Territorial Apprentice Mobility Guidelines.
 - i. temporary mobility
 - ii. permanent mobility
10. Describe Atlantic and National Harmonization initiatives.

Practical Requirements:

1. Use the Provincial Apprenticeship and Trades Certification website at www.gov.nl.ca/atcd.
 - i. locate, download, and complete the Application for Apprenticeship and Memorandum of Understanding (MOU)
 - ii. locate the address of the Industrial Training office closest to this campus
 - iii. locate the training schedule and identify the start date of the next class call for this trade
 - iv. locate and review the learning resources applicable to this trade
 - Study Guide
 - Exam Preparation Guide
 - Plan of Training
2. Use the Plan of Training applicable to this trade.
 - i. locate the hours for the trade
 - total in-school
 - total required for certification
 - ii. locate the number of levels
 - iii. locate the courses in each level
 - iv. locate the hours required for progression to a Level 2 apprentice and the wage percentage of that level

AM1101 Math Essentials

Note: It is recommended that AM1101 be delivered in the first semester of the Pre-employment program.

Learning Outcomes:

- Demonstrate knowledge of essential numeracy skills.
- Demonstrate knowledge of mathematics as a critical element of the trade environment.
- Demonstrate knowledge of mathematical principles in trade problem solving situations.
- Demonstrate the ability to solve simple mathematical word problems.

Duration: 42 Hours

Pre-Requisite(s): None

Objectives and Content:

Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.

1. Describe whole number operations.
 - i. read, write, count, round off, add, subtract, multiply and divide whole numbers.
2. Describe the application of the order of operations in math problems.
3. Describe fraction and mixed number operations.
 - i. read, write, add, subtract, multiply and divide fractions.
4. Describe decimal operations.
 - i. read, write, round off, add, subtract, multiply and divide decimals.
5. Describe percent/decimal/fraction conversion and comparison.
 - i. convert between fractions, decimals and percents.
6. Identify percentage operations.
 - i. read and write percentages
 - ii. calculate base, rates and percentages

7. Identify ratio and proportion operations.
 - i. use a ratio comparing two quantities with the same units
 - ii. use a proportion comparing two ratios
8. Describe the use of the imperial measurement system in math problems.
 - i. identify units of measurement
 - length
 - mass
 - area
 - volume
 - capacity
9. Describe the use of the metric measurement system in math problems.
 - i. identify units of measurement
 - length
 - mass
 - area
 - volume
 - capacity
10. Identify angles, lines and geometric shapes.
 - i. use a protractor to measure angles
 - ii. determine whether an angle is right, acute or obtuse
 - iii. identify parallel, perpendicular, horizontal and vertical lines
 - iv. identify types of triangles, quadrilaterals, and 3-dimensional shapes
11. Describe estimation strategies.
 - i. estimate a linear measure using a referent
 - ii. estimate length, area and volume of objects in metric and imperial systems
12. Describe problem solving that involves linear measurement using instruments such as rulers or tape measures, in the metric and imperial systems.

Practical Requirements:

1. To emphasize or further develop specific knowledge objectives, students will be required to complete practical demonstrations, which confirm proper application of mathematical theory to job skills.

AM1410 Landscape Math Fundamentals

Learning Outcomes:

- Demonstrate knowledge of mathematical concepts in the performance of trade practices.
- Demonstrate knowledge of mathematics as a critical element of the trade environment.
- Solve mathematical word problems.
- Demonstrate knowledge of mathematical principles for the purposes of problem solving, job and materials estimation, measurement, calculation, system conversion, diagram interpretation and scale conversions, formulae calculations, and geometric applications.

Duration: 42 Hours

Pre-Requisite(s): AM1101

Objectives and Content:

The instructor is required to use trade specific examples to reinforce the course objectives.

