

## Specialist High Skills Major

# Manufacturing

2025-2026

### Profile

In Ontario, the manufacturing sector accounts for the greatest number of jobs with its production of consumer and industrial goods that are essential to the province's prosperity. The Specialist High Skills Major Program in Manufacturing at Timiskaming District Secondary School offers the opportunity to explore the many career areas associated with manufacturing. Our experienced staff will provide training by covering topics including design, precision measurement and layout, hand tools and machine tools with a focus on welding and fitting.

### Certifications (6)

#### Compulsory (3):

- CPR level C with AED
- Standard First Aid
- WHMIS

#### Electives (3) (more options at Ontario.ca):

- Personal Protective Equipment - Manufacturing
- Health and Safety - Basic
- Confined Space Awareness
- Basic Electrical Safety
- Powder Actuated Tools
- Safe Lifting
- Hoisting and Rigging
- Fall Protection
- Propane Safety

#### **Other Opportunities:**

- Industry visits
- Community partnerships
- Possible dual credits

### Possible Occupations in the Sector

| Workplace                                         | Apprenticeship                           | College                                                                             | University                                                     |
|---------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Journey Person<br>Boilermaker<br>Machine Operator | Millwright<br>Tool & Die Maker<br>Welder | Welding Technologist<br>Fitter/Fabricator<br>Mechanical Engineering<br>Technologist | Welding Engineer<br>Electrical Engineer<br>Mechanical Engineer |

### Additional Information

- SHSMs are for students in all four pathways: Workplace, Apprenticeship, College, and University.
- Major credits may be offered in school, but additional courses are offered through eLearning and booklet courses.
- You can indicate your interest at [www.myblueprint.ca](http://www.myblueprint.ca) or speak with your Guidance Counsellor.
- There are no extra credits required - the SHSM is obtained within the 30 OSSD credits.
- SHSMs are two-year programs and are made up of Grade 11 and 12 courses.
- There are no additional fees for students to participate in a SHSM.



## Manufacturing SHSM Pathway (Total of 9 credits)

**Please check the Ministry's Master List for more approved courses**

### Grade 11 Courses

### Grade 12 Courses

### Major Credits (4 credits)

**Students can now substitute 3 additional Cooperative Education credits related to their sector in place of 3 major credits**

SCH3U – Chemistry  
 SPH3U – Physics  
 TCJ3C – Construction Engineering Technology  
 TDJ3M – Technological Design  
 TDJ3O – Technological Design and the Environment  
 TMJ3C – Manufacturing Technology  
 TTJ3C – Transportation Technology  
 TTJ3O – Transportation Technology: Vehicle Ownership

SCH4C – Chemistry  
 SCH4U – Chemistry  
 SPH4C – Physics  
 SPH4U – Physics  
 TDJ4M – Technological Design in the Twenty-first Century  
 TDJ4O – Technological Design in the Twenty-first Century  
 TMJ4C – Manufacturing Technology  
 TTJ4C – Transportation Technology

\*Possible Dual Credits  
 TLH4T – Basic Welding

### English (1 credit if Apprenticeship, College, University & 2 credits if Workplace <– 1 must be in gr. 12)

NBE3C – Understanding Contemporary First Nations, Métis, and Inuit Voices  
 NBE3E – Understanding Contemporary First Nations, Métis, and Inuit Voices  
 NBE3U – Understanding Contemporary First Nations, Métis, and Inuit Voices  
 OLC3O – Ontario Secondary School Literacy Course

ENG4C – English  
 ENG4E – English  
 ENG4U – English  
 OLC4O – Ontario Secondary School Literacy Course

### Math (1 credit)

MBF3C – Foundations for College Math  
 MCF3M – Functions and Applications  
 MEL3E – Mathematics for Work and Everyday Life  
 MCR3U – Functions

MAP4C – Foundations for College Mathematics  
 MCT4C – Mathematics for College Technology  
 MDM4U – Data Management  
 MCV4U – Calculus and Vectors  
 MHF4U – Advanced Functions  
 MEL4E – Math for Work and Everyday Life

### Other (1 credit if Apprenticeship, College, University & 0 credits if Workplace)

**Students can substitute 1 additional Cooperative Education credit related to their sector in place of 1 other credit**

BDI3C – Entrepreneurship: The Venture, College (PACE)  
 MEL3E – Mathematics for Work and Everyday Life  
 OLC3O – Ontario Secondary School Literacy Course  
 SBI3C – Biology  
 SBI3U – Biology  
 SCH3U – Chemistry  
 SPH3U – Physics  
 SVN3E – Environmental Science  
 SVN3M – Environmental Science  
 TGJ3O – Communication Technologies: Broadcast and Print Productions

