

Electrical Engineering Technology (Power & Controls) Co-op

Electrical Engineering Technology (Power and Controls) Co-op is a three-year cooperative education program providing a comprehensive coverage of the electrical power discipline with emphasis on power systems, control systems and electrical design. The theoretical aspects of this program are complemented by extensive practical components that allow students to gain invaluable experience with installation, operation and maintenance practices. This is further supplemented with real-world experience provided by two work terms.

ACCREDITATION

This program is accredited by the Canadian Technology Accreditation Board under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord.

Note: This program may not be suitable for applicants who do not have normal colour perception.

OBJECTIVES

1. Analyze and design electrical generation, transmission and distribution systems.
2. Install, operate, troubleshoot and maintain electrical equipment (including, but not limited to, motors, generators, transformers and related control and protection devices) found in utilities and industrial plants.
3. Apply the Canadian Electrical Code and employ specific computer software to plan, design and specify building electrical systems (including, but not limited to, power, lighting, heating, control and protection circuitry).

CURRICULUM

Specific education in various aspects of the electrical power discipline including power systems, analysis, control systems, equipment and techniques and building electrical design.

Practical education in various aspects of the electrical workshop including shop tools, electrical wiring, installation and maintenance of electrical equipment and correct application of the Canadian Electrical Code.

General education consisting of Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Engineering Graphics and Technology Awareness.

Co-operative education, consisting of two work terms, provides valuable industry experience that supports and enhances the in-class learning.

An applied research project is required for successful completion of the program.

EMPLOYMENT OPPORTUNITIES

A graduate of the Electrical Engineering Technology (Power and Controls) Co-op program can find employment with a wide variety of companies involved in the electrical industry. Typical employers include production plants, oil and gas exploration production companies, refineries, offshore servicing companies, power utilities, pulp and paper mills, electrical sales and service groups, shipyards, Provincial and Federal Government Departments and consulting engineering companies.

Graduates with two years of appropriate work experience may receive the designation of Professional Technologist (P. Tech).

DIPLOMA

- Three years
- September start
- Ridge Road Campus (St. John's)

COURSES

CODE	TITLE	Hrs/wk	Cr	Le	La
Semester 1 and 2 - Refer to Engineering Technology (First Year)					
Semester 3 (Technical Intersession I)					
ET2100	Electrotechnology		3	5	3
AE1240	Electronic Devices		5	7	4
C11310	Electrical/Electronic Fabrication Techniques		3	4	5
Semester 4					
DR2320	Engineering Graphics for Electrical		2	1	2
MA2100	Mathematics		5	5	0
MP2300	AC Circuits		4	3	3
MP2910	DC Machines		4	3	3
DP1310	Introduction to PLCs		4	3	3
PE2500	Electrical Practices		2	1	3
Semester 5					
MA1670	Statistics		4	4	1
CM2800	Oral/Written Communication Skills		3	3	0
DP2540	Advanced PLCs		4	3	3
MP2350	Transformers		4	3	3
MP2920	AC Machines		4	3	3
PE2501	Electrical Practices		2	1	3
Semester 6 (Technical Intersession II)					
MP2230	Power System Harmonics		2	3	2
AE2260	Electronic Power Devices & Circuits		5	7	4
MP1700	Control Engineering		2	3	2
PE3100	Electrical Practices		3	3	6
Semester 7					
WC1200	Workterm I		5	0	0
Semester 8					
PR2560	Technical Thesis I		P/F	1	0
MP3250	Emer. Standby Systems & Alternate Energy Sources		3	3	0
MP3215	Power Systems: Analysis		4	3	2
MP3110	Motor Control Systems		4	3	3
C11210	Instrumentation Controls & Automation		3	2	2
PE3101	Electrical Practices (Facility Design)		4	3	3
PR3150	Project Management & Financial Analysis		4	4	0
Semester 9					
WC1201	Workterm II		5	0	0
Semester 10					
PR2561	Technical Thesis II		5	5	0
MP3220	Power Systems: Analysis & Operation		6	5	3
MP3150	Power Devices & Motor Drives		4	3	3
C13600	Industrial Process Control		4	3	3
PE4110	Electrical Practices (Facility Design)		4	3	3

