

**WITHLACOOCHEE TECHNICAL COLLEGE**  
**ELECTRICITY**  
**I460312**  
**POST-SECONDARY SYLLABUS/PACING GUIDE**  
**2019-2020**

**Instructor Contact Information**

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**Program Description**

The purpose of this program is to prepare students for employment or advanced training in a variety of construction electrical industries.

This program focuses on broad, transferable skills, stresses the understanding of all aspects of the electricity industry, and demonstrates such elements of the industry as planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

**Physical Requirements**

There are 120 graded, hands on job sheets as well as work orders that will include lifting tools and equipment used in the industry, up to 50 lbs., working from 6', 8', 10' & 12' ladders and working in confined spaces.

**Dress Code**

Full cover shoes such as work boots or sneakers, full cover shirt, no tank tops, long pants such as jeans, Dickies, Duluth or Carhart. Safety eyewear is required in the shop area. No shorts permitted.

**Attendance**

Attendance is an integral part of this program. Attendance/employability is 30% of your grade. Attendance should be treated as if I am your employer and you are the employee. If you are going to miss a day you are expected to call in as you would at your place of employment. Failure to do so will affect your grade. See the student handbook regarding attendance. Refer to the WTC Student Handbook.

**Program Length**

1200 hours

**How you are evaluated / percentage of grade**

- Competency – performance on shop/hands on activities, housekeeping, internships: 30%
- Class work – assignments, reviews, quizzes and exams: 40%
- Employability skills: 30%

### How You Are Graded

- 100 – 90      A
- 89 – 80      B
- 79 – 70      C
- 69 – 60      D
- Below 60      F

### Florida Department of Education Occupational Completion Points

| OCP | Course Number | Course Title            | Length    | SOC Code |
|-----|---------------|-------------------------|-----------|----------|
| A   | BCV0603       | Electrician Helper      | 300 Hours | 47-3013  |
| B   | BCV0640       | Residential Electrician | 450 Hours | 47-2111  |
| C   | BCV0652       | Commercial Electrician  | 450 Hours | 47-2111  |

### Industry Certifications

All students are required to take the proctored National Center for Construction Education and Research (NCCER) Core and Electricity Level exams and complete the required performance evaluations to receive the certifications associated with this curriculum.

### Safety

All students are required to follow safe work habits, and to wear appropriate clothing and safety glasses. All safety rules and requirements will be discussed in class.

### Discipline

Refer to the WTC Student Handbook for school rules and expectations. Program specific rules and expectations will be discussed in class.

### Housekeeping Tasks

All students are required to keep their work & desk areas clean every day. On Fridays, students will stop working at 2:30 and will all participate in cleaning the common areas of our shop. this is our shop and we will keep it clean.

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**ELECTRICITY**  
**POST-SECONDARY LESSON PLANS / PACING GUIDE**  
**2019-2020**

**This is the minimum pacing requirements for**  
**Weekly Classroom and Homework Assignments for the year**

Lectures loop each 18 weeks for incoming students

| <b>Week</b> | <b>Lesson</b>                                | <b>Textbook &amp; Chapters</b> | <b>Job Sheets</b> | <b>EWR Modules</b> |
|-------------|--|--------------------------------|-------------------|--------------------|
| 1           | Shop Safety & Orientation                    | Core, Chapters 1 & 2           | 1-2               | Not Applicable     |
| 2           | Drawings                                     | Core, Chapters 3, 4 & 5        | 3-4               | Not Applicable     |
| 3           | Boxfill                                      | Core, Chapters 6, 7 & 8        | 5-8               | Not Applicable     |
| 4           | Electrical Theory Report/Presentation Due    | Level 1, Chapters 1 & 2        | 9-12              | Not Applicable     |
| 5           | Ohms Law – series circuit                    | Level 1, Chapters 3 & 4        | 13-16             | Not Applicable     |
| 6           | Ohms Law – parallel circuit                  | Level 1, Chapters 5 & 6        | 17-20             | Not Applicable     |
| 7           | Ohms Law – series/parallel                   | Level 1, Chapters 7 & 8        | 21-24             | Not Applicable     |
| 8           | Review                                       | Level 1, Chapters 9 & 10       | 25-28             | Not Applicable     |
| 9           | Make up if needed<br><b>OCP A Completion</b> | Level 1, Chapters 11 & 12      | 29-30             | Not Applicable     |
| 10          | Conduit Bending                              | Level 2, Chapters 1, 2 & 3     | 31-33             | Not Applicable     |
| 11          | Conduit Sizing                               | Level 2, Chapters 4, 5 & 6     | 34-36             | Not Applicable     |
| 12          | Ampacity Correction                          | Level 2, Chapters 7, 8 & 9     | 37-39             | Not Applicable     |
| 13          | Voltage Drop                                 | Level 2, Chapters 10, 11 & 12  | 40-42             | Not Applicable     |
| 14          | Single Phase Transformers                    | No Text Book Required          | 43-45             | 1-4                |
| 15          | Service Sizing Standard Calculation          | No Text Book Required          | 46-48             | 5-8                |
| 16          | Motor Circuit Design                         | No Text Book Required          | 49-51             | 9-12               |
| 17          | Control wiring / ladder diagrams             | No Text Book Required          | 52-55             | 13-16              |
| 18          | Motor Control Review                         | No Text Book Required          | 56-60             | 17-20              |
| 19          | Lessons begin to loop                        | No Text Book Required          | 61-65             | 21-24              |
| 20          | No Formal Lesson                             | No Text Book Required          | 66-68             | 25-28              |
| 21          | No Formal Lesson                             | No Text Book Required          | 69-73             | 29-31              |
| 22          | No Formal Lesson                             | No Text Book Required          | 74-76             | 32-34              |
| 23          | No Formal Lesson                             | No Text Book Required          | 77-79             | 35-36<br>Exam 1    |
| 24          | No Formal Lesson                             | No Text Book Required          | 80-84             | Exams 2 & 3        |

| <b>Week</b> | <b>Lesson</b>                               | <b>Textbook &amp; Chapters</b> | <b>Job Sheets</b> | <b>EWR Modules</b> |
|-------------|---|--------------------------------|-------------------|--------------------|
| 25          | <b>OCP B Completion</b>                     | Level 3, Chapters 1 & 2        | 85-90             | Not Applicable     |
| 26          | No Formal Lesson                            | Level 3, Chapters 3, 4 & 5     | 91-92             | Not Applicable     |
| 27          | No Formal Lesson                            | Level 3, Chapters 6 & 7        | 93-95             | Not Applicable     |
| 28          | No Formal Lesson                            | Level 3, Chapters 8 & 9        | 96-98             | Not Applicable     |
| 29          | No Formal Lesson                            | Level 3, Chapters 10 & 11      | 99-100            | Not Applicable     |
| 30          | No Formal Lesson                            | Level 4, Chapters 1 & 2        | 101-102           | Not Applicable     |
| 31          | No Formal Lesson                            | Level 4, Chapters 3 & 4        | 103-105           | Not Applicable     |
| 32          | No Formal Lesson                            | Level 4, Chapters 5 & 6        | 106-109           | Not Applicable     |
| 33          | No Formal Lesson                            | Level 4, Chapters 7 & 8        | 110-112           | Not Applicable     |
| 34          | No Formal Lesson                            | Level 4, Chapters 9 & 10       | 113-115           | Not Applicable     |
| 35          | No Formal Lesson                            | Level 4, Chapters 11 & 12      | 116-118           | Not Applicable     |
| 36          | Make up, testing<br><b>OCP C Completion</b> | Level 4, Chapters 13           | 119-120           | Not Applicable     |