

MECHANICAL ENGINEERING TECHNOLOGY (METY)

Put your ideas into action by honing mechanical engineering technology skills.

From automotive to aerospace, from biomedical to power, the possibilities for a rewarding career in mechanical engineering technology are endless. By designing, testing, fabricating, and constructing various types of mechanical devices, you'll be the wizard behind the curtain who puts your mechanical design ideas into action for any kind of industry.

Using programs like AutoCAD and SolidWorks, you'll develop components in 2D and 3D and then take your designs a step further by producing them in our on-campus labs via additive and subtractive manufacturing techniques. You'll get the chance to work on real community and applied research projects in labs that are equipped with state-of-the-art, advanced manufacturing equipment. In your third year, you will expand your knowledge of design, quality assurance, manufacturing processes, and project management to ensure that you are career-ready.

Program highlights

- Computer-aided design (CAD) tools like AutoCAD and SolidWorks
- Explore 3D printing and CNC machining processes
- Real-world community and applied research projects in state-of-the-art labs
- Independent research project in final semester will round out technical writing and presentation skills
- Common first and second year with Cambrian's Mechanical Engineering Technician program
- Learn with students from across northern Ontario in year 3
- Careers available in variety of industries including mining, health care, manufacturing, and more
- Option for grads to study at university for as little as one more year after graduation and attain a Bachelor of Engineering degree (B.Eng.)

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.

Semester 1		Credits
ENG 1002	College Communications	3
MEC 1003	Engineering Materials	3
MTH 1050	Algebra I	3
PHY 1112	Physical Principles I ¹	4
MEC 1002	Introduction to Metrology and Geometric Dimensioning	3
CAD 1001	Engineering Graphics	3
One General Education Course. ²		3
Credits		22
Semester 2		
ENG 1754	Technical Communication	3
MTH 1250	Algebra II	3

PHY 1212	Physical Principles II	3
MCH 1207	Fluid Mechanics	4
MCH 1165	Industrial Design I ¹	3
CAD 1003	Solid Modeling ¹	3
MCH 1153	Mechanical Lab I ¹	3
Credits		22

Semester 3		
MTH 2325	Technical Math III	3
MTH 2332	Applied Calculus	3
MCH 1301	Dynamics of Machines	3
MCH 1303	Strength of Materials	5
MCH 1365	Industrial Design II ¹	3
ELC 1013	Electrical Fundamentals	4
One General Education Course. ²		3
Credits		24

Semester 4		
CAD 1004	Advanced Solid Modelling ¹	4
INT 1001	Instrumentation I	3
MCH 1002	Thermodynamics	3
MCH 1401	Advanced Structural Design	4
MCH 1402	Materials and Processes	3
MCH 1410	Codes and Standards	3
One General Education Course. ²		3
Credits		23

Semester 5		
MCH 1215	Engineering Operations Management	4
MCH 1103	Advanced Dynamics	3
MTH 1180	Advanced Calculus	4
MCH 1225	Advanced Fluid Mechanics	3
MCH 1160	Mechanical Lab I ¹	2
RES 1100	Research Project I ¹	3
Credits		19

Semester 6		
MCH 1230	Metrology and Quality Control	3
MCH 1220	Advanced Strength of Materials	3
MCH 1113	Advanced Dynamics of Machines	3
MCH 1150	Machine Design	3
ENE 1101	Applied Thermodynamics and Heat Transfer	2
MCH 1161	Mechanical Design Lab II ¹	3
RES 1200	Research Project II ¹	4
Credits		21

Total Credits **131**

¹ Course with Lab Component

² For more information regarding General Education courses, click here (<https://cambriancollege.ca/general-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 12 mathematics (C) or (U) (MCT4C is highly recommended)

Additional admission requirements

Recommendations

- Any grade 12 physics (C) or (U)
- Computer competency in relevant software

Program delivery

2024-2025

Fall term start

SEMESTER 1: Fall 2024

SEMESTER 2: Winter 2025

SEMESTER 3: Fall 2025

SEMESTER 4: Winter 2026

SEMESTER 5: Fall 2026

SEMESTER 6: Winter 2027

Specific program pathways

College or university degree opportunities

If you are a graduate of this program, you may continue your studies at a college or university and you may receive credit(s) for your prior college education. Refer to Cambrian's college and university agreement (<https://cambriancollege.ca/supports-services/articulation-agreements/>) details for further information.

Employment opportunities

Graduates may find employment in areas such as:

- Consulting engineering firms
- Manufacturing companies
- Resource industries
- Mechanical designer
- Sales representative
- Government departments

Contacts

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INTERNATIONAL ADMISSIONS

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