

Horticulture and Landscaping

Required Components for the SHSM–Horticulture and Landscaping

1. A bundle of nine Grade 11 and Grade 12 credits that comprises:
 - four horticulture and landscaping major credits
 - three other required credits from the Ontario curriculum, in English, mathematics, and a choice of science or business studies
 - two cooperative education credits tied to the sector
2. Seven sector-recognized certifications and/or training courses/programs (four compulsory and a choice of three electives)
3. Experiential learning and career exploration activities within the sector
4. Reach ahead experiences connected with the student’s postsecondary plans
5. Development of Essential Skills and work habits required in the sector, and documentation of them using the OSP

Profile of the Horticulture and Landscaping Sector

Ornamental horticulture and landscaping is a multibillion-dollar industry offering thousands of full- and part-time employment opportunities in Ontario.

The sector is growing rapidly due to unprecedented residential and commercial construction activity. There will be a great demand, as well as expanded entrepreneurial opportunities, for skilled employees in this sector over the coming years.

INSIGHT

The requirements of this SHSM are unique and are geared to the horticulture and landscaping sector. However, the design of all SHSM programs follows a consistent model, described in **Section A: Policy**.

The need for management of local parks and botanical or heritage gardens, maintenance of sports grounds, and construction of domestic gardens is growing, as is consumer demand for outdoor recreation, environmental sustainability, and eco-tourism.¹

The SHSM–Horticulture and Landscaping provides students with a strong foundation for a wide variety of careers in the horticulture and landscaping sector. Depending on local circumstances, this SHSM may be designed to have a particular focus. Where a choice of focus areas is offered, students may select one.

¹ Horticultural Trades Association, Landscape Ontario, www.horttrades.com.

Occupations in the Horticulture and Landscaping Sector

The following table provides examples of occupations in the horticulture and landscaping sector, with corresponding NOCs, sorted according to the type of postsecondary education or training the occupations would normally require.

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See **Section A1.6** for more on occupations and NOCs.



Apprenticeship Training	College
<ul style="list-style-type: none"> • Arborist 2225 • Horticultural Technician 2225 • Small Engine Technician 7335 	<ul style="list-style-type: none"> • Golf Course Technician 8612 • Landscape Technologist 2225 • Parks Operations Manager 0114 • Tree Service Technician 2225 • Urban Forestry and Park Technician 2122
University	Workplace
<ul style="list-style-type: none"> • Biologist 2121 • Botanist 2121 • Horticulturalist 2225 • Landscape Architect 2151 • Plant Pathologist 2121 	<ul style="list-style-type: none"> • Gardener 2225 • Greenhouse Worker 8432 • Grower 8254 • Landscape Labourer 8612 • Landscaping and Grounds Maintenance Contractors 8255 • Lawn and Garden Retail Salesperson 6421 • Plant Propagator 8432

Note: Some of the names of occupations in this table may differ slightly from the names given in the National Occupation Classification system. The names listed here reflect common usage by institutions and organizations in this sector in Ontario.

Postsecondary Programs and Training in the Horticulture and Landscaping Sector

The following are examples of programs and training related to careers in the horticulture and landscaping sector and the accreditations associated with each.

Apprenticeship Training

Arborist	Certificate of apprenticeship/ certificate of qualification
Horticultural Technician	Certificate of apprenticeship/ certificate of qualification
Small Engine Technician	Certificate of apprenticeship/ certificate of qualification

College

Floriculture/Retail	Diploma
Golf Course Management	Diploma
Horticulture Technician	Diploma
Landscape Design	Diploma
Landscape Technician	Diploma
Landscape Technology	Diploma
Ornamental Horticulture	Diploma
Parks Operations and Services	Diploma
Urban Tree Maintenance	Diploma

University

Botany	Bachelor's degree
Horticulture and Landscaping	Bachelor's degree
Horticulture Science	Bachelor's degree
Landscape Architecture	Bachelor's degree
Plant Agriculture	Bachelor's degree
Plant Biology	Bachelor's degree
Plant Sciences	Bachelor's degree

Training for the Workplace

Greenskeeper	Certificate
Irrigation Technician	Certificate
Nursery Production	Certificate
Pesticide Technician	Certificate

Required Components for the SHSM–Horticulture and Landscaping

The SHSM–Horticulture and Landscaping has the following five required components:

1. A bundle of nine Grade 11 and Grade 12 credits

These credits make up the bundle:

- four horticulture and landscaping major credits that provide sector-specific knowledge and skills
- three other required credits from the Ontario curriculum, in English, mathematics, and science or business studies, in which some expectations are met through learning activities contextualized to the horticulture and landscaping sector

FIND IT!

