

# ELECTRICAL CONSTRUCTION & MAINTENANCE



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**HIGH DEMAND FIELD!**

**Questions?**

**Contact:**  
**[admissions@nmcc.edu](mailto:admissions@nmcc.edu)**

## CAREER OPPORTUNITIES

Graduates of this program will find employment opportunities with:

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

After necessary experience and licenses 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 transcript should include completed 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.

## 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 electrical and 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 systems analysis, industrial wiring and motor controls are studied. Hands-on exercises include the planning, wiring and testing of motor control circuitry.

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## ELECTRICAL CONSTRUCTION & MAINTENANCE

2023-2024

### Associate in Applied Science Degree Program

First Semester			C	L	CR
COL	103	College Success	1	0	1
> 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	121	Technical Mathematics	4	0	4
			13	8	16

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 Electric 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	Electric Construction & Maintenance II	3	0	3
> ELE	223	Electric Construction & Maintenance Lab II	0	9	3
		Humanities Elective	3	0	3
			12	9	15

Total Required 62

## ELECTRICAL CONSTRUCTION & MAINTENANCE

2023-2024

### Certificate Program

First Semester			C	L	CR
> ELC	110	National Electric 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	121	Technical Mathematics	4	0	4
			12	8	15

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 30

> Major courses; a minimum grade of "C" or 2.0 is required  
Key: C= Class Hours, CR= Credit Hours, L= Laboratory

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NMCC is an equal opportunity/affirmative action institution and employer. For more information, please call 768-2791.

2023-2024