

Mechatronics and Advanced Manufacturing Technology

Mechatronics is a multidisciplinary field of science that includes a combination of mechanical engineering, electronics, computer engineering, telecommunications engineering, systems engineering and control engineering.

IN THIS SECTION

- Mechatronics and Advanced Manufacturing Technology: Diploma

STUDENT PROFILE

The types of students likely to be successful in this field of study include:

- High school graduates
- Undergraduate students and graduates seeking competitive and marketable skills as technicians in the fields of Biotechnology, Distribution, Transportation & Logistics, Energy, Mining, Forestry, Autonomous Vehicles, Aerospace, National Security and Defense, etc.
- Trades Red Seal graduates who want to enhance their skillset.
- Trades students seeking an alternative to an apprenticeship and Red Seal certification.
- Students in theoretical programs such as physics, mechatronics, engineering, or other fields where a grounding in applied practice is an advantage.
- Individuals interested in skilled trades or the Siemens Mechatronic Systems Certification.
- Individuals transitioning into advanced manufacturing and mechatronics from other sectors.
- Mature, working professionals interested in career-enhancing studies.
- International students seeking to augment their credentials with Canadian-based curriculum and a globally recognized certification - Siemens Mechatronic Systems Certification.
- Science and Engineering students who want to augment their expertise with mechanical, process, and electrical experience.
- Design students who are seeking a means to create and produce the items they design.
- Technology students who are seeking to extend their computer-based expertise (e.g. CADD) into practical and applied realms.

CAREER OPPORTUNITIES

Graduates of the Mechatronics and Advanced Manufacturing Technology program will be employable across a wide range of industries such as manufacturing, green technology, biotechnology, energy, transportation, telecommunications, autonomous vehicles, medical technology, building technology, agriculture, aerospace and national security and defense.

Examples of job categories include:

- Controls Technologist
- Customer Service Technician
- Electrical Maintenance Technician
- Electro-Mechanical Technician
- Facilities Operators Field Service Technician
- Industrial Engineering Technician
- Maintenance Technician

- Manufacturing Process Technician
- Material Engineers Mechatronics
- Technologist Mine Engineering Technician
- Plant Engineering Systems Technician
- Production Operators Service and Installation Technician

The Mechatronics and Advanced Manufacturing Technology program also provides skills and theoretical training to meet the occupational duties and requirements as described in the following National Occupational Classifications (NOC):

- NOC 2241 Electrical and Electronics Engineering Technologists and Technicians
- NOC 7311 Construction Millwrights and Industrial Mechanics
- NOC 2243 Industrial Instrument Technicians and Mechanics
- NOC 7242 Industrial Electricians .

Note that some of the above occupations may require work experience and additional training beyond an undergraduate diploma.