

# MECHANICAL TECHNICIAN - MANUFACTURING/MACHINING (MMTN)

## Ontario College Diploma | 4 semesters | Barrydowne Campus

Prepare for a career in the machine trades in the manufacturing sector by learning to design and fabricate a variety of metal parts required to build and maintain industrial equipment and tools. You'll gain knowledge in 3D design, manufacturing, jigs/fixtures for custom production, and computer-integrated manufacturing processes. You will also develop a high level of skill in the operation of CNC equipment and the related software used to manufacture components through hands-on training on modern, complex machining equipment.

### 4D Learning Opportunities

Ontario Technological Skills Competition - there are opportunities for select students to compete in this provincial competition against other college students and apprentices.

### Optional Paid Co-op

Our program features an optional, paid co-op directly related to your program of study. During this work-integrated learning experience, you'll apply your skills and knowledge in an actual work environment, giving you industry training that you can showcase to potential employers when you graduate.

You will be required to complete work preparation sessions prior to the work term to help you develop an industry-specific resume and effective interviewing skills. Cambrian's Career Centre (<https://cambriancollege.ca/campus-life/career-centre/>) will support you through this process and will also help you to source and apply for placement opportunities.

International students: Study permits prohibit international students from participating in optional co-ops. However, if you are an international student and are interested in work-integrated learning opportunities, visit Cambrian's Career Centre (<https://cambriancollege.ca/campuslife/career-centre/>) to discuss available options with a career advisor. Opportunities may include volunteer positions or part-time or full-time jobs during academic breaks and/or during the academic year.

### Quick Links

How to Apply (<http://cambriancollege.ca/apply/>)

Skills and Trades Training (<http://cambriancollege.ca/field-of-study/skills-and-trades-training/>)

### Program highlights

- 2 years - 4 semesters
- Upon successful completion of our program, your diploma equates to the three levels of theory required towards your apprenticeship Certificate of Qualification.
- Opportunities to participate in applied research projects with industry partners

- 60% of the program in hands-on training in a manufacturing lab on modern, industry-standard equipment
- Training on industrial 3D design and manufacturing software

### Program of study for 2024-25 Academic Year

Students are required to successfully complete an online Lab Safety course (in Moodle) when starting their program at Cambrian. This course must be completed prior to entering the labs (as identified in the table below) in the Schools of Skills Training, Engineering Technology and Environmental Studies.

Students are required to successfully complete an online Lab Safety course (in Moodle) when starting their program at Cambrian. This course must be completed prior to entering the labs (as identified in the table below) in the Schools of Skills Training, Engineering Technology and Environmental Studies.

Semester 1		Credits
TEM 1001	Trade Calculations I	2
TEM 1004	Mechanical Drawings Lab	2
TEM 1005	Workshop Technology I <sup>1</sup>	10
MTM 1000	Machine Practices I	2
TEM 1100	Information Technology	2
ENG 1002	College Communications	3
<b>Credits</b>		<b>21</b>
Semester 2		
TEM 1103	Workshop Technology II <sup>1</sup>	10
TEM 1104	Trade Calculations II	2
TEM 1108	Programming/Operations I <sup>1</sup>	2
TEM 1200	Machining Practices II	2
TEM 1210	Mechanical Drawings II	2
One General Education course. <sup>2</sup>		3
<b>Credits</b>		<b>21</b>
Semester 3		
MTM 1001	Programming/Operations II Lab <sup>1</sup>	3
MTM 1002	Workshop Technology III <sup>1</sup>	9
MTM 2325	Machining Operations	2
MTM 2330	Jigs and Fixtures	2
MTM 2335	Design and Calculations	2
ENG 1780	Applied Communication II	2
One General Education course. <sup>2</sup>		3
<b>Credits</b>		<b>23</b>
Semester 4		
MTM 1003	Manufacturing Processes <sup>1</sup>	3
MTM 2420	CAD Lab	3
MTM 1004	Manufacturing/Machining Lab <sup>1</sup>	9
One General Education course. <sup>2</sup>		3
<b>Credits</b>		<b>18</b>
<b>Total Credits</b>		<b>83</b>

<sup>1</sup> Course with Lab component.

<sup>2</sup> For more information regarding General Education courses, click here (<https://cambriancollege.ca/general-education-electives/>).

## Admission requirements

For graduates of the new curriculum (OSS): Ontario Secondary School Diploma (30 credits) or equivalent or mature student status, including:

- Any grade 12 English (C) or (U)
- Any grade 11 mathematics (C), (U), or (M)

## Program delivery

**2024-2025**

**Fall term start**

SEMESTER 1: Winter 2025

SEMESTER 2: Spring 2025

SEMESTER 3: Fall 2025

SEMESTER 4: Winter 2026

## Specific program pathways

### College/university degree opportunities

Graduates from this program may continue their studies at college/university and may receive credit for their prior College education.

Refer to College/University Agreements (<https://cambriancollege.ca/supports-services/articulation-agreements/>) for further information.

## Employment opportunities

Graduates are prepared for employment opportunities as:

- Machinists
- CNC programmers
- Tool and die makers
- Mold makers
- Machine operators
- CNC machinists
- Entry level CAD designers

## Contacts

**Darrell Clarke**

Chair, School of Skills Training

705-566-8101, ext 7940

darrell.clarke@cambriancollege.ca