MEL4E – Math for Work and Everyday Life  
 SBI4U – Biology  
 SCH4C – Chemistry  
 SCH4U – Chemistry  
 SNC4M – Science  
 SPH4C – Physics  
 SPH4U – Physics  
 GLE4O – Advanced Learning Strategies  
 GLS4O – Advanced Learning Strategies  
 OLC4O – Ontario Secondary School Literacy Course

### Cooperative Education (2 credits taken in grade 11 OR 12) Summer co-op available.

# Specialist High Skills Major Manufacturing

Student Name: \_\_\_\_\_

Year of graduation: \_\_\_\_\_

Pathway of interest:

☐ Apprenticeship      ☐ College      ☐ University      ☐ Workplace

|                                                                                                                                                                           |                                                   |                                                                                                                                                |                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Certifications (Mandatory*):</b><br><input type="checkbox"/> *Standard First Aid<br><input type="checkbox"/> *CPR Training<br><input type="checkbox"/> *WHMIS Training | <b>Date Completed:</b><br>_____<br>_____<br>_____ | <b>3 Sector Specific Certifications:</b><br><input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____ | <b>Date Completed:</b><br>_____<br>_____<br>_____ |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|

| Pathway                                                                                                                                                                        | Apprenticeship                                                                                                                                                                                              | College                                                                                                                              | University                                                                                                                           | Workplace                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>4 Major Credits:</b><br><br>New: <b>Students can now substitute 3 additional Cooperative Education credits related to their sector in place of 3 major credits</b>          | <input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____                                                                        | <input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____ | <input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____ | <input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____<br><input type="checkbox"/> _____ |
|                                                                                                                                                                                | <input type="checkbox"/> 1 extra sector-related coop credit _____<br><input type="checkbox"/> 1 extra sector-related coop credit _____<br><input type="checkbox"/> 1 extra sector-related coop credit _____ |                                                                                                                                      |                                                                                                                                      |                                                                                                                                      |
| <b>1 English:</b><br><br><b>(2 credits if Workplace. 1 must be in grade 12)</b>                                                                                                | <input type="checkbox"/> _____<br><input type="checkbox"/> _____                                                                                                                                            | <input type="checkbox"/> _____<br><input type="checkbox"/> _____                                                                     | <input type="checkbox"/> _____<br><input type="checkbox"/> _____                                                                     | <input type="checkbox"/> _____<br><input type="checkbox"/> _____                                                                     |
| <b>1 Math:</b>                                                                                                                                                                 | <input type="checkbox"/> _____                                                                                                                                                                              | <input type="checkbox"/> _____                                                                                                       | <input type="checkbox"/> _____                                                                                                       | <input type="checkbox"/> _____                                                                                                       |
| <b>1 Other Required Credit (unless Workplace):</b><br><br>Students can substitute 1 additional Cooperative Education credit related to their sector in place of 1 other credit | <input type="checkbox"/> _____                                                                                                                                                                              | <input type="checkbox"/> _____                                                                                                       | <input type="checkbox"/> _____                                                                                                       | <input type="checkbox"/> _____                                                                                                       |
|                                                                                                                                                                                | <input type="checkbox"/> 1 extra sector-related coop credit _____                                                                                                                                           |                                                                                                                                      |                                                                                                                                      |                                                                                                                                      |
| <b>2 Sector Related Cooperative Education Credits:</b>                                                                                                                         | <input type="checkbox"/> Coop _____<br><input type="checkbox"/> Coop _____                                                                                                                                  | <input type="checkbox"/> Coop _____<br><input type="checkbox"/> Coop _____                                                           | <input type="checkbox"/> Coop _____<br><input type="checkbox"/> Coop _____                                                           | <input type="checkbox"/> Coop _____<br><input type="checkbox"/> Coop _____                                                           |

**Minimum 1 Experiential Learning, 1 Reach Ahead Experience & 1 Sector-Partner Experience:**

☐ Experiential: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Reach Ahead: \_\_\_\_\_ Date: \_\_\_\_\_

☐ SPE: \_\_\_\_\_ Date: \_\_\_\_\_