

# ELECTRICITY

## Overview

### Electricity Technical Diploma

**Program Code: 31-413-1**

For more information: [www.wctc.edu/electricity](http://www.wctc.edu/electricity) (<http://www.wctc.edu/electricity/>)

Learn to apply key electricity skills and knowledge in commercial, residential and industrial settings. Explore the National Electrical Code and emerging trends in the industry. Learn to read construction drawings and use appropriate safety measures when working with electricity.

**The minimum required course grades and program grade point average (GPA) for students under this catalog are:**

Core Courses = C

General Studies Courses = C-

Program GPA = 2.0

## Learning Outcomes

1. Apply electrical theory.
2. Install electrical equipment in a residential setting.
3. Install electrical equipment in a commercial setting.
4. Analyze industrial equipment.

### 5. Critical Life Skills

To help our students prepare for success in a workplace and society that is **increasingly global, multi-cultural, and collaborative**, all students are given opportunities to develop and demonstrate Critical Life Skills, both in and out of the classroom. The following Critical Life Skills are learning outcomes for WCTC students.

6. **Communication:** Demonstrate appropriate communication.
7. **Critical Thinking/Problem Solving:** Demonstrate critical thinking skills to analyze situations and solve problems.
8. **Relationships:** Demonstrate effective interpersonal skills.
9. **Self-management:** Demonstrate responsible and respectful behavior.

## Required Courses

Listed below are the required courses for the program. To view the recommended sequence for taking courses click on the plan of study tab(s) above. Work with your Academic Advisor to design a program plan!

View your **Program Matrix** to find out when each course will be offered (term and time of day).

Code	Title	Credits
<b>Core Courses</b>		
413-301	Beginning Electrical Concepts	2
413-302	Reading Construction Drawings	2
413-307	Res & Comm Wiring Concepts	3
Approved Substitute: (413-317 and 413-319)		
413-308	Construction Trades Safety	1

413-309	Introduction to NEC	2
413-311	Intermediate NEC	2
413-313	Industrial Wiring Concepts	3
413-316	Advanced Electrical Concepts	2
413-318	Trends in Electricity	1
605-129	Elect Pwr Ctrl & Motors	3
605-188	PLC 1	2
<b>General Studies</b>		
801-311	Communication in the Workplace	2
Approved Substitutes: 801-136 OR 801-196		
804-107	College Mathematics	3
Approved Substitutes: 804-115 OR 804-116 OR 804-118 OR 804-195 OR 804-198 OR (804-304 AND 804-305)		
<b>Total Credits</b>		<b>28</b>

## Full-time Plan

### First Year

Fall Term 1		Credits
413-301	Beginning Electrical Concepts	2
413-302	Reading Construction Drawings	2
804-107	College Mathematics	3
801-311	Communication in the Workplace <small>This course will run 16 weeks.</small>	2
<b>Credits</b>		<b>9</b>

### Fall Term 2

413-307	Res & Comm Wiring Concepts	3
413-308	Construction Trades Safety	1
413-309	Introduction to NEC	2
<b>Credits</b>		<b>6</b>

### Spring Term 1

413-311	Intermediate NEC	2
413-313	Industrial Wiring Concepts	3
413-316	Advanced Electrical Concepts	2
<b>Credits</b>		<b>7</b>

### Spring Term 2

413-318	Trends in Electricity	1
605-129	Elect Pwr Ctrl & Motors	3
605-188	PLC 1	2
<b>Credits</b>		<b>6</b>
<b>Total Credits</b>		<b>28</b>