# **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

Course Prefix and Number: APR - 232UW

# 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.

Course Title: Advanced Circuit Theory & Troubleshooting I

Course Description:

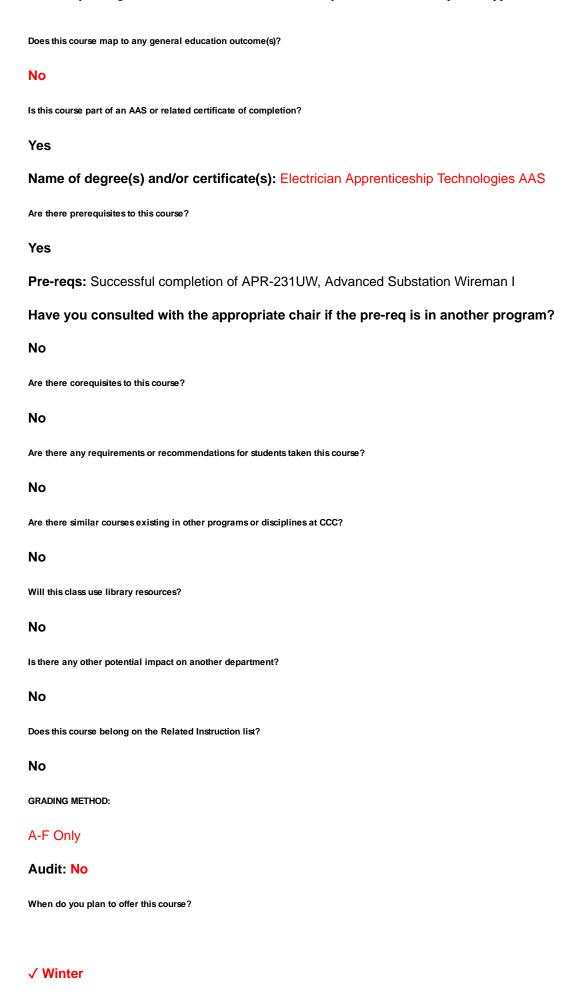
This course is designed to instruct third year wireman students on the advanced theory and application of outside electrical substation related training as it applies to a working understanding of algebra, electron theory and all aspects of AC & DC electric circuit evaluation, reading substation construction prints, National Electric Code (NEC) codes for construction and safe work practices.

Type of Course: Career Technical Apprenticeship

Can this course be repeated for credit in a degree?

No

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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. demonstrate proficiency in reading substation prints,
- 2. apply wiring standards: auxiliary transformers, control switches, auxiliary relays and personal grounds;
- 3. apply NEC codes in construction applications,
- 4. follow safe work practices.

This course does not include assessable General Education outcomes.

## Major Topic Outline:

- 1. Substation print reading.
- 2. Substation circuits, relays, and grounds.
- 3. National Electric Code construction standards.
- 4. Safety on the job.
- 5. IBEW test.

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

Increased energy efficiency
 Produce renewable energy
 Prevent environmental degradation
 Clean up natural environment
 Supports green services

Percent of course: 0%

First term to be offered:

## Next available term after approval

:

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