

## 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 - 112UL

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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 II

**Course Description:**

Instructs first year, second term apprentices in electrical-related training. National Electric Code (NEC) standards, application of electrical Direct Current (DC) theory, including Ohms law, electrical grid components, rigging, OSHA regulations, electrical terminology and mathematical applications.

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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-111UL Outside Electrical Basic Theory I

**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?

**No**

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

**No**

Will this class use library resources?

**Yes**

**Have you talked with a librarian regarding that impact?**

**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?

**✓ Winter**

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. explain the individual characteristics of different types of conductors,
2. determine power ratings of components in series, parallel and combination circuits;
3. apply Ohm's law to determine the current through any branch or component of a circuit,
4. follow National Electric Code standards,
5. apply rigging techniques using a capstan to set pole structures,
6. cite OSHA regulations that pertain to the job of a lineman,
7. use specific electrical terms on the job.

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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. Ohm's Law.
3. DC Theory.
4. Electrical terminology.
5. Lineworker rigging.
6. OSHA high voltage & telecommunication regulations.

**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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