



**SPECIALIST HIGH SKILLS MAJOR  
(SHSM)  
MANUFACTURING  
Quick Fact Sheet**



Centre your learning towards a career that matches your skills and interests while you earn your high school diploma! Students who successfully complete the SHSM program receive an Ontario Secondary School Diploma with an embossed red seal, an SHSM Record documenting his/her achievement, and a formal recognition on his/her Ontario Student Transcript. Speak with your guidance counsellor about SHSM and other benefits!

**1. CREDITS AND PATHWAYS**

| CREDITS   |   | Apprenticeship Training                             |       | College   |       | University  |       | Workplace   |                              |
|---|---|---|-------|---|-------|---|-------|---|------------------------------|
|   |   | Gr 11   | Gr 12 | Gr 11   | Gr 12 | Gr 11   | Gr 12 | Gr 11   | Gr 12                        |
| <b>Major Credits ^</b><br>• <b>One credit may be substituted with a cooperative education credit (additional to the 2 required co-op credits)</b> |   | 4*  |       | 4*  |       | 4*  |       | 4*  |                              |
|   |   | Including at least one Gr. 11 and one Gr. 12 credit |       | Including at least one Gr. 11 and one Gr. 12 credit |       | Including at least one Gr. 11 and one Gr. 12 credit |       | Including at least one Gr. 11 and one Gr. 12 credit |                              |
| <input type="checkbox"/> Includes content delivered in the sector's context (Except for Workplace pathway)  | English   | 1   |       | 1   |       | 1   |       | 2   | One credit must be in Gr. 12 |
|   | Math  | 1   |       | 1   |       | 1   |       | 1   |                              |
|   | Science<br>OLC4O,<br>MEL3E &<br>MEL4E<br>In addition<br>*see List of<br>Approved<br>SHSM<br>courses | 1   |       | 1   |       | 1   |       | 1   |                              |
| <b>Cooperative Education</b>  |   | 2   |       | 2   |       | 2   |       | 2   |                              |
| <b>Total</b>  |   | 9   |       | 9   |       | 9   |       | 9   |                              |

\* Including at least one Grade 11 and one Grade 12 credit

\* A co-op credit related to the sector may be substituted for one of these four MAJOR credits

-Major credits may also include Mohawk Bridge/OYAP Dual Credits

**The above credits must be selected from the following lists:**

**Grade 11 Major Credits**

- HNC3C College Understanding Fashion
- ICS 3C/3U College/University Intro to Computer Programming
- SCH 3U University Chemistry
- SPH 3U University Physics
- TCJ 3C College Construction Engineering Technology
- TDJ 3M College/University Technological Design
- TEJ 3M College/University Computer Engineering Tech

**Grade 12 Major Credits**

- ICS 4C/4U College/ University Intro Computer Programming
- MCV 4U University Calculus & Vectors
- MHF 4U University Advanced Functions
- SCH 4C/4U College/University Chemistry
- SPH 4C/4U College/University Physics
- TCJ 4C College Construction Engineering Tech
- TDJ 4M College/University Tech Design

TGJ 3M College/University Info & Com Technology  
 TMJ 3C/3E College/Workplace Manufacturing  
 TTJ 3C College Transportation Technology  
 TWJ 3E Workplace Custom Woodworking

TEJ 4M College/University Computer Engineering  
 TGJ 4M College/University Info & Com Tech  
 TMJ 4C/4E College/Workplace Manufacturing  
 TMJ 4M College/University Manufacturing  
 TTA 4C College Transportation Tech Auto Service  
 TTJ 4C College Transportation Technology  
 TWJ 4E Custom Woodworking

**Grade 11 English**

ENG 3E Workplace English  
 ENG 3C College English  
 ENG 3U University English

**Grade 12 English**

ENG4E Workplace English  
 ENG4C College English  
 ENG4U University English  
 OLC4O Literacy Course

**Grade 11 Math**

MEL 3E Workplace Math  
 MBF 3C Foundations for College Mathematics  
 MCF 3M Functions & Applications  
 MCR 3U Functions

**Grade 12 Math**

MEL 4E Workplace Math  
 MCT 4C Math for College Technology  
 MAP 4C Foundations for College Math  
 MHF 4U Advanced Functions  
 MCV 4U Calculus & Vectors  
 MDM4U Data Management

**Grade 11 Science**

SVN 3E Workplace Environmental Science  
 SBI 3C/3U College/University Biology  
 SCH 3U University Chemistry  
 SPH 3U University Physics

**Grade 12 Science**

SPH 4C/4U College/University Physics  
 SBI 4U University Biology  
 SCH 4C/4U College/University Chemistry  
 SNC4E Workplace Science

**Grade 11 Business/Computer Studies**

BDI 3C College Entrepreneurship  
 ICS3C College Intro to Computer Programming  
 ICS3U University Computer Studies

**Grade 12 Business/Computer Studies**

ICS4C College Computer Programming  
 ICS4U University Computer Studies

**Cooperative Education (2 Credits)**

2 Co-op credits in the sector (one additional co-op credit can be substituted for a major credit)

**Six Sector-Recognized Certifications and/or Training Courses/Programs**

| <b>Three (3) compulsory</b>  |                                     |  |  |
|--|-------------------------------------|--|--|
| Cardiopulmonary Resuscitation (CPR) Level C – includes automated external defibrillation (AED) | Standard First Aid                  | Workplace Hazardous Materials Information System (WHMIS) – generic (i.e., not site-specific) instruction |  |
| <b>Three (3) electives from the list below</b>   |                                     |  |  |
| basic electrical safety  | Basic Safety Orientation (BSO Plus) | Canadian Welding Bureau (CWB) – flat   | computer-aided design and computer-aided manufacturing (CAD/CAM) |
| confined space awareness   | customer service                    | elevated work platforms  | fall protection  |
| fire safety and fire extinguisher use  | handling dangerous substances       | health and safety – basic  | hoisting and rigging   |

|                                   |  |                            |  |
|-----------------------------------|--|----------------------------|--|
| leadership skills                 | Lean Manufacturing                           | lockout/tagging            | personal protective equipment – manufacturing  |
| portfolio development             | project management                           | propane safety             | safe lifting   |
| scaffold safety                   | sector-specific vehicle operation and safety | sector-specific software 1 | specialized skills training program/competition (e.g., Skills Canada provincial level) |
| transportation of dangerous goods | Working at Heights                           |                            |  |