# Landscape Horticulturist Guide to Course Content

2024

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Saskatchewan Apprenticeship and Trade Certification Commission Online: www.saskapprenticeship.ca

Recognition:

To promote transparency and consistency, this document has been adapted from the 2018 Landscape Horticulturist Red Seal Occupational Standard (Employment and Social Development Canada).

A complete version of the Occupational Standard can be found at <u>www.red-seal.ca</u>



# STRUCTURE OF THE GUIDE TO COURSE CONTENT

To facilitate understanding of the occupation, this guide to course content contains the following sections:

**Task Matrix**: a chart which outlines graphically the major work activities, tasks and sub-tasks of this standard detailing the essential skills and the level of training where the content is covered. The Task Matrix is broken down into the following:

Major Work Activity: the largest division within the standard that is comprised of a distinct set of trade activities.

Task: distinct actions that describe the activities within a major work activity.

Sub-task: distinct actions that describe the activities within a task.

**Training Profile Chart**: a chart which outlines the model for Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training.

**Technical Training Course Content for the Landscape Horticulturist trade**: a chart which outlines the model for SATCC technical training sequencing. For the harmonized level of training, a cross reference to the Harmonized apprenticeship technical training sequencing, at the learning outcome level, is provided.



# TRAINING REQUIREMENTS FOR THE LANDSCAPE HORTICULTURIST TRADE

To graduate from each level of the apprenticeship program, an apprentice must successfully complete the required technical training and compile enough on-the-job experience to total at least 1500 hours each year. Total trade time required is 6000 hours and at least 4 years in the trade.

There are four levels of technical training delivered by Olds College in Olds, Alberta. Apprentices also have the Saskatchewan option of online training using courses from the University of Saskatchewan Prairie Horticulture Certificate (PHC) program. For more information on this program see the Online Option Guide to Course Content.

Level One: 8 weeks Level Two: 8 weeks Level Three: 8 weeks Level Four: 8 weeks

The information contained in this document details the technical training delivered for each level of apprenticeship. An apprentice spends approximately 15% of their apprenticeship term in a technical training institute learning the technical and theoretical aspects of the trade. The hours and percentages of technical and practical training may vary according to class needs and progress.

The content of the technical training components is subject to change without notice.

#### **Entrance Requirements for Apprenticeship Training**

Your grade twelve transcripts (with no modified classes) or GED 12 is your guarantee that you meet the educational entrance requirements for apprenticeship in Saskatchewan. In fact, employers prefer and recommend apprentices who have completed high school. This ensures the individual has all of the necessary skills required to successfully complete the apprenticeship program and receive journeyperson certification.

Individuals with "modified" or "general" classes in math or science do not meet our entry requirements. These individuals are required to take an entrance assessment prescribed by the SATCC.

English is the language of instruction in all apprenticeship programs and is the common language for business in Saskatchewan. Before admission, all apprentices and/or "upgraders" must be able to understand and communicate in the English language. Applicants whose first language is not English must have a minimum Canadian Language Benchmark Assessment of six (CLB6).

Note: A CLB assessment is valid for a one-year period from date of issue.



Designated Trade Name	Math Credit at the Indicated Grade Level	Science Credit at Grade Level
Landscape Horticulturist	Grade 10	Grade 10
<ul> <li>One of the following) WA – Workplace and Apprenticeship; or F – Foundations; or P – Precalculus, or a Math at the indicated grade level (Modified and General Math credits are not acceptable.).</li> </ul>		
*Applicants who have graduated in advance of 2015-2016, or who do not have access to the revised Science curricula will require a Science at the minimum grade level indicated by trade.		
For information about high school curriculum, including Math and Science course names, please see: http://www.curriculum.gov.sk.ca		
Individuals not meeting the	ne entrance requirements will be a and any required training	subject to an assessment

