



## Program Syllabus

Offered on Main Campus

## Electricity

**Program Number:** I460312

**Program Hours:** 1200

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The purpose of the program reflects Emerald Coast Technical College's mission as evidenced by the desire to provide students with the training and education that is required to function successfully in the professional workforce.

### Rules and Regulation/Policies and Procedures:

Students will follow all rules outlined in the Emerald Coast Technical College Catalog.

**PROGRAM DESCRIPTION:** The Electricity program is to prepare students for employment or advanced training in a variety of electrical industries. The program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education.

This program covers the use of tools, Electrical Safety, Hand Bending, Fasteners and Anchors, Electrical Theory One, Electrical Theory Two, Introduction to the NEC, Raceways, Boxes, Fittings, Conductors, Introduction to Blueprints, Wiring; commercial, Wiring; Residential, Alternating Current, Motors, Grounding, Conduit Bending, Boxes and Fittings, Conductor Installation, Cable Trays, Conductor Terminations, Electrical Services, Circuit Breakers, Contactors, Electric Lighting, Branch Circuits, Conductor Calculation, Over-current Protection, Wiring Devices, Distribution Equipment, Lamps and Ballasts, Motor Calculation, Motor Maintenance, Motor Controls, Hazardous Locations, Load Calculations, Lighting applications, Standby and Emergency Systems, Basic Electronic Theory, Fire Alarm Systems, Specialty Transformers, Communication Skills, Employability Skills.

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code
A	BCV0603	Electrician Helper	ELECTRICAL @7 7G IND ENGR 7G TEC ED 1@2	300 Hours	47-3013
B	BCV0640	Residential Electrician	ELECTRICAL @7 7G	450 Hours	47-2111
C	BCV0652	Commercial Electrician		450 Hours	47-2111



## Program Syllabus

## Electricity

### **Prerequisites:**

NCCER Core: Intro to Basic Construction (Pearson)

ISBN: 9780137483358 used for OCP A, OCP B, OCP C.

NCCER Electrical Level 1-10<sup>th</sup> edition 2020 (Pearson)

ISBN: 9780136908654 used for OCP A, OCP B, OCP C.

NCCER Electrical Level 2-10<sup>th</sup> edition 2020 (Pearson)

ISBN: 9780136977743 used for OCP A, OCP B, OCP C.

NCCER Electrical Level 3-10<sup>th</sup> edition 2020 (Pearson)

ISBN: 9780136904809 used for OCP A, OCP B, OCP C.

NCCER Electrical Level 4-10<sup>th</sup> edition 2020 (Pearson)

ISBN: 9780136910787 used for OCP A, OCP B, OCP C. (Pearson)

Workbook #1: National Electric Code, 2020 NEC, ISBN: 978-1-4559-2299-4, used for OCP A, OCP B, OCP C.

### **TOOLS / SUPPLIES:**

Tools are provided by Emerald Coast Technical College post-secondary students who have entered the program after January 1, 2021. Dual enrolled students will be issued tools by ECTC but must return the tools upon completion or the end of a school term. The tools must be accounted for and in good working condition when returned. Any postsecondary student that does not complete the required 1200 hours will return the tool kit back to the school.

### **HOW YOU ARE MEASURED (GRADES):**

40% Competency/Performance Evaluation (Daily assignments, homework and lab activities)

40% Evaluation (Written Exams and Major Projects)

20% Work Order/Professionalism: Ability to communicate with customers and complete assigned tasks.

### **Grading Scale:**

A 93-100

B 84-92

C 70-83

F 69 & Below

### **Satisfactory Progress:**

This program is a planned sequence of instruction consisting of three occupational completion points.

When the recommended sequence is followed, the structure is intended to prepare students to complete the industry certifications associated with this program of study. This program adheres to the Satisfactory Progress guidelines listed in the ECTC Catalog.

### **MAJOR COURSE OBJECTIVES:**

The courses content includes, but is not limited to:

1. Identify safe working conditions at the laboratory and work place, and observe safety precautions.
2. Demonstrate an understanding of basic direct-current (DC) electrical-circuit skills.
3. Demonstrate appropriate communication skills.
4. Apply electrical related basic math.



## Program Syllabus

## Electricity

5. Demonstrate an understanding of basic electricity.
6. Demonstrate employability skills.
7. Read and interpret basic electric codes.
8. Demonstrate an understanding of entrepreneurship.
9. Demonstrate positive customer-relations skills.
10. Demonstrate alternating-current (AC) circuit skills.
11. Install residential wiring.
12. Demonstrate proficiency in commercial wiring.
13. Demonstrate specialized electrical skills.
14. Demonstrate proficiency in Industrial wiring
15. Demonstrate competency in AC and DC motors.