See **Section A1.2** for more on SHSM credits.

- two cooperative education credits that provide authentic learning experiences in a workplace setting, enabling students to refine, extend, apply, and practise sector-specific knowledge and skills

Credits		Apprenticeship Training		College		University		Workplace	
		Gr. 11	Gr. 12	Gr. 11	Gr. 12	Gr. 11	Gr. 12	Gr. 11	Gr. 12
Horticulture and Landscaping Major		2	2	2	2	2	2	2	2
includes content delivered in the sector's context	English	1		1		1			1
	Mathematics		1		1		1	1	
	Business Studies or Science	1		1		1		1	
Cooperative Education		2		2		2		2	
Total number of credits		9		9		9		9	

Note: Multiple credits in the Ontario technological education curriculum allow additional instructional time for the practice and refinement of skills needed to develop student performance to the levels required for certification, entry into apprenticeship programs, or participation in school–work transition programs (see *The Ontario Curriculum, Grades 11 and 12: Technological Education, 2009*, page 17).

2. Seven sector-recognized certifications and/or training courses/programs

The SHSM in horticulture and landscaping requires students to complete seven sector-recognized certifications and/or training courses/programs. Of these, four are compulsory and the remaining three are electives that must be chosen from the list in the following table. Note that items in the table that are capitalized are the proper names of specific certifications or training courses/programs that are appropriate for the SHSM. Items that are lowercased are names of the areas or categories within which specific certifications or training courses/programs should be selected by the school or board. The requirements are summarized in the table below.

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See **Section A1.3** for more on SHSM certifications and training.



Four compulsory			
Cardiopulmonary Resuscitation (CPR) Level A	generic (i.e., not site-specific) Workplace Hazardous Materials Information System (WHMIS)	plant identification	Standard First Aid
Three electives from the list below			
cash handling	customer service	edging and trimming	grading and drainage
grading and sodding	lawn mower use and safety	paver installation	phone etiquette
plant layout	pruning	tree planting	work orders

Note: Taken together, some of these electives can lead to certification as a certified horticultural technician.

3. Experiential learning and career exploration activities

Experiential learning and career exploration opportunities relevant to the sector might include:

- one-on-one observation of a cooperative education student at a placement in the horticulture and landscaping sector (example of job twinning)
- a day-long observation of a skilled tradesperson in the horticulture and landscaping sector (example of job shadowing)
- a one- or two-week work experience with a member of an industry association or a professional in the sector (example of work experience)
- attendance at college or university classes in a horticulture and/or landscaping program
- the design and installation of a landscaping project on the grounds of the school or school board
- attendance at a workshop put on by a garden centre or nursery
- a tour of a greenhouse in which research is conducted
- a volunteer experience with a community landscaping initiative.

FIND IT!

See **Section A1.4** for more on experiential learning and career exploration activities.

POLICY

Note that volunteer activities in an SHSM cannot be counted towards the hours of community involvement required to earn the OSSD.

4. Reach ahead experiences

Students are provided one or more reach ahead experiences – opportunities to take the next steps along their chosen pathway – as shown in the following examples:

- Apprenticeship: visiting an approved apprenticeship delivery agent in the sector
- College: interviewing a college student enrolled in a sector-specific program
- University: observing a university class in a sector-related program
- Workplace: interviewing an employee in the sector

FIND IT!

See **Section A1.5** for more on reach ahead experiences.



5. Essential Skills and work habits and the OSP

Students will develop Essential Skills and work habits required in the sector and document them using the OSP, a component of the SHSM.

FIND IT!

See **Section A1.6** for more on Essential Skills and work habits.



Pathways for the SHSM–Horticulture and Landscaping

A table illustrating the four pathways and required credits leading to completion of this SHSM is provided below. You will also find tables illustrating sample bundles of credits, and other useful resources, on the ministry's SHSM website.

Awareness building (Grades 7 and 8)

See **Section 5.5** for information on building awareness of SHSM programs among students in Grades 7 and 8.