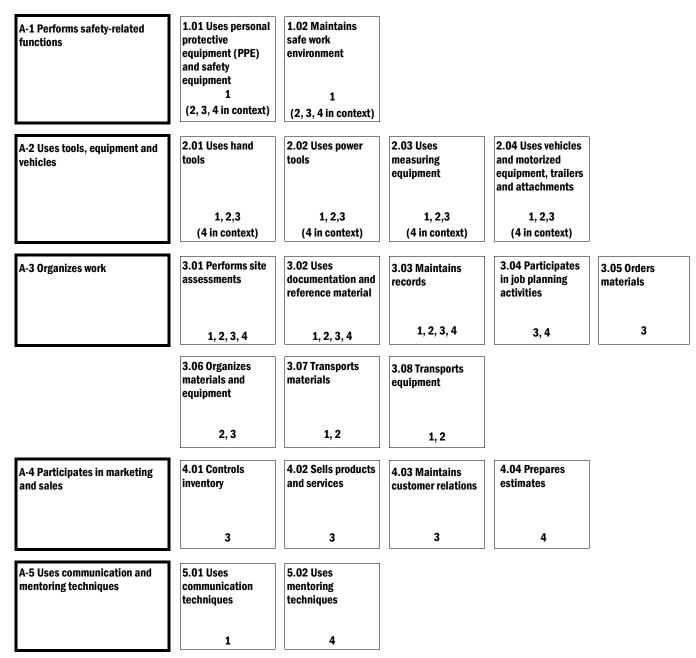
# LANDSCAPE HORTICULTURIST TASK MATRIX

This chart outlines the major work activities, tasks and sub-tasks from the 2018 Landscape Horticulturist Red Seal Occupational Standard. Each sub-task details the corresponding essential skill and level of training where the content is covered. \*

\* Sub Tasks with numbers in the boxes is where the content will be delivered in training.

# A – Performs Common Occupational Skills

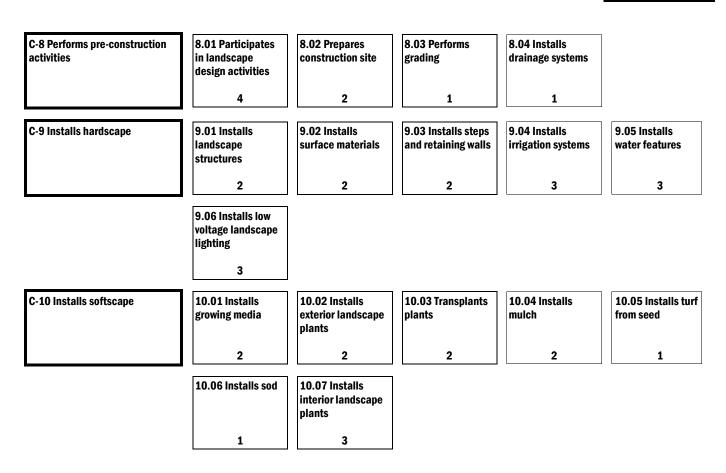
**19%** 



## **B** – Applies Horticultural Principles

B-6 Applies horticultural practices	6.01 Identifies plants and plant requirements	6.02 Manages plant health and growing conditions	6.03 Prunes plant material	6.04 Manages pests, diseases and invasive species
	1, 2, 3, 4	1, 2	2, 3	3, 4
B-7 Applies environmental practices	7.01 Practices environmental stewardship	7.02 Practices biodiversity enhancement	7.03 Practices soil stewardship	7.04 Practices water stewardship
	1, 2, 3, 4	4	2	2, 3

# **C** – Performs Landscape Construction





34%

C-11 Installs green infrastructure systems	11.01 Selects green infrastructure	11.02 Installs green roofs and walls	11.03 Installs rainwater and stormwater management systems	11.04 Installs erosion control	11.05 Installs biodiverse plantings and natural areas
	4	4	4	4	4

