

Mechanical Engineering Technology – Design (Advanced Diploma)



Meet our students

Our students build a strong foundation in mechanical engineering and develop a unique skillset that transfers seamlessly into the workplace. In Year 3, students learn more specialized subjects such as mechanical design and simulation, kinematics, building facilities layout, HVAC, sustainable design, and design analysis. 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

- Designing using AutoCAD, SolidWorks, Autodesk Inventor, CATIA and 3ds Max.
- Reading blueprints, producing drawings, and sketching/expressing conceptual ideas.
- Applying mathematical, analytical skills and sustainability to design products.
- Generating NC codes using Mastercam, setup and operate CNC.
- Applying business principles to design and engineering practices.
- Planning, implementing, and evaluating projects by applying project management principles.
- Using current and emerging technologies to implement mechanical engineering projects.
- Designing and analyzing mechanical components, processes, and systems.
- Writing codes integrating Artificial Intelligence in engineering design

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

- Calculating areas, volumes, weights, quantities, velocity, acceleration of machine components, mechanisms, and linkages.
- Designing, detailing, and analyzing mechanical components and preparing mechanical engineering drawings and technical documents.
- Preparing drawings and plans of process piping, elevations, isometric spools, and equipment.
- Planning for CAD execution using techniques and system manipulation.
- Providing client support for the dealers of CAD systems and the CAD industry including demonstrations, machine set-up and sales.
- Writing reports (including lab reports), requisitions, purchase orders and estimate forms.
- Developing programs to calculate or design machine parts and simulate mechanical components.
- Analyzing and selecting different bearing types and other machine components.
- Applying QA techniques for standard inspection.
- Calculating heating/cooling loads and produce control diagram for a HVAC unit, and equipment layout for a HVAC plant.
- Programing, setting up and operating CNC, 3D printers, laser cutters and other machine tools in shop.

Employer resources

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

Post a job

To post a job, log in to our online platform [Sheridan Works](#).

Don't have an account? Create one today using our [Employer Registration Guide](#).