1. Describe percent/decimal/fraction conversions and comparisons in trade specific situations.
2. Describe ratios and proportions as they relate to trade specific problems.
3. Describe the use of the Imperial and Metric measurement systems in trade specific applications.
4. Describe Imperial and Metric conversions in trade specific situations.
 - i. convert between imperial and metric measurements
 - ii. convert to another unit within the same measurement system
5. Describe how to manipulate formulas using cross multiplication, dividing throughout, elimination, and substitution to solve trade specific problems.
 - i. right angle triangles
 - ii. area
 - iii. volume
 - iv. perimeter
 - v. density

6. Identify calculations involving geometry that are relevant to the trade.
 - i. angle calculations
 - ii. circle calculations
7. Identify math processes used to complete administrative trade tasks.
 - i. material estimation
 - ii. material costing
 - iii. time & labour estimates
 - iv. taxes & surcharges
 - v. markup & projecting revenue

Practical Requirements:

1. To emphasize or further develop specific knowledge objectives, students will be asked to complete practical demonstrations, which confirm proper application of mathematical theory to job skills.

Note: This course is **Non-Transferable** to other trades programs, and **Not Eligible for Prior Learning Assessment**. Students completing training in this trade program are required to complete this math course. Apprentice transfers under Provincial / Territorial Mobility agreements may be exempt from this requirement.

CM2161 Communication Essentials

Learning Outcomes:

- Demonstrate knowledge of the importance of well-developed writing and oral communication skills in the workplace.
- Demonstrate knowledge of the principles of effective workplace writing.
- Demonstrate knowledge of the purpose of various types of workplace documentation and workplace meetings.
- Demonstrate knowledge of the importance of effective interpersonal skills in the workplace.
- Demonstrate knowledge of effective job search techniques

Duration: 36 Hours

Pre-Requisite(s): None

Objectives and Content:

Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.

1. Define communications terminology used in the trade.
2. Identify the principles of effective workplace writing.
 - i. grammar, punctuation, mechanics
 - ii. sentence and paragraph construction
 - iii. tone, language, and word choice
 - iv. the writing process
 - planning
 - writing
 - editing/revising
3. Identify sources of information used to communicate in the workplace.
 - i. regulations
 - ii. codes
 - iii. OH&S requirements
 - iv. prints, drawings and specifications
 - v. company and client documentation

4. Identify types and purposes of informal workplace documents.
 - i. reports
 - incident
 - process
 - progress
 - ii. common trade specific forms
 - iii. primary and secondary methods of information gathering
 - iv. accuracy and completeness in reports and forms
5. Demonstrate an understanding of interpersonal communications in the workplace.
 - i. recognize group dynamics
 - ii. contribute information and expertise
 - iii. individual learning styles
 - audible
 - visual
 - experiential
 - theoretical
 - iv. recognize respectful and open communication
 - v. accept and provide feedback
 - vi. interpret non-verbal communication cues
 - body language
 - signals
6. Demonstrate an understanding of effective oral communication skills.
 - i. listening
 - receiving, understanding, remembering, reflecting, evaluating, paraphrasing, and responding
 - ii. speaking
 - using clear and proper words
 - tone, style, and vocabulary
 - brevity
 - iii. common workplace oral communication situations
 - introducing self and others
 - telephone conversations
 - tool box/safety talks
 - face-to-face conversations
 - communicating with co-workers, supervisors, clients, and other trades people
7. Identify common practices related to workplace meetings.
 - i. meeting formats
 - ii. meeting preparation
 - iii. agendas and minutes
 - iv. roles, responsibilities, and etiquette of meeting participants

8. Identify acceptable workplace use of communication technologies.
 - i. cell / smart phone etiquette
 - ii. voice mail
 - iii. e-mail
 - iv. texting / messaging through social media
 - v. teleconferencing / videoconferencing for meetings and interviews
 - vi. social networking
 - vii. other emerging technologies
9. Demonstrate an understanding of effective job search techniques.
 - i. employment trends, opportunities, and sources of employment
 - ii. job ads and the importance of fitting qualifications to job requirements
 - iii. resumes
 - characteristics of effective resumes
 - types of resumes
 - principles of resume formatting
 - iv. effective cover letters
 - v. job interview process
 - pre-interview preparation
 - interview conduct
 - post-interview follow up

Practical Requirements:

1. Write a well-developed, coherent, unified paragraph.
2. Complete a trade-related form.
3. Prepare an agenda for a toolbox safety talk.
4. Participate in a simulated oral workplace communication situation.
5. Prepare a resume.

