

# ENGINEERING, MANUFACTURING & ROBOTICS

**Oakville Trafalgar  
High School**

## PROGRAM OVERVIEW

The manufacturing sector, with its production of consumer and industrial goods, accounts for the greatest number of jobs in Ontario. Automobiles, petroleum, electricity, iron and steel mills, and primary and fabricated metal products are all aspects of the manufacturing sector. Ontario's manufacturing industry generates \$270 billion in annual sales and accounts for 18% of the province's GDP, employing over 12% of Ontario's total workforce. The SHSM in manufacturing provides students with a strong foundation for a wide variety of careers in the manufacturing sector. The different components of the program will provide students the opportunity to gain qualifications, develop transferable and trade specific skills, and learn about various options in this large employment sector. Oakville Trafalgar High School offers the manufacturing program with a focus on robotics / computer technology.

### Experiential Learning Opportunities

- Trips to various organizations such as manufacturing facilities or welding fabricators
- Presentations related to different careers within the sector
- Complete 2 Cooperative Education credits
- Design and develop a construction project
- Fabricate a variety of structures
- Tour of a range of manufacturing enterprises
- Participate in Skills Canada competition

### Related Careers

- Instrumentation and Controls Technician
- Machinist
- Manufacturing Engineer
- Metal Fabricator
- Millwright (Industrial Mechanic)
- Production Worker
- Quality Process Engineer
- Robotics Engineer
- Welder
- ...and more

### Certifications & Training

- CPR Level C / AED Training & Standard First Aid
- WHMIS
- Canadian Welding Bureau (flat)
- CAD / CAM
- Fire Safety & Fire Extinguisher Use
- Health & Safety (basic)
- Hoisting & Rigging
- Leadership Skills
- Working at Heights
- ...and more

# CREDITS

## Course Package

Each SHSM program offers students a bundle of 8 - 10 credits. These courses are regular Ontario secondary school courses that allow students to work towards their Ontario Secondary School Diploma, but have been bundled as the most relevant courses to prepare students for a future in the manufacturing sector.

### The Bundle Includes:

- **4 “major” credits** in manufacturing, robotics and engineering (dependent on pathway)
- **Supporting credits**, which include Contextualized Learning Activities (opportunities for students to learn the subject in the context of the manufacturing sector):
  - > 1/2 Grade 12 English credit
  - > 1 Grade 11 Math credit
  - > 1 Grade 11 or 12 Science credit depending on pathway
  - > 2 Cooperative Education credits to experience life in the manufacturing sector

### Applying to the Manufacturing SHSM:

All students in Halton are able to attend the Manufacturing SHSM at Oakville Trafalgar High School in grade 11 and grade 12. Each student’s goals will be assessed and course selection will be determined based on their needs.

### If you want to learn more about this program:

- Check out the Manufacturing SHSM at **haltonpathways.ca**
- Visit **myblueprint.ca/halton**
- Talk to Chuck Woods or Andrew Palmer
- Come to a Pathways Planning Information Evening (see haltonpathways.ca for dates and times)

## CONTACT

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