# **D** – Performs Landscape Maintenance

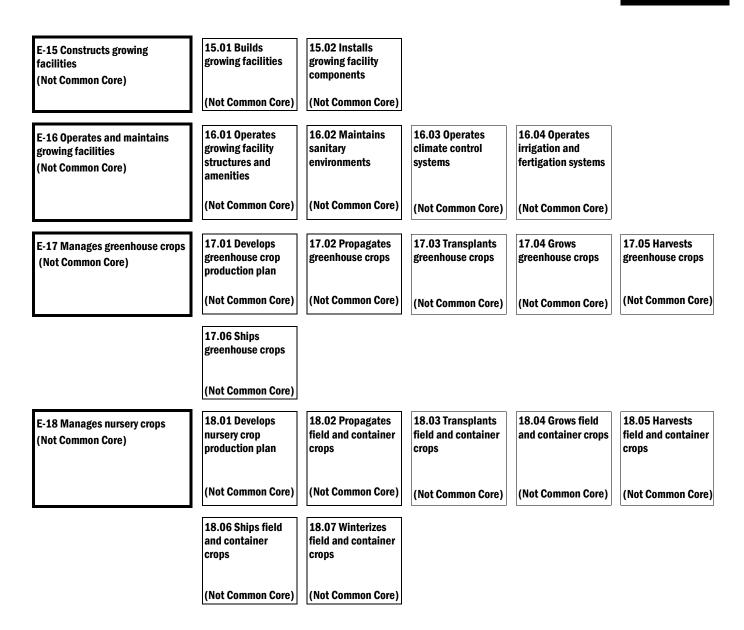
**D-12 Maintains hardscape** 12.01 Maintains 12.02 Maintains 12.03 Maintains 12.04 Maintains 12.05 Maintains drainage systems surface materials steps and retaining irrigation systems landscape structures walls 2 3 2 2 3 12.06 Maintains 12.07 Maintains 12.08 Practices 12.09 Repairs water features landscape lighting snow and ice hardscape control 3 3 3 2 **D-13 Maintains softscape** 13.01 Maintains 13.02 Maintains 13.03 Maintains 13.04 Propagates 13.05 Repairs exterior softscape interior softscape turfgrass plant material softscape 1, 2 3 1 2 3 14.02 Maintains 14.03 Maintains 14.04 Maintains 14.01 Maintains D-14 Maintains green rainwater and green roofs and erosion control biodiverse infrastructure walls stormwater plantings and management natural areas systems 4 4 4 4





23%

### **E** – Works in Production Plant Material (NOT COMMON CORE)



This Major Work Activity is not consistently performed by Landscape Horticulturists across Canada, therefore this content is deemed not common core and will not be assessed on the Landscape Horticulturist certification examination.

0%

# **TRAINING PROFILE CHART**

Since Landscape Horticulturist Technical Training is completed in Alberta, this Training Profile Chart represents Alberta Apprenticeship technical training which is performed at the topic level.

Alberta Level One	Hours
Workplace Safety and Occupational Skills	14
Trade Related Safety Tools, Equipment and Vehicles	34
Soil and Water	60
Plant properties, Grassland and Parkland	74
Site Assessment, Grading and Drainage	22
Turfgrass and Exterior Softscape Maintenance	36
	240

Alberta Level Two	Hours
Softscape Installation and Pruning	24
Surveying and Site Assessment	32
Physiology, Boreal, Montane and Wetland Plants	40
Landscape Pests	50
Conservation	24
Hardscape Installation and Maintenance	70
	240

Alberta Level Three	Hours
Project Management	19
Landscape Construction and Irrigation	67
Softscape Maintenance	24
Sustainable Horticultural Practices	41
Urban Forestry and Arboriculture	58
Growing Facilities	31
	240

Alberta Level Four	Hours
Business Administration	14
Contract Management	41
Landscape Design	70
Sustainable Landscape Technologies	29
Speciality Crops	38
Nursery Production and Greenhouse Crops	48
	240





# **TECHNICAL TRAINING COURSE CONTENT**

This chart outlines the model for Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training sequencing. For the harmonized level of training, a cross reference to the Red Seal Occupational Standard (RSOS) apprenticeship technical training sequencing, at the learning outcome level, is provided.

