

PROGRAM PURPOSE

Electrical construction and maintenance is a two-year program that provides broad fundamental training in the principles used to install electrical equipment and the mathematics necessary to plan electrical systems. National electric code and theory are taught throughout the program.

The first year provides theory and practice in electronics basics. Studies include the use of diagnostic test equipment and troubleshooting techniques while performing hands-on laboratory exercises. Areas covered include: AC and DC circuits, semi-conductor devices, electronic circuits and digital electronics. The second year begins with an in-depth study of commercial and industrial wiring techniques and lighting design.

Hands-on exercises include conduit bending installation and lighting and control system installation. Following a thorough study of rotating machinery, power system analysis, industrial wiring and motor controls are studied. Hands-on exercises include the planning, wiring and testing of motor control circuitry.

CAREER OPPORTUNITIES

Graduates of this program will find employment opportunities with:

- Electrical contractors
- Service shops
- Power companies
- Industrial maintenance operations
- Industry equipment supplies

After necessary experience and license have been obtained, graduates may qualify for the following positions:

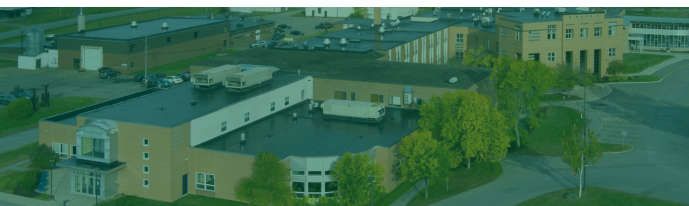
- Managers
- Supervisors
- Inspectors
- Operators of individual businesses



APPLICATION PROCEDURE

The following procedures constitute the admissions process:

- 1 Submit an NMCC application.
- 2 Submit official high school transcript and/or HiSET/GED scores (current senior's ranking period grades).
- 3 Official college transcripts for applicants who have attended other post-secondary schools.
- 4 If SAT scores are not available, placement testing may be required.
- 5 Meet with an Admissions Counselor.
- 6 A campus tour is highly recommended.



GET IN TOUCH

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ELECTRICAL CONSTRUCTION & MAINTENANCE
2025-2026
Associate in Applied Science Degree Program

Electrical Construction & Maintenance
2025-2026
Certificate Program

First Semester			C	L	CR
>	ELE 112	Basic Residential Wiring	2	2	3
>	ELS 115	Basic Electricity/Electronics	3	0	3
>	ELS 116	Basic Electricity/Electronics Lab	0	6	2
	ENG 111	English Composition	3	0	3
	MAT 122	Technical Mathematics	2	2	3
			10	10	14

Second Semester			C	L	CR
	DIB 113	Introduction to Digital Systems	2	2	3
	DRR 117	Blueprint Reading for Construction Trades	2	2	3
>	ELS 124	Industrial Electronics	2	3	3
>	ELS 125	Motors & Controls	2	3	3
		Social Science Elective	3	0	3
			11	10	15

Third Semester			C	L	CR
	EET 221	Control Systems & PLCs	2	3	3
>	ELC 110	National Electrical Code	3	0	3
>	ELE 210	Electrical Construction & Maintenance I	3	0	3
>	ELE 212	Electrical Construction & Maintenance Lab I	0	9	3
	PHY 150	Physics	3	2	4
			11	14	16

Fourth Semester			C	L	CR
	COM 221	Technical Communications	3	0	3
>	ELC 116	National Electric Code for Industry	3	0	3
>	ELE 222	Electrical Construction & Maintenance II	3	0	3
>	ELE 223	Electrical Construction & Maintenance Lab II	0	9	3
		Gen Ed Elective	3	0	3
		Humanities Elective	3	0	3
			15	9	18

Total Required **63**

> **Major courses; a minimum grade of "C" or 2.0 is required**

Key: C=Class hours; L=Laboratory; CR=Credit hours

First Semester			C	L	CR
>	ELC 110	National Electrical Code	3	0	3
>	ELE 112	Basic Residential Wiring	2	2	3
>	ELS 115	Basic Electricity/Electronics	3	0	3
>	ELS 116	Basic Electricity/Electronics Lab	0	6	2
	MAT 122	Technical Mathematics	2	2	3
			10	10	14

Second Semester			C	L	CR
	DRR 117	Blueprint Reading for Construction Trades	2	2	3
>	ELC 116	National Electric Code for Industry	3	0	3
>	ELS 124	Industrial Electronics	2	3	3
>	ELS 125	Motors & Controls	2	3	3
	ENG 111	English Composition	3	0	3
			12	8	15

Total Required **29**

