

Electrical Power Distribution

Program Code 314132

Technical Diploma - Nine Months (Begins in June)

Offered at the Green Bay campus. For information: (920) 498-5444.

Toll-free: (800) 422-NWTC, ext. 5444.

Program Description

Electrical Power Distribution prepares students to install, maintain, and operate electrical systems to supply electric energy to residential, commercial, and industrial customers, and joint gas and electric underground generation facilities.

Program Outcomes

- Assist in the construction of electric transmission systems.
- Opportunity to secure a (CDL) commercial driver's license.
- Relate electrical theory to electric power systems.
- Work comfortably at heights.
- Climb poles and towers.
- Be knowledgeable in personal protective equipment to safely perform specific work.
- Identify sub-station components.
- Install underground electric systems.
- Operate electrical power distribution equipment.
- Troubleshoot power distribution and transmission systems.
- Communicate technical information.
- Assist in the construction of power distribution systems.
- Identify methods of electrical generation.

Requirements for Program Entry

- Completed application.
- High school transcript or equivalent (such as an HSED or GED® Transcript).
- NWTC Academic Skills Assessment or equivalent (See Academic Skills Assessment section for details and equivalents).
- Be able to obtain a commercial driver's license.
- Place satisfactorily in the NWTC mathematics examination. Students should have mastered basic math skills. For a description of Basic Math, see the Basic Education section of catalog.

Note

Students who have completed the Electrical Power Distribution technical diploma program have the opportunity to fulfill the requirements for a Utility Management certificate and/or apply these credits toward a Leadership Development and/or an Individualized Technical Studies associate degree.

Employment Potential

A graduate of the program will have the potential for employment as a Line Technician, Lead Line Technician, Line Technician Supervisor, Cable TV Line Technician, Telephone Line Technician, Technician in an Electricity Generating Plant, or Installer/Maintainer of Underground Systems. Graduates in those jobs will perform construction, operations, and maintenance work on the electric power system and equipment.

With additional education and/or work experience, graduates may find other opportunities for employment.

- Line Coordinator
- Line Apprentice
- Safety Advisor
- Distribution Construction Designer
- Distribution Dispatcher
- Substation Electrician

Curriculum

The Electrical Power Distribution Technical Diploma is a one-year, three-semester program. Upon graduation, a student will have completed 34 credits.

First Semester

Catalog No.	Description	Credits
10-804-110	Elem Algebra w Apps	3
31-413-330	Line Elec Field Trng 1	5
31-413-353	Electricity-Basic	1
31-413-362	Line Elec-Safety 1	1
Semester Total		10

Second Semester

10-103-121	Micro: Word-Intro	1
31-413-335	Line Elec-Const Standards	1
31-413-336	Line Elec Field Trng 2-A	5
31-413-337	Line Elec Field Trng 2-B	5
31-413-355	Electricity-Linepersons	2
31-413-364	Line Elec-Safety 2	1
31-801-385	Communicating-Writing	1
Semester Total		16

Third Semester

10-103-131	Micro: Excel-Intro	1
31-413-332	Line Elec Field Trng 3	5
31-413-361	Lineman-Safety/First Aid	1
31-801-386	Communicating Effectively	1
Semester Total		8
Total Credits		34

This program is fully eligible for financial aid.

Please Note

- Some courses have prerequisites (listed at the end of each course description, if applicable) that need to be taken prior to enrolling in those courses.
- Many courses are offered via our Flexible Learning Options (online, accelerated, ITV, video, weekend, and self-paced) and may be taken in any order as long as prerequisites are met. To find out which program courses are offered through Flexible Learning Options, go to www.nwtc.edu or consult a counselor, (920) 498-5444.
- Descriptions of courses not found on this page can be found in the back of this catalog.

Course Descriptions

These courses provide an opportunity for students to develop the knowledge, skills, and understanding required for employment in this field.

31-413-330 LINE ELECTRICIAN FIELD TRAINING 1

...pole climbing, care of equipment/vehicle operation, setting and removing poles/line layout, pole framing, guys and anchors, conductor string, sagging, tying/transformers, operation, application, construction/safety.

31-413-332 LINE ELECTRICIAN FIELD TRAINING 3

...protective grounds, transmission, substation operations and maintenance, metering tools, transmission hot stick use and safety, and stray voltage precautions. (Prerequisite: 31-413-337, Line Electrician Field Training 2-B)

31-413-335 LINE ELECTRICIAN-CONSTRUCTION

STANDARDS ...distribution standards overhead, underground, primary, secondary, clearances, work practices, material and safe work practices.

31-413-336 LINE ELECTRICIAN FIELD TRAINING 2-A

...transformer installation, operation, maintenance; regulator, capacitor and OCR operation and maintenance. (Prerequisite: 31-413-330, Line Electrician Field Training 1)

31-413-337 LINE ELECTRICIAN FIELD TRAINING 2-B

...underground installation and equipment; street lighting operation and maintenance; protective equipment use; map/diagram reading, code clearance requirements; use of tree trimming methods and tools. (Corequisite: 31-413-336, Line Electrician Field Training 2-A)

31-413-353 ELECTRICITY-BASIC

...basic electricity: fundamental laws and circuit analysis. (Prerequisite: Accepted into Electrical Power Distribution)

31-413-355 ELECTRICITY-LINEPERSONS

...electric power/energy, three-phase voltage generation, three-phase circuit power, transformer operation principles, transformer connections, and safety practices in high voltage applications. (Prerequisite: 31-413-353, Electricity-Basic)

31-413-361 LINEMAN-SAFETY/FIRST AID

...substation construction and maintenance, first aid procedures, mouth-to-mouth resuscitation, safety code analysis, recordkeeping, external heart massage, and safety/accident analysis. (Prerequisite: Accepted into Electrical Power Distribution)

31-413-362 LINE ELECTRICIAN-SAFETY 1

...general rules, definitions, applications, responsibility, reporting accidents, injuries, hand and power tools, ladders, scaffolds, handling materials, operation of company automotive equipment. (Prerequisite: Accepted into Electrical Power Distribution)

31-413-364 LINE ELECTRICIAN-SAFETY 2

...electrical section, line clearing, right-of-way maintenance; generating stations including theory and hands-on working on overhead lines; protective equipment; underground systems; tree trimming; and substations. (Prerequisite: 31-413-362, Line Electrician-Safety 1)