Sub-tasks listed are the minimum to be covered in a topic. Related sub-tasks not listed may be used as a reference and taught "in context" in other topics.

Level One
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### 8 weeks

#### Workplace Safety and Occupational Skills

- applies legislation, regulations and practices ensuring safe work
- uses industry standard practices for climbing, lifting, rigging and hoisting
- applies industry standard practices for hazardous materials and fire protection
- manage an apprenticeship to earn journeyman certification
- use communication strategies

#### **RSOS** topics covered in this section of training:

#### A-1 Safety-related functions

A-1.01 Uses personal and protective equipment (PPE) and safety equipment A-1.02 Maintains safe work environment

#### A-5 Uses communication and mentoring techniques

A-5.01 Uses communication techniques

#### Tools, Equipment and Vehicles

- uses trade related tools
- use equipment
- maintains hydraulic systems
- operates heavy equipment
- operates commercial vehicles
- transports equipment
- transports materials

#### RSOS topics covered in this section of training:

#### A-2 Uses tools, equipment and vehicles

- A-2.01 Uses hand tools
- A-2.02 Uses power tools
- A-2.03 Uses measuring equipment

A-2.04 Uses vehicles and motorized equipment, trailers and attachments



14 hours

240 hours

#### Site Assessment, Grading and Drainage

- performs pre-construction site assessment
- interprets utility locates
- performs site grading
- installs drainage systems

#### RSOS topics covered in this section of training:

#### A-3 Organizes Work

A-3.01 Performs site assessments A-3.02 Uses documentation and reference material A-3.03 Maintains records A-3.07 Transports materials A-3.08 Transports equipment

#### A-5 Communication Techniques

A-5.01 Uses communication techniques

#### C-8 Performs pre-construction activities

C-8.03 Performs grading

C-8.04 Installs drainage systems

#### Plant properties, Grassland and Parkland

- evaluate plant health
- uses the botanic classification system for plant identification
- uses plants from the grassland and parkland ecosystems

#### RSOS topics covered in this section of training:

#### **B-6 Applies horticultural practices**

B-6.01 Identifies plants and plant requirements B-6.02 Manages plant health and growing conditions

#### Soil and Water

- uses environmental stewardship principles
- manages soil health
- manages water quality for plant health
- Uses soilless media

#### RSOS topics covered in this section of training:

#### **B-7 Applies environmental practices**

B-7.01 Practices environmental stewardship

22 hours

74 hours



#### **Turfgrass and Exterior Softscape Maintenance**

- installs turfgrass
- maintains turfgrass
- applies fertilizer
- performs exterior softscape maintenance

#### RSOS topics covered in this section of training:

#### C-10 Installs softscape

C-10.01 Installs growing media C-10.05 Installs turf from seed C-10.06 Installs sod

#### **D-13 Maintains softscape**

D-13.01 Maintains exterior softscape D-13.03 Maintains turfgrass

#### Level One topics from the RSOS that are taught in context:

There are no in-context topics in Level 1.

For details regarding the In-Context Topic, see page 22.



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#### prepares construction sites coordinates site layout maintains relationships with stakeholders

#### RSOS topics covered in this section of training:

#### A-3 Organizes Work

**Level Two** 

A-3.01 Performs site assessments

Surveying and Site Assessment

conducts site surveys

A-3.02 Uses documentation and reference material

A-3.03 Maintains records

A-3.07 Transports materials

A-3.08 Transports equipment

#### C-8 Performs pre-construction activities

C-8.02 Prepares construction site

#### Conservation

- practice environmental conservation
- practice water conservation
- practice soil conservation

#### RSOS topics covered in this section of training:

#### **B-7** Applies environmental practices

- B-7.01 Practices environmental stewardship
- B-7.03 Practices soil stewardship

#### B-7.04 Practices water stewardship

#### Hardscape Installation and Maintenance

- mitigates site risks •
- installs surface materials •
- installs retaining walls
- maintains drainage systems
- installs stone paving
- uses timber construction techniques

