

Mechanical Engineering Technology (Advanced Diploma)



Meet our students

Our students build a strong foundation of mechanical engineering knowledge in their first two years of study. In their third year, they are exposed to more specialized subjects such as mechanical design, mechanics of machines, HVAC, programmable controllers, energy systems and additive manufacturing and robotics. The theory and skills learned through this program prepare our students for the workplace upon graduation. Graduates will have also completed all the academic requirements for personal certification with OACETT.

Learn more about the classes these students take by visiting [the program webpage](#).

Core competencies and skills

- Applying business principles to design and engineering practices.
- Planning, implementing, and evaluating projects using project management principles, analytical skills, and problem-solving.
- Using current and emerging technologies to design, implement and maintain mechanical engineering projects, including HVAC systems.
- Implementing Computer-Assisted Design in two and three dimensions (AutoCAD, SolidWorks), combined with part prototyping using Additive Manufacturing.
- Applying software and programming in the solution of real-world problems.
- Designing and fabricating mechanical systems using CNC software (AutoCAD NC).
- Demonstrating communication, collaboration, and interpersonal skills in the workplace.

- Developing and applying engineering sustainability best practices in design and in the workplace.

Work term availability

- Winter (January – April)
- Summer (May – August)
- Fall (September – December)

Note: Some students will be available for an 8-month work term from September – April.

Work term capabilities

- Analyzing and solving mechanical problems by applying mathematics and fundamentals of mechanical engineering.
- Preparing mechanical engineering drawings and technical documents.
- Designing, analyzing, manufacturing, and maintaining mechanical components.
- Preparing and examining metallurgical specimens.
- Operating shop equipment - including hand, machine, and cutting tools.
- Producing control diagrams for HVAC units, and equipment layout for a HVAC plant.
- Producing equipment layout and flow diagrams for a manufacturing plant.
- Selecting and recommending hydraulic equipment and components.
- Testing automatic control equipment.
- Implementing additive manufacturing and basic robotic principles in the workplace.
- Energy accounting, costing, and balancing.
- Applying QA techniques for standard inspection.

Employer resources

- [Employer webpage](#)
- [Program information](#)
- [Program course schedule](#)

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