SPECIALIST HIGH SKILLS MAJOR SHSM Ontario.ca/SHSM

haltonpathways.ca M.M. Robinson High School

ArcelorMittal Dofasco Advanced Manufacturing Engineering & Robotics Program

Program Overview:

Advanced Manufacturing makes extensive use of sophisticated design technologies, high-precision and innovative manufacturing methods and a vast array of computer engineering and control methods. This industry requires a high-performance, highly skilled workforce.

This program connects traditionally to separate areas of study in Technological Design, Computer Studies and Manufacturing Technology to better prepare students to take advantage of the opportunities available to them in this new and highly diverse field.

Students will develop skills in:

- Controls and Automation (Robotics)
- Design, Print Reading, Computer Aided Drawing and 3D Printing
- Conventional and Computer Aided Manufacturing, working with Industry Relevant Software
- Applied Engineering relevant to the Advanced Manufacturing Industry (STEM)
- Innovation, Creativity and Entrepreneurship (ICE)
- Teamwork, Problem Solving and Communication

Course Package

- 4 Advanced Manufacturing credits
- 1 Physics credit (depending on exit destination)
- 1-2 English credits (depending on exit destination)
- 1 Math credit (depending on exit destination)
- 2 Co-op credits in the Advanced Manufacturing sector

The program includes the following areas of study:

- Print Reading and Drawing Skills
- Design Process
- Computer Aided Design (CAD)
- 3D Printing
- Computer Numerical Control (CNC) Programming
- Quality Control/Metrology
- Hand Tools/Precision Layout
- Conventional Machining
- CNC Machining CAM
- Math and Science for Advanced Manufacturing
- Programmable Logic Controls
- Pneumatics/Hydraulics
- Electricity

Who Would be Interested in the Program?

Students receive opportunities through job shadowing, coop placements and experiential field trips to understand and appreciate all careers in the Manufacturing/Engineering Sector. Some careers in the Manufacturing/ Engineering Sector include:

- Industrial Engineer/Technician/ Technologist
- Precision Machinist CNC
- Robotics Engineer/Technician/Technologist
- Electrical Engineer/Technician/Technologist
- Mechanical Engineer Technician/Technologist
- Design Technician/Technologist
- Quality Control Engineer/Technician/Technologist
- Tool and Die Maker
- Industrial Electrician
- Industrial Mechanic/Millwright
- CNC Programmer/Operator
- Instrumentation & Control Technician

Program Delivery Schedule:

All students in in the Halton District School Board are able to attend this Manufacturing\Engineering SHSM at M.M. Robinson High School in grade 11 (first semester) and in grade 12 (second semester). This format will allow students who are delaying their OSSD to complete the course in one school year.

Application Details and Contact Information:

For more detailed program information contact the program facilitator David Hammel at **hammeld@hdsb.ca**.

To begin the registration process, please visit: **myblueprint.ca/halton**