

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 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
Motor Vehicle Assembler Machine Operator Foundry Worker	Millwright Tool and Die Maker Welder	Drafting Technologist Instrumentation Technician Mechanical Engineering Technologist	Chemical Engineer Electrical Engineer 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 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; 1 must be from each gr. 11 & 12)

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

ICS3C – Introduction to Computer Programming, College
 ICS3U – Introduction to Computer Science
 SCH3U – Chemistry
 SPH3U – Physics
 TCJ3E – Construction Technology
 TCJ3C – Construction Engineering Technology
 TEJ3M – Computer Engineering Technology
 TGJ3M – Communication Technologies: Broadcast and Print Productions
 TGJ3O – Communication Technologies: Broadcast and Print Productions
 TMJ3C – Manufacturing Technology
 TMJ3E – Manufacturing Technology
 TMJ3M – Manufacturing Engineering Technology
 TTJ3C – Transportation Technology
 TMJ3E – Manufacturing Technology
 TMY3C – Manufacturing Technology: Welding Technician

ICS4C – Computer Programming
 ICS4U – Computer Science
 SCH4C – Chemistry
 SCH4U – Chemistry
 SPH4C – Physics
 SPH4U – Physics
 TCJ4C – Construction Engineering Technology
 TEJ4M – Computer Engineering Technology
 TGJ4M – Communication Technologies: Digital Imagery and Web Design
 TMJ4C – Manufacturing Technology
 TMJ4E – Manufacturing Technology
 TMJ4M – Manufacturing Engineering Technology
 TMY4C – Manufacturing Technology: Welding Technician
 TTJ4E – Transportation Technology: Vehicle Maintenance
 TTJ4C – Transportation Technology

Possible Dual Credits
 TLA4Y – Welding Level 1
 TAF4T – AutoCAD
 TRC4Y – Millwright Level 1

English (1 credit for Apprenticeship, College, University & 2 credits for 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

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)

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

ICS3C – Introduction to Computer Programming
 ICS3U – Introduction to Computer Science
 SBI3C – Biology
 SBI3U – Biology
 SCH3U – Chemistry
 SPH3U – Physics
 SVN3E – Environmental Science
 SVN3M – Environmental Science
 TGJ3O – Communication Technologies: Broadcast and Print Productions

ICS4C – Computer Programming
 ICS4U – Computer Science
 SBI4U – Biology
 SCH4C – Chemistry
 SCH4U – Chemistry
 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

Certifications (Mandatory*): ☐ *Standard First Aid ☐ *CPR Training ☐ *WHMIS Training	Date Completed: _____ _____ _____	3 Sector Specific Certifications: ☐ _____ ☐ _____ ☐ _____	Date Completed: _____ _____ _____
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Pathway	Apprenticeship	College	University	Workplace
4 Major Credits: New: Students can now substitute 3 additional Cooperative Education credits related to their sector in place of 3 major credits	☐ _____ ☐ _____ ☐ _____ ☐ _____	☐ _____ ☐ _____ ☐ _____ ☐ _____	☐ _____ ☐ _____ ☐ _____ ☐ _____	☐ _____ ☐ _____ ☐ _____ ☐ _____
	☐ 1 extra sector-related coop credit _____ ☐ 1 extra sector-related coop credit _____ ☐ 1 extra sector-related coop credit _____			
1 English: (2 credits if Workplace. 1 must be in grade 12)	☐ _____ ☐ _____	☐ _____ ☐ _____	☐ _____ ☐ _____	☐ _____ ☐ _____
1 Math:	☐ _____	☐ _____	☐ _____	☐ _____
1 Other Required Credit (unless Workplace): Students can substitute 1 additional Cooperative Education credit related to their sector in place of 1 other credit	☐ _____	☐ _____	☐ _____	☐ _____
	☐ 1 extra sector-related coop credit _____			
2 Sector Related Cooperative Education Credits:	☐ Coop _____ ☐ Coop _____	☐ Coop _____ ☐ Coop _____	☐ Coop _____ ☐ Coop _____	☐ Coop _____ ☐ Coop _____

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

☐ Experiential: _____ Date: _____

☐ Reach Ahead: _____ Date: _____

☐ SPE: _____ Date: _____