



**COURSE SYLLABUS**  
**ELECTRICITY II**  
Fall 2022

**PROGRAM TITLE:** Electricity II

**DOE CODE:** 4832

**RECOMMENDED GRADE LEVELS:** 11, 12

**PREREQUISITES:** Electricity I

**HIGH SCHOOL CREDITS:** 3 per semester (6 total per school year)

**QR:** This program qualifies as a quantitative reasoning course.

**ELECTIVE INFORMATION:** Counts as a Directed Elective or Elective for all diplomas

**HOW WCC CAN HELP MEET GRADUATION PATHWAYS:**

**Pathway 1**

CTE elective high school credits

Technical Honors Diploma

**Pathway 2**

Work-Based Learning

**Pathway 3**

Technical honors diploma

Industry Certification

2 Advanced CTE Courses

**INSTRUCTOR:** Scott Sargent  
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**PROGRAM DESCRIPTION:** Electricity II includes classroom and laboratory experiences in residential wiring, including electrical service, metering equipment, lighting, switches, outlets and other common components and methods of installation and maintenance of the residential wiring system in accordance with the current National Electrical Code. Additionally, students will learn methods and techniques for troubleshooting appliances, motors, motor controls, relay wiring, commercial wiring, and industrial wiring systems. Wiring methods, material selection for commercial and industrial wiring systems, mechanical installation of hardware, and electrical design and layout are also covered. Instruction in thinking critically to analyze, synthesize, and evaluate technical problems and information will also be covered as it relates to health, safety, and welfare standards and codes as dictated by local, state or federal agencies. Upon completion of this program, students continue their education in 2 and 4-year degree programs at the postsecondary level or enter employment in one of the many construction fields. Students also enter apprenticeship programs for specific construction/electrical trades.

**MAJOR LEARNING OBJECTIVES:**

1. Apply and adapt wiring concepts in residential electrical projects to ensure compliance with National Electrical Code.
2. Employ wiring concepts to solve electrical problems in generators and alternators.
3. Apply wiring concepts to solve electrical problems in transformers.
4. Apply and adapt wiring processes to all commercial/industrial electrical projects to ensure compliance with the National Electrical Code.

**REQUIRED TEXT/CURRICULUM MATERIALS:**

- Electrical Level 1 Trainee Guide; NCCER
- Core Curriculum Trainee Guide; NCCER

**DUAL CREDITS AVAILABLE:**

BCTI 130 Introduction to Electrical  
Ivy Tech 3 credits

**INDUSTRY CERTIFICATION AVAILABLE:**

NCCER (National Center for Construction Education and Research) Electrical I  
Testing required. Fees may apply. Qualifies for THD and Pathway Industry-Recognized Certification.

**METHODS OF INSTRUCTIONAL DELIVERY:**

This course will be delivered using a variety of delivery methods. Lecture, class discussion, lab work, and individual and group exercises and activities will be used to deliver the class material.

**EVALUATION METHODS:**

- Classroom work
- Lab work
- Dual credit course projects and exams
- Certification exams
- Participation and attendance

**GRADING CRITERIA:**

Assignments are divided into three categories: Classwork (40%), Projects/Assessments (40%), and Work Ethic (20%). Work Ethic includes daily participation and engagement in the class.

**GRADING SCALE:**

|            |                 |
|------------|-----------------|
| A+ 99-100% | C+ 78-79%       |
| A 92-98%   | C 72-77%        |
| A- 90-91%  | C- 70-71%       |
| B+ 88-89%  | D+ 68-69%       |
| B 82-87%   | D 62-67%        |
| B- 80-81%  | D- 60-61%       |
|            | F 59% and below |

**ATTENDANCE AND DISCIPLINE:**

WCC attendance and discipline policies will be followed as detailed in the Student Handbook.

**GRADING SCALE:**

|            |                 |
|------------|-----------------|
| A+ 99-100% | C+ 78-79%       |
| A 92-98%   | C 72-77%        |
| A- 90-91%  | C- 70-71%       |
| B+ 88-89%  | D+ 68-69%       |
| B 82-87%   | D 62-67%        |
| B- 80-81%  | D- 60-61%       |
|            | F 59% and below |

**REQUIRED CONSUMABLE MATERIALS AND EQUIPMENT:**

- Student kit