### **Instructional Delivery Methods:**

This program is a traditional program taught on ECTC campus. It uses a variety of instructional delivery methods including but not limited to:

- ❖ Hands-on training
- ❖ Lectures
- ❖ Videos
- ❖ Web-based programs

### **PROGRESS:**

Students will be provided with detailed assignment sheets for each major area/topic of study. Complete mastery of an area must be achieved before proceeding further. **Students are responsible for maintaining a sufficient rate of progress throughout the course**, consistent with their individual student ability.

### **LAB SHEETS:**

Student must demonstrate an understanding of theory and basic principles prior to starting labs and major projects.

### **CONFERENCES AND ASSISTANCE:**

You are encouraged to come to instructor's office to talk over any problems you may have in this course. Students needing assistance with problems will research along with the instructor all possibilities and utilize all reference materials to achieve a solution. Subject-related problems can be presented to the class for research upon instructor's approval. Class interaction and discussion concerning occupational area is encouraged.

### **CLASS HOURS:**

Class hours are 8am-4pm & 4pm-9pm & 5:15pm-9pm, Monday - Thursday

### **OFFICE HOURS:**

Regular office hours for the instructor are Monday – Thursday, 7:30am-8am, or as scheduled by appointment.

### **STUDENT RESPONSIBILITIES:**



## Program Syllabus

## Electricity

Students are expected to understand and follow all school rules and policies. Students are responsible for class, lab and equipment/tool care. Students are responsible for maintaining proper industry work habits and conduct. Clean-up is the responsibility of all students and will be conducted daily.

### **EXAMINATIONS:**

The course examinations consist of written knowledge examinations and performance evaluations. A knowledge examination is given upon completion of each major topic assignment. Performance evaluation must be mastered before proceeding to the next assignment. Students will be able to repeat performance evaluations until complete mastery is achieved. At the end of each module (chapter) an exam will be required before moving forward in the course work. All exams will be conducted online and proctored.

### **LAB STATION EQUIPMENT:**

You will be assigned specific equipment for your labs. The equipment you will use is reliable. However, with abuse or misuse, it will malfunction and become inoperable. Be careful and have the instructor demonstrate the use of the equipment before using it for the first time. Read all instructions carefully and ask questions prior to use. Keep your work area and lab areas clean and orderly while performing assignments. Return all software, equipment and lab components to the proper storage area before departing at the end of the period. The classroom lab will be clean and secured at the end of each project or period whichever comes first. If a lab assignment will take more than one day notify the instructor and secure all parts and project at the end of the period.

### **EARNING INDUSTRY CERTIFICATION:**

- Students will complete course work through each module of the Level text book that they are working in (example: students enrolled in Level 1 Electricity will test through 12 modules before earning the NCCER Electrical Wiring Level 1 certification).
- Each student will take a proctored exam for each module in the Level text that they are working in.
- After satisfactory scoring 70% or higher on all modules of the level, students will receive an industry certification along with a NCCER Certificate.

### **Classroom Location:**

761 N. 20th Street DeFuniak Springs, Florida 32433  
Building 100 Room 052

### **Office Location:**

761 N. 20th Street DeFuniak Springs, Florida 32433  
Building 100 Room 052

### **Office Hours:**

Regular office hours for the instructor are 7:30am-8am. (Mon-Thurs) or as scheduled by appointment.

### **Attendance:**

Attendance is mandatory. Students who believe that attendance may present a problem should discuss their situation with the instructor and with student services. Meet with instructor to schedule makeup hours



## Program Syllabus

## Electricity

### Equipment:

Students will checkout and check in all tools that are not part of their tool kit from the tool room.

### Suspicion of Alcohol or Drugs

- If any student is suspected of being under the influence of drugs or alcohol, the student will be required to get tested. Upon refusal, the student could be subject to expulsion based on Walton County School District Student Code of Conduct.
- Students vehicles while parked on ECTC campus is subject to be searched based on suspicion of drugs and alcohol.

### Safety:

- Safety is priority one.
- Report any unsafe conditions to the instructor immediately.
- If you are not comfortable or confident with any lab or project, stop and notify instructor.

### Emergency Procedures:

- Emergency exits are clearly marked.
- As part of regular classroom instruction, students will be asked to participate in regular safety and emergency drills.
- Fire extinguishers are in each area.

### Rules and Regulation / Policies and Procedures:

Students will follow all rules/regulations outlined in the Emerald Coast Technical College Catalog.

### General Information:

Refer to the ECTC Catalog located at <http://www.ECTC.edu>, for additional information:

- Career and Counseling Services
- Services for Students with Disabilities
- Student Grievance Procedures
- Leave of Absence
- Withdrawal
- Forms