#### RSOS topics covered in this section of training:

#### C-9 Installs hardscape

C-9.02 Installs surface materials C-9.03 Installs steps and retaining walls 24 hours

32 hours

8 weeks



#### Physiology, Boreal, Montane and Wetland Plants

- manages plant development
- uses plants from the boreal forest region
- uses plants from the montane region
- uses plants from the wetlands

#### RSOS topics covered in this section of training:

#### **B-6 Applies horticultural practices**

B-6.01 Identifies plants and plant requirements B-6.02 Manages plant health and growing conditions

#### D-13 Maintains softscape

D-13.01 Maintains exterior softscape

D-13.04 Propagates plant material

#### Landscape Pests

- practices integrated pest management
- manages weeds
- manages plant disease
- manages pests
- applies pesticide legislation

#### RSOS topics covered in this section of training:

#### **B-6 Applies horticultural practices**

B-6.01 Identifies plants and plant requirements B-6.02 Manages plant health and growing conditions

B-6.03 Prunes plant material

#### Softscape Installation and Pruning

- installs woody plants
- installs mulch
- prunes plants

#### **RSOS** topics covered in this section of training:

#### C-10 Installs Hardscape

C-10.02 Installs exterior landscape plants C-10.03 Transplants plants C-10.04 Installs mulch

#### Level Two topics from the RSOS that are taught in context:

A-1 Performs safety Related Functions A-5 Uses communication and mentoring techniques

For details regarding the In Context Topic, see page 22.

40 hours

50 hours





## **Level Three**

#### **Project Management**

- provides customer service
- plans projects
- manages inventory

#### RSOS topics covered in this section of training:

#### A-4 Participates in marketing and sales

A-4.01 Controls inventory

- A-4.02 Sells products and services
- A-4.03 Maintains customer relations

#### Landscape Construction and Irrigation

- constructs water features
- installs landscape lighting
- installs irrigation systems
- maintains irrigation systems

#### RSOS topics covered in this section of training:

#### **D-12 Maintains hardscape**

- D-12.02 Maintains landscape structures
- D-12.05 Maintains irrigation systems
- D-12.06 Maintains water features
- D-12.07 Maintains landscape lighting
- D-12.08 Practices snow and ice control
- D-12.09 Repairs hardscape

#### **Softscape Maintenance**

- repairs softscapes
- installs interior landscapes plants
- maintains interior landscapes plants
- practices snow and ice control
- maintains landscape structures

#### RSOS topics covered in this section of training:

#### C-10 Installs softscape

C-10.07 Installs interior landscape plants.

#### **D-13 Maintains softscape**

D-13.02 Maintains interior softscape

D-13.05 Repairs softscape

67 hours

24 hours



# 8 weeks

# 240 hours

19 hours

#### **Sustainable Horticultural Practices**

- applies environmental practices
- uses introduced herbaceous plants
- uses introduced woody plants

#### RSOS topics covered in this section of training:

#### **B-7** Applies environmental practices

B-7.01 Practices environmental stewardship

B-7.04 Practices water stewardship

#### **Urban Forestry and Arboriculture**

- assesses tree physiology in the landscape
- applies techniques to achieve plant independence in the landscape
- assesses trees
- protects trees in the landscape
- prunes trees
- removes trees

#### **RSOS** topics covered in this section of training:

#### **B-6 Uses horticultural principles**

B-6.01 Identifies plants and plant requirements

B-6.03 Prunes plant material

B-6.04 Manages pests, diseases and invasive species

#### **Growing Facilities**

- constructs a growing facility
- operates a growing facility
- creates a sanitary environment