SD1761 Workplace Essentials

Note: It is recommended that SD1761 be delivered in the second half of Pre-employment training.

Learning Outcomes:

- Demonstrate knowledge of workplace requirements in the areas of personal responsibility, unions, workers compensation, workers' rights, and human rights.
- Demonstrate knowledge of quality customer service.

Duration: 24 Hours

Pre-Requisite(s): None

Objectives and Content:

Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.

1. Identify personal responsibilities and attitudes that contribute to on-the-job success.
 - i. asking questions
 - ii. working safely
 - iii. accepting constructive feedback
 - iv. time management & punctuality
 - v. respect for authority
 - vi. stewardship of materials, tools and properties
2. Define unions and identify their role in the workplace.
 - i. purpose of unions
 - ii. common union structure
 - iii. unions in this trade
3. Demonstrate an understanding of the Worker's Compensation process.
 - i. aims, objectives, and benefits of the Workplace Health, Safety and Compensation Commission
 - ii. role of the workers advisor
 - iii. internal review process

4. Demonstrate an understanding of worker's rights.
 - i. labour standards
 - ii. regulations, including:
 - hours of work & overtime
 - termination of employment
 - minimum wages & allowable deductions
 - statutory holidays, vacation time, and vacation pay

5. Demonstrate an understanding of human rights issues.
 - i. awareness of the Human Rights Code and the role of the Human Rights Commission
 - ii. categories of discrimination and strategies for prevention
 - direct
 - systemic
 - adverse effect
 - iii. types of discrimination
 - race
 - ethnic origin
 - colour
 - religion
 - age
 - gender identify
 - sexual orientation
 - marital status
 - family status
 - disability
 - criminal conviction that has been pardoned
 - iv. conduct that constitutes harassment and discrimination
 - objectionable conduct
 - comments or displays made either on a one-time or continuous basis that demeans, belittles, or causes personal humiliation or embarrassment to the recipient
 - v. the value of diversity in the workplace
 - culture
 - gender identify
 - sexual orientation

6. Demonstrate an understanding of quality customer service.
 - i. importance of quality service
 - ii. barriers to quality service
 - physical and physiological
 - cultural
 - technological
 - iii. customer needs & common methods for meeting them
 - iv. characteristics & importance of a positive attitude
 - v. interactions with challenging customers
 - vi. addressing complaints and resolve conflict

Practical Requirements:

None.

MC1062 Computer Essentials

Learning Outcomes:

- Demonstrate knowledge of desktop/laptop and mobile computers and their operation.
- Demonstrate knowledge of word processing and spreadsheet software, internet browsers and their applications.
- Demonstrate knowledge of e-mail applications and procedures.
- Demonstrate an awareness of security issues related to computers.
- Demonstrate an awareness of online learning using computers.

Duration: 15 Hours

Pre-Requisite(s): None

Objectives and Content:

When possible, the instructor is expected to use trade specific examples to reinforce the course objectives.

1. Identify computer types used in the workplace, and the characteristics of each.
 - i. desktop/laptop computers
 - ii. tablets
 - iii. smartphones
2. Identify common desktop and mobile operating systems.
 - i. Windows
 - ii. Mac OS
 - iii. iOS
 - iv. Android
3. Describe the use of Windows operating system software.
 - i. start and end a program
 - ii. use the help function
 - iii. use the find function
 - iv. maximize and minimize a window
 - v. open and scroll through multiple windows
 - vi. use the task bar
 - adjust desktop settings such as screen savers, screen resolution, and backgrounds
 - vii. shut down a computer

