

## Clackamas Community College

### Online Course/Outline Submission System

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#### Section #1 General Course Information

**Department:** Apprenticeship

**Submitter**

First Name: Shelly

Last Name: Tracy

Phone: 0945

Email: shellyt

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**Course Prefix and Number:** APR - 111UL

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**# Credits:** 5

**Contact hours**

Lecture (# of hours): 55

Lec/lab (# of hours):

Lab (# of hours):

Total course hours: 55

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

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**Course Title:** Outside Electrical Basic Theory I

**Course Description:**

Fundamentals of outside electrical apprenticeship related training. National Electrical Code standards, basic electrical Direct Current (DC) theory including Ohms law, electrical terminology, mathematical applications in electrical energy, rigging and safe work practices.

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**Type of Course:** Career Technical Apprenticeship

Can this course be repeated for credit in a degree?

**No**

Does this course map to any general education outcome(s)?

**No**

Is this course part of an AAS or related certificate of completion?

**Yes**

**Name of degree(s) and/or certificate(s):** Electrician Apprenticeship Technologies AAS

Are there prerequisites to this course?

**Yes**

**Pre-reqs:** APR-115UL Initial Pole Yard Training and Certification

**Have you consulted with the appropriate chair if the pre-req is in another program?**

**No**

Are there corequisites to this course?

**No**

Are there any requirements or recommendations for students taken this course?

**Yes**

**Recommendations:** N/A

**Requirements:** Accepted into the Line-Electrician apprenticeship program.

Are there similar courses existing in other programs or disciplines at CCC?

**No**

Will this class use library resources?

**No**

Is there any other potential impact on another department?

**No**

Does this course belong on the Related Instruction list?

**No**

GRADING METHOD:

A-F Only

**Audit:** No

When do you plan to offer this course?

✓ Fall

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

**No**

Will this course appear in the college catalog?

**No**

Will this course appear in the schedule?

**No**

Student Learning Outcomes:

Upon successful completion of this course, students should be able to:

1. restate basic electrical unit terms,
2. mathematically solve circuit problems using Ohm's law,
3. describe the components that are involved in heavy lifting and rigging,
4. calculate line loads and guy loads for guy installations,
5. demonstrate rigging techniques,
6. explain the fundamentals of DC theory,
7. follow National Electric Code standards,
8. use required Personal Protective Equipment (PPE) and follow safe work practices.

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***This course does not include assessable General Education outcomes.***

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Major Topic Outline:

1. National Electric Code Standards.
2. Ohms Law.
3. Electrical terminology.
4. DC theory.
5. Lineworker rigging.

Does the content of this class relate to job skills in any of the following areas:

- |                                      |           |
|--------------------------------------|-----------|
| 1. Increased energy efficiency       | <b>No</b> |
| 2. Produce renewable energy          | <b>No</b> |
| 3. Prevent environmental degradation | <b>No</b> |
| 4. Clean up natural environment      | <b>No</b> |
| 5. Supports green services           | <b>No</b> |

Percent of course: 0%

First term to be offered:

**Next available term after approval**

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