



## Overview

Ever wonder what it takes to keep complex industrial processes running? Today there are process measurement and control system techniques that ensure precise product consistency and reliability.

Confederation College's Instrumentation Engineering Technician – Process Automation and Control two-year program will provide you with a solid footing in both theory and practice in a modern, cutting-edge laboratory designed to emulate common control systems found in industry. Through coursework, you'll learn the basics of electrical, digital, electronics, computer systems, industrial drawings & specifications, physics, computer software and communications for technology. Our lab features functioning processes employing pneumatic as well as modern microprocessor-based electronic control equipment such as PLC's, Distributed Control Systems, and field networks.



### Top Highlights

- Learn how to install, calibrate, maintain and repair complex measurement and control systems used in a variety of process control applications
- Two optional co-op work placements give you experience in the field
- Option to apply for the 3rd year Electrical Engineering Technology program after graduation
- Continue on to a university degree through articulation agreements



### Learner Testimonial

After over 25 years as a labourer, my employment opportunities were limited. I am happy I made the decision to go to Confederation College and obtain an Instrumentation Engineering Technician diploma. From the start, all of the College staff were very supportive and encouraging. On completion of my course studies, all of my classmates and I secured employment related to our studies.

Eric N. / Alumnus / Instrumentation Engineering Technician / 2011

# Instrumentation Engineering Technician - Process Automation and Control

## Admission Requirements

- Ontario Secondary School Diploma (or equivalent) with courses from the College (C), University (U), University/College (U/C), or Open (O) preparation levels with Grade 12 English (C/U) Level.
- or successful completion of the Mature Student Assessment.
- or successful completion of the General Education Development Test (GED).
- or appropriate credits from the Academic and Career Entrance program (ACE).

## Other Courses Required

- Grade 11 MCF3M Functions and Applications, or MCR3U Functions, or Grade 12 MAP4C Foundations for College Math or MCT4C Mathematics for College Technology or University Preparation.

## Alternative Pathways

If you do not meet the entrance requirements, we encourage you to apply for the Pre-Technology program-Technology/Aviation to facilitate success in your technology path.

## Employment Opportunities

Instrumentation engineering technician's commission, install, calibrate, maintain and repair complex measurement and control systems used in a variety of process control applications. Opportunities exist in the pulp and paper, mining, chemical, petroleum, steel and manufacturing industries; fresh water and waste water management; grain trade; nuclear and thermal generation; biomedical equipment manufacturers; and sales and technical service of instrumentation equipment.

## Articulation Agreements

Confederation College has agreements in place that permit credits earned throughout this program to be transferred to programs at other colleges and universities.

Visit: [confederationcollege.ca/articulation-agreements](https://confederationcollege.ca/articulation-agreements) for more information.

## First Semester

MA 133	Mathematics I
EL 161	Electrical I
EL 167	Electronics I
EL 165	Digital I
EL 166	Computer Systems
CS 007	Persuasive Writing
GE	General Elective
MC 165	Microsoft Office

## Second Semester

MA 231	Mathematics II
EL 267	Electronics II
EL 261	Electrical II
EL 269	Introduction to CAD
EL 268	Health and Safety Regulations
PH 210	Physics
CS 219	Communications for Technology

Select one of the following:

SY 066	Sociology of Community: The Indigenous Context
LV 100	History of Indigenous Relations

## Third Semester

EL 365	Digital II
EL 305	Industrial Electronics I
IT 345	Field Instrumentation
IT 346	Practical Instrumentation I
IT 347	Final Control Elements
MA 331	Mathematics III
EL 362	Computer Software I
GE	General Elective

## Fourth Semester

EL 307	Industrial Data Networks
EL 405	Industrial Electronics II
EL 406	Embedded Control Systems
EL 431	Automation Control Systems I
EL 611	Professional Practice and Law
EL 612	Quality Assurance
IT 445	Process Control Applications
IT 446	Practical Instrumentation II

**For information, please contact:**

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