#### RSOS topics covered in this section of training:

#### A-1 Performs safety-related functions

A-1.01 Uses personal protective equipment (PPE) and safety equipment

#### A-2 Uses tools, equipment and vehicles

A-2.01 Uses hand tools A-2.02 Uses power tools A-2.03 Uses measuring equipment

A-2.04 Uses vehicles and motorized equipment, trailers and attachments

#### A-3 Organizes Work

A-3.01 Performs site assessments A-3.02 Uses documentation and reference material A-3.07 Transports materials A-3.08 Transports equipment

#### A-4 Participates in marketing and sales

A-4.01 Controls inventory A-4.02 Sells products and services A-4.03 Maintains customer relations



#### 41 hours

58 hours

Level Three topics from the RSOS that are taught in context:

A-1 Performs safety Related Functions

For details regarding the In Context Topic, see page 22.



## **Level Four**

#### **Business Administration**

- conducts post construction site assessments
- schedules resources for a landscape project
- uses coaching skills when training an apprentice
- describes the role of the network of industry committees that represent trades and occupations

8 weeks

• uses Red Seal products to challenge an interprovincial examination

#### RSOS topics covered in this section of training:

#### A-3 Organizes work

- A-3.01 Performs site assessments
- A-3.02 Uses documentation and reference material

A-3.03 Maintains records

A-3.04 Participates in job planning activities

#### A-5 Uses communication and mentoring techniques

A-5.02 Uses mentoring techniques.

#### **Contract Management**

- prepares estimates for landscape projects
- implements contract security measures
- prepares bids for landscape projects

#### RSOS topics covered in this section of training:

#### A-4 Participates in marketing and sales

A-4.04 Prepares estimates

#### Landscape Design

- analyze landscape designs
- uses drafting to create a landscape design
- applies design processes to landscape projects
- develops construction plans

#### RSOS topics covered in this section of training:

#### C-8 Performs pre-construction activities

C-8.01 Participates in landscape design activities

#### Sustainable Landscape Technologies

- evaluates economics of sustainable landscape technologies
- maintains green roofs
- maintains living walls
- manages rainwater
- controls erosion

#### RSOS topics covered in this section of training:

#### **B-7 Applies environmental practices**

7.01 Practices environmental stewardship 7.02 Practices biodiversity enhancement

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# 240 hours

41 hours

#### 70 hours

29 hours



14 hours

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#### C- 11 Installs green infrastructure systems

- 11.01 Selects green infrastructure
- 11.02 Installs green roofs and walls
- 11.03 Installs rainwater and stormwater management systems
- 11.04 Installs erosion control
- 11.05 Installs biodiverse plantings and natural areas

#### **Specialty Crops**

- grows edible fruit species
- grows vines
- grows geophytes
- grows bedding plants
- grows ornamental grasses

#### **RSOS** topics covered in this section of training:

#### **B-6 Applies horticultural practices**

B-6.01 Identifies plants and plant requirements B-6.04 Manages pests, diseases and invasive species

#### **Nursery Production and Greenhouse Crops**

- propagates crops
- transplants crops
- grows crops
- harvests crops
- winterizes crops
- ships crops

#### RSOS topics covered in this section of training:

#### **B-6 Applies horticultural practices**

B-6.01 Identifies plants and plant requirements B-6.04 Manages pests, diseases and invasive species

#### Level Four topics from the RSOS that are taught in context:

#### A-1 Performs safety Related Functions

A-2 Uses tools, Equipment and Vehicles

For details regarding the In Context Topic, see page 22.

38 hours





# **In Context Topics**

In context means learning that has already taken place and is being applied to the applicable task. Learning outcomes for in context topics are accomplished in other topics in that level.

#### A-1 Performs safety-related functions

A-1.01 Uses personal and protective equipment (PPE) and safety equipment A-1.02 Maintains safe work environment

#### A-2 Uses tools, equipment and vehicles

A-2.01 Uses hand toolsA-2.02 Uses power toolsA-2.03 Uses measuring equipmentA-2.04 Uses vehicles and motorized equipment, trailers and attachments

#### A-5 Uses communication and mentoring techniques

A-5.01 Uses communication techniques A-5.02 Uses mentoring techniques