4. Identify the skills necessary to perform file management commands.
 - i. create folders
 - ii. copy files and folders
 - iii. move files and folders
 - iv. rename files and folders
 - v. delete files and folders
5. Describe the use of word processing software to create documents.
 - i. enter & edit text
 - ii. indent and tab text
 - iii. change text attributes
 - bold
 - underline
 - font
 - iv. change layout format
 - margins
 - alignment
 - line spacing
 - v. spell check and proofread
 - vi. save, close & reopen a document
 - vii. print document
6. Describe the use of spreadsheet software to create documents.
 - i. enter data in cells
 - ii. format data in cells
 - iii. create formulas to add, subtract, multiply and divide
 - iv. save, close & reopen a spreadsheet
 - v. print spreadsheet
7. Describe the use of the internet in the workplace.
 - i. web browsers
 - ii. search engines
 - iii. security issues
 - iv. personal responsibility for internet use at work
8. Describe the role of e-mail.
 - i. e-mail etiquette
 - grammar and punctuation
 - privacy issues when sharing and forwarding e-mail
 - work appropriate content
 - awareness of employer policies
 - ii. managing e-mail
 - using folders
 - deleting, forwarding, replying

- iii. adding attachments to e-mail
 - iv. view e-mail attachments
 - v. printing e-mail
9. Describe computer use for online learning.
- i. online training
 - ii. level exams
 - iii. study guides
 - iv. practice exams

Practical Requirements:

- 1. Create, save and print a document using word processing software.
- 2. Create, save and print a document using spreadsheet software.
- 3. Send and receive an e-mail with an attachment.

B. Conditions Governing Apprenticeship Training

1.0 General

The following general conditions apply to all apprenticeship training programs approved by the Provincial Apprenticeship and Certification Board (PACB) in accordance with the **Apprenticeship Training and Certification Act (1999)**. If an occupation requires additional conditions, these will be noted in the specific Plan of Training for the occupation. In no case should there be a conflict between these conditions and the additional requirements specified in a certain Plan of Training. All references to Memorandum of Understanding will also apply to Letter of Understanding (LOU) agreements.

2.0 Entrance Requirements

2.1 Entry into the occupation as an apprentice requires:

Indenturing into the occupation by an employer who agrees to provide the appropriate training and work experiences as outlined in the Plan of Training.

2.2 Notwithstanding the above, each candidate must have successfully completed a high school program or equivalent, and in addition may be required to have completed certain academic subjects as specified in a particular Plan of Training. Mature students, at the discretion of the Director of Apprenticeship and Trades Certification, may be registered. A mature student is defined as one who has reached the age of 19 and who can demonstrate the ability and the interest to complete the requirements for certification.

2.3 At the discretion of the Director of Apprenticeship and Trades Certification, credit toward the apprenticeship program may be awarded to an apprentice for previous work experience and/or training as validated through prior learning assessment.

2.4 An Application for Apprenticeship form must be duly completed along with a Memorandum of Understanding as applicable to be indentured into an Apprenticeship. The Memorandum of Understanding must contain signatures of an authorized employer representative, the apprentice and an official representing the Provincial Apprenticeship and Certification Board to be valid.

2.5 A new Memorandum of Understanding must be completed for each change in an employer during the apprenticeship term.

3.0 Probationary Period

The probationary period for each Memorandum of Understanding will be six months or 900 employment credit hours. Within that period the memorandum may be terminated by either party upon giving the other party and the PACB one week notice in writing.

4.0 Termination of a Memorandum of Understanding

After the probationary period referred to in Section 3.0, the Memorandum of Understanding may be terminated by the PACB by mutual consent of the parties involved, or cancelled by the PACB for proper and sufficient cause in the opinion of the PACB, such as that stated in Section 14.

5.0 Apprenticeship Progression Schedule, Wage Rates and Advanced Training Criteria

Progression Schedule

Landscape Horticulturist-5400 Hours			
Apprenticeship Level And Wages			
Level	Wage Rate	Requirements for Progression to Next Level	Next Level
1	60%	<ul style="list-style-type: none"> Completion of Pre-Employment / Level 1 training Registration as an apprentice Pass Level 1 exam* Minimum 1800 hours of combined relevant work experience and training 	2 nd Year
2	75%	<ul style="list-style-type: none"> Completion of Level 2 training Pass Level 2 exam* Minimum 3600 hours of combined relevant work experience and training 	3 rd Year
3	90%	<ul style="list-style-type: none"> Completion of Level 3 training Pass Level 3 exam* Minimum 5400 hours of combined relevant work experience and training Sign-off of all workplace skills in apprentice logbook Pass certification exam 	Journeyman Certification
<p>Wage Rates</p> <ul style="list-style-type: none"> Rates are percentages of the prevailing journeyman's wage rate in the place of employment of the apprentice. Rates must not be less than the wage rate established by the Labour Standards Act (1990), as now in force or as hereafter amended, or by other order, as amended from time to time replacing the first mentioned order. Rates must not be less than the wage rate established by any collective agreement, which may be in force at the apprentice's workplace. Employers are free to pay wage rates above the minimums specified. <p>Level Exams*</p> <ul style="list-style-type: none"> This program may not currently contain level exams, in which case this requirement will be waived until such time as level exams are available. 			

