Electrical Engineering Technology
A Three-Year Ontario College Advanced Diploma
with Co-operative Education Endorsement
1001 Fanshawe College Blvd. – Room D1063
London, ON N5Y 5R6
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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.

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**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
- 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.