

## Electrical Engineering Technology

A Three-Year Ontario College Advanced Diploma  
with Co-operative Education Endorsement

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## The Program

Using a combination of theory and practical labs involving electrical and electronic components, students gain knowledge used in the design and maintenance of electrical systems, automated systems and controls.

## Outcomes

Graduates of this program are very versatile and may work in an engineering design office of manufacturers of automated equipment or in the plant engineering departments of process industries such as steel, paper, plastic and chemical. They also work for power utilities and with computer and instrumentation manufacturers. While they generally work in design, they also work in technical sales, maintenance and supervision.

## Content

Students study circuits, electricity, computer applications, networking and telecommunications systems, robotics, PLC's and controls as well as manufacturing systems technologies, electrical drafting CAD, power generation, electrical instrumentation and project management. Students will develop an expertise in project development, design, automation and management of electrical systems, machines and electrical distribution and renewable energy systems.

## Why Should You Hire a Co-op Student?

Many employers feel today's graduates have no concepts of the "real" world of work; we are providing this experience in co-op. Any job that gives the student related background in your business would be suitable.

Co-op students are ultimately looking ahead to careers in businesses such as yours. For this reason they're not expecting to simply put in time on the job, but are eager to get involved and make a worthwhile contribution. Participation in co-op also gives the employer the opportunity to try out a student's capabilities without obligation or commitment to permanent employment. This work oriented educational system integrates classroom study and paid, on-the-job work experience, by alternating periods in College with periods of employment by co-operating companies.

It is essential that the work experience be a normal one; that the student be treated like a regular company employee so that a realistic picture of the working environment in that field may be obtained. Perhaps most important is what students may gain from the working experience, i.e. what is to be discovered, attitude to work, and the ability to get along with coworkers at all levels.

### September Intake Only

	<b>Sept-Dec</b>	<b>Jan-Apr</b>	<b>May-Aug</b>
<b>Year 1</b>	Academic Term 1	Academic Term 2	Academic Term 3
<b>Year 2</b>	Academic Term 4	Academic Term 5	Academic Term 6
<b>Year 3</b>	Work Term 1	Work Term 2	Work Term 3
<b>Year 4</b>	Academic Term 7		

## Course Outline

For the official Degree Audit, please see Registrar's Office

### Level 1 –Take all of the following Mandatory Courses

MATH-1188	Math 1
ELEC-1130	DC Electricity
COMP-1471	Programming & Analytical Techniques
CADD-1072	Computer Aided Design
WRIT-1039	Reason & Writing 1- Technology
SKLS-1021	Applied Project

### Level 2 –Take all of the following Mandatory Courses

MATH-1189	Calculus 1
ELEC-3068	AC Electricity
DIGL-1024	Digital I- Fundamentals
ELNC-1107	Electronic Devices
LAWS-1038	Law, Ethics & Occupational H&S

### Level 3 – Gen Ed –Take a 3 credit Gen. Ed. elective course

Take all of the following Mandatory Courses:

CNTL-1015	Automation
ELEC-1133	Applied Electrical Code
ELEC-1131	Electrical Machines 1
MATH-3074	Calculus 2
TELE-1022	Telecommunications
ELEC-3069	Electrical Machines 2
DIGL-3024	Digital 2- Digital Systems
MGMT-1007	Project Management

### Level 4 –Take all of the following Mandatory Courses

INST-1007	Instrumentation
ELEC-3053	Energy Generation & Distribution
CNTL-5011	Automation III
CNTL-3011	Automation II
ELEC-5037	Applied Project IV
COMM-5016	Communication for Technologists -Adv.
LAWS-1038	Law, Ethics & Occupational H & S

### Level 5 - Take all of the following Mandatory Courses

MATH-5020	Calculus 3
ELEC-1132	Electrical Systems Design E-Code
CNTL-5015	PLC Applications-Adv
ELNC-3035	Power Electronics
ELEC-3070	Electrical Power Systems

**Level 6-** Gen Ed- Take a 3 credit General Education elective course  
Take all of the following Mandatory Courses:

#### Group 1

TELE-3013	Structured Cabling
MGMT-3076	Capstone 1 Electrical Technology
INST-1009	Instrumentation
COOP-1020	Co-operative Education Employment Prep

#### Group 2

Take CNTL-3017, ELEC-3071 or CNTL-3018	
CNTL-3017	Industrial Robots
ELEC-3071	Renewable Energy
CNTL-3018	Circuit Design & Fabrications

**Level 7-** Take all of the following Mandatory Courses:

#### Group 1

CNTL-1016	Process Control-Intro
METH-3025	Quality Assurance
MGMT-5078	Capstone 2 Electrical Technology
COMM-3070	Technical Comm for Technologists

#### Group 2

Take TELE-5008 or CNTL-3019	
TELE-5008	Telecommunications- Adv
CNTL-3019	Integrated Automation Systems

#### Group 3

Take COMP-3099 or ELEC-3072	
COMP-3099	Embedded Systems
ELEC-3072	Variable Frequency Drive

### Program Requirements:

#### Gen Ed- Electives

Take 6 General Education Credits-  
Normally taken in Levels 3 and 6

### Program Residency

Students must complete a minimum of 31 credits in this program at Fanshawe College to meet the Program Residency requirement and graduate from this program