Landscape Horticulturist-5400 Hours		
Class Calls(After Apprenticeship Registration)		
Call Level	Requirements for Class Call	Hours awarded for In-School Training
Direct Entry Level 1	<ul style="list-style-type: none"> Minimum of 1800 hours of relevant work experience Prior Learning Assessment (PLA) at designated college (if applicable) 	To be determined by the number of courses completed after each class call
Level 2	<ul style="list-style-type: none"> Minimum of 3000 hours of relevant work experience and training 	240
Level 3	<ul style="list-style-type: none"> Minimum of 4400 hours of relevant work experience and training 	230
Level 4	<ul style="list-style-type: none"> Minimum of 5300 hours of relevant work experience and training 	148
Class Calls at Minimum Hours <ul style="list-style-type: none"> Class calls may not always occur at the minimum hours indicated. Some variation is permitted to allow for the availability of training resources and apprentices. 		

6.0 Tools

Apprentices shall be required to obtain their own hand tools applicable for the designated occupation of registration or tools as specified by the PACB.

7.0 Periodic Examinations and Evaluation

- 7.1 Every apprentice shall submit to such occupational tests and examinations as the PACB shall direct. If after such occupational tests and examinations the apprentice is found to be making unsatisfactory progress, his/her apprenticeship level and rate of wage shall not be advanced as provided in Section 5 until his/her progress is satisfactory to the Director of Apprenticeship and Trades Certification and his/her date of completion shall be deferred accordingly. Persistent failure to pass required tests shall be a cause for revocation of his/her Memorandum of Understanding.
- 7.2 Upon receipt of reports of accelerated progress of the apprentice, the PACB may shorten the term of apprenticeship and advance the date of completion accordingly.
- 7.3 For each and every course, a formal assessment is required for which 70% is the pass mark. A mark of 70% must be attained in both the theory examination and the practical project assignment, where applicable as documented on an official transcript.

- 7.4 Course credits may be granted through the use of a PACB approved matrix which identifies course equivalencies between designated trades and between current and historical Plans of Training for the same trade.

8.0 Granting of Certificates of Apprenticeship

Upon the successful completion of apprenticeship, the PACB shall issue a Certificate of Apprenticeship.

9.0 Hours of Work

Any hours employed in the performance of duties related to the designated occupation will be credited towards the completion of the term of apprenticeship. Appropriate documentation of these hours must be provided.

10.0 Copies of the Registration for Apprenticeship

The Director of Apprenticeship and Trades Certification shall provide copies of the Registration for Apprenticeship form to all signatories to the document.

11.0 Ratio of Apprentices to Journeypersons

Under normal practice, the ratio of apprentices to journeypersons shall not exceed two apprentices to every one journeyperson employed. Other ratio arrangements would be determined and approved by the PACB.

12.0 Relationship to a Collective Bargaining Agreement

Where applicable in Section 5 of these conditions, Collective Agreements take precedence.

13.0 Amendments to a Plan of Apprenticeship Training

A Plan of Training may be amended at any time by the PACB.

14.0 Employment, Re-Employment and Training Requirements

- 14.1 The Plan of Training requires apprentices to regularly attend their place of employment.
- 14.2 The Plan of Training requires apprentices to attend training for that occupation as prescribed by the PACB.

