Mechatronics
Ontario College Graduate Certificate (3 semesters)

**START IN JANUARY 2021**
- Classes begin: January 11, 2021
- Offered at: Sutherland Campus
- Program code: MTY
- Tuition (Domestic): $3,059.74*
- Tuition (International): $9,189.76*

* Tuition and fees subject to change.

**PROGRAM COORDINATOR**
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The only post-graduate program of its kind in Ontario, Mechatronics is a unique interdisciplinary engineering program that provides you with a fast-track to a sought-after credential.

Each student is strongly recommended to have their own personal computer for course work with an internet connection. The recommended computer should be an Intel Core i5 or AMD Ryzen 5, 8GB memory and 250GB storage, with Windows 10 operating system. SSD provides better performance than HDD.

An integral or external webcam and microphone for video conferencing is also recommended.

**Program Highlights**
Mechatronics is a three-semester program focused on advanced manufacturing, industrial automation, electronics engineering, and computer programming. This is the first graduate certificate in Ontario that fully represents this interdisciplinary field.

You will develop your skills through hands-on learning. The program includes a comprehensive real-world applied project, several leading-edge lab courses, and Agile and Lean project management training. Applied research concepts and related skills are part of the curriculum, and you will have the opportunity to participate in applied research projects.

**Why are these skills in demand?**
As technology and automation continue to advance, there is a growing, and projected, need for graduates with this combined level of skill and knowledge for high-level process control, advanced manufacturing, automation and robotics.

**Why Choose Fleming**
There are no other colleges in Ontario that combine these fields of study in one post-grad program. You will benefit from our established reputation in related fields of study, as well as strong support from our industry partners. Our state-of-the-art facilities feature the latest software, and leading-edge technology to ensure you will graduate with an advantage.
Experiential Learning
The program features a comprehensive applied project in the second and third semesters. The applied project allows you to interact with industry partners, building your collaboration and communication skills at the same time as gaining real-world experience and knowledge in your area of study. You will also have opportunities within the program to contribute to applied research – embedded within the curriculum and through external partnerships.

Career Opportunities
The options for careers in the field are varied across both the private and public sector, and include:

» Mechatronics Technologist
» Automation Technologist
» Control Engineering Technologist
» Advanced Manufacturing Technologist
» Robotics Systems Technologist
» Electronics Engineering Technologist
» Mechanical Designer Technologist
» Nuclear Engineering Technologist
» Process Control Equipment Technologist

Minimum Admission Requirements
Students applying to Mechatronics must meet the following requirements:

» Completion of an Ontario College Diploma, Ontario College Advanced Diploma, Degree or equivalent in Electrical Engineering, Mechanical Engineering, Computer Engineering, or related field.
» Successful completion of a Differential and Integral Calculus course or equivalent is required.

IMPORTANT NOTICE
New admission requirements effective September 2021.
Students applying to Mechatronics must meet the following requirements:

Completion of an Ontario College Diploma, Ontario College Advanced Diploma, Degree or equivalent in Electrical Engineering, Mechanical Engineering or related field.
Successful completion of a Differential and Integral Calculus course or equivalent is required.

Courses and Descriptions
Semester 1

Agile and LEAN Project Management  
MGMT 292  Hours: 45

CAD and Rapid Prototyping  
COMP 586  Hours: 60

Computer Programming  
COMP 585  Hours: 45

Machine Design for Robotics  
AUTM 71  Hours: 45

Math for Technology III  
MATH 98  Hours: 45

Mechatronics I  
MECH 339  Hours: 60

Semester 2

Applied Project I (MTY)  
APST 164  Hours: 120

Electro Pneumatic  
AUTM 72  Hours: 45

Industrial Control Systems  
ELCT 139  Hours: 45

Mechatronics II  
MECH 340  Hours: 60

SCADA/HMI  
COMP 587  Hours: 60

Semester 3

Advanced Manufacturing Processes  
MECH 342  Hours: 45

Applied Project II (MTY)  
APST 165  Hours: 120

Industrial Networking  
ELCT 140  Hours: 45

Introduction to Machine Learning, AI & IOT  
COMP 588  Hours: 45

Mechatronics III  
MECH 341  Hours: 60