Exploration (Grades 9 and 10)

See **Section 5.5** for information on providing Grade 9 and 10 students with opportunities for exploration of SHSM programs. In addition, students considering this SHSM can be encouraged to enrol in the following courses to become better informed about careers and postsecondary options in the sector:

- Exploring Technologies: This Grade 9 course is recommended for all students following SHSM pathways that have a technological education focus. The course provides students with opportunities to explore a variety of technologies, including Green Industries, by engaging in activities related to them.
- Career Studies (compulsory) and Discovering the Workplace: Some of the expectations in these Grade 10 courses provide opportunities for students to explore occupations and other postsecondary options in the sector and to participate in experiential learning activities.
- Green Industries: This course is recommended for any Grade 10 student who is considering enrolling in an SHSM– Horticulture and Landscaping.

TOOLS AND RESOURCES

Visit the ministry's SHSM website at www.edu.gov.on.ca/eng/teachers/studentssuccess/specialist.html for:

- sample bundles of credits specific to this SHSM
- a list of organizations and resources specific to this SHSM.



Specialization (Grades 11 and 12)

Students acquire the sector-specific knowledge and technical skills required to earn their OSSD with an SHSM–Horticulture and Landscaping by completing its five required components. Students and their parents/guardians are encouraged to consult with guidance counsellors and teachers to select the courses that will enable students to pursue their goals.

Students pursuing an apprenticeship pathway should consider OYAP, which enables them to start an apprenticeship while earning their OSSD.

Students pursuing a university pathway are advised to complete their required cooperative education credits in Grade 11, in order to allow room in their timetables in Grade 12 for credits needed to meet university entrance requirements.

When helping students plan their SHSMs, particularly with respect to the selection of courses to fulfil the requirement for credits in the major, teachers should bear in mind that technological education courses can be offered as single-credit or multiple-credit courses.

Program pathways: SHSM–Horticulture and Landscaping

• Shaded boxes – required credits in the bundle for the SHSM–Horticulture and Landscaping • (C) – compulsory credit for the OSSD

Grade 9: <i>Exploration</i>	Grade 10: <i>Exploration</i>	Apprenticeship Training Pathway: <i>Specialization</i>		College Pathway: <i>Specialization</i>		University Pathway: <i>Specialization</i>		Workplace Pathway: <i>Specialization</i>	
		Grade 11	Grade 12	Grade 11	Grade 12	Grade 11	Grade 12	Grade 11	Grade 12
An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit	An optional or a compulsory credit
(C) English	(C) English	(C) English	(C) English	(C) English	(C) English	(C) English	(C) English	(C) English	(C) English
(C) Mathematics	(C) Mathematics	(C) Mathematics	(C) Mathematics	(C) Mathematics	(C) Mathematics	(C) Mathematics	(C) Mathematics	(C) Mathematics	(C) Mathematics
(C) Science	(C) Science	Science or Business Studies in either Gr. 11 or Gr. 12		Science or Business Studies in either Gr. 11 or Gr. 12		Science or Business Studies in either Gr. 11 or Gr. 12		Science or Business Studies in either Gr. 11 or Gr. 12	
(C) Geography of Canada	(C) Canadian History	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major
(C) Core French	(C) Career Studies/ Civics	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Horticulture and Landscaping Major	Health and Wellness Major
(C) Healthy Active Living Education	(C) The Arts	May be used as a (C) Cooperative education (2 credits) related to the sector, in either Gr. 11 or Gr. 12	May be used as a (C) Cooperative education (2 credits) related to the sector, in either Gr. 11 or Gr. 12	May be used as a (C) Cooperative education (2 credits) related to the sector, in either Gr. 11 or Gr. 12	May be used as a (C) Cooperative education (2 credits) related to the sector, in either Gr. 11 or Gr. 12	May be used as a (C) Cooperative education (2 credits) related to the sector, in either Gr. 11 or Gr. 12	May be used as a (C) Cooperative education (2 credits) related to the sector, in either Gr. 11 or Gr. 12	May be used as a (C) Cooperative education (2 credits) related to the sector, in either Gr. 11 or Gr. 12	May be used as a (C) Cooperative education (2 credits) related to the sector, in either Gr. 11 or Gr. 12
Exploring Technologies	Green Industries or Construction Technology	Business Studies or an optional or a compulsory credit	Geography or Cooperative Education	Business Studies or an optional or a compulsory credit	Geography or Cooperative Education	Business Studies or an optional or a compulsory credit	Mathematics	Business Studies or an optional or a compulsory credit	Geography or Cooperative Education