- 14.3 Failure to comply with Sections 14.1 and/or 14.2 will result in cancellation of the Memorandum of Understanding. Apprentices may have their MOUs reinstated by the PACB but would be subject to a commitment to complete the entire program as outlined in the General Conditions of Apprenticeship. Permanent cancellation in the said occupation is the result of non-compliance.
- 14.4 Cancellation of the Memorandum of Understanding to challenge journeyperson examinations, if unsuccessful, would require an apprentice to serve a time penalty of two (2) years before reinstatement as an apprentice or qualifying to receive a class call to training as a registered Trade Qualifier. Cancellation must be mutually agreed upon by the employer and the apprentice.
- 14.5 An employer shall ensure that each apprentice is under the direct supervision of an approved journeyperson supervisor who is located at the same worksite as the apprentice, and that the apprentice is able to communicate with the journeyperson with respect to the task, activity or function that is being supervised.
- 14.6 Under the Plan of Training the employer is required to keep each apprentice employed as long as work is available, and if the apprentice is laid off due to lack of work, to give first opportunity to be hired before another is hired.
- 14.7 The employer will permit each apprentice to attend training programs as prescribed by the PACB.
- 14.8 Apprentices who cannot acquire all the workplace skills at their place of employment will have to be evaluated in a simulated work environment at a PACB authorized training institution and have sign-off done by instructors to meet the requirements for certification.

15.0 Appeals to Decisions Based on Conditions Governing Apprenticeship Training

Persons wishing to appeal any decisions based on the above conditions must do so in writing to the Minister of Immigration, Population Growth and Skills within 30 days of the decision.

C. Requirements for Red Seal Endorsement

1. Evidence the required work experiences outlined in this Plan of Training have been obtained. This evidence must be in a format clearly outlining the experiences and must be signed by an appropriate person or persons attesting that these experiences have been obtained to the level required.
2. Successful completion of all required courses in the program.
3. A combination of training from an approved training program and suitable work experience totaling 5400 hours.

Or

A total of 8100 hours of suitable work experience.

4. Completion of a National Red Seal examination, to be set at a place and time determined by the Apprenticeship and Trades Certification Division.

D. Roles and Responsibilities of Stakeholders in the Apprenticeship Process

The apprenticeship process involves a number of stakeholders playing significant roles in the training of apprentices. This section outlines these roles and the responsibilities resulting from them.

The Apprentice:

- completes all required technical training courses as approved by the PACB.
- finds appropriate employment.
- completes all required work experiences in combination with the required hours.
- ensures work experiences are well documented.
- approaches apprenticeship training with an attitude and commitment that fosters the qualities necessary for a successful career as a qualified journeyman.
- obtains the required hand tools as specified by the PACB for each period of training of the apprenticeship program.

The Employer:

- provides high quality work experiences in an environment conducive to learning.
- remunerates apprentices as set out in the Plan of Training or Collective Agreements.
- provides feedback to training institutions, Apprenticeship and Trades Certification Division and apprentices in an effort to establish a process of continuous quality improvement.
- where appropriate, releases apprentices for the purpose of returning to a training institution to complete the necessary technical courses.
- ensures work experiences of the apprentice are documented.
- ensures a certified journeyperson is currently on staff in the same trade area as the apprentice and whose certification is recognized by the NL Department of Immigration, Population Growth and Skills,.

The Training Institution:

- provides a high quality learning environment.
- provides the necessary student support services that will enhance an apprentice's ability to be successful.
- participates with other stakeholders in the continual updating of programs.

The Apprenticeship and Trades Certification Division:

- establishes and maintains program advisory committees under the direction of the PACB.
- promotes apprenticeship training as a viable career option to prospective apprentices and other appropriate persons involved, such as career guidance counsellors, teachers, parents, etc.
- establishes and maintains a protocol with training institutions, employers and other appropriate stakeholders to ensure the quality of apprenticeship training programs.
- ensures all apprentices are appropriately registered and records are maintained as required.
- schedules all necessary technical training periods for apprentices to complete requirements for certification.
- administers level, provincial and Red Seal examinations.

The Provincial Apprenticeship and Certification Board:

- sets policies to ensure the provisions of the **Apprenticeship and Certification Act (1999)** are implemented.
- ensures advisory and examination committees are established and maintained.
- accredits institutions to deliver apprenticeship training programs.
- designates occupations for apprenticeship training and/or certification.