# **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 - 128UL
# Credits:1
Contact hours
Lecture (# of hours): Lec/lab (# of hours): 24 Lab (# of hours): Total course hours: 24  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:Transformer Connections II
Course Description:
Instruct apprentices or journey-level workers on the fundamentals of transformer bank connections: delta-delta, wye-wye, wye-delta, open-delta-wye and single-phase regulators and conditions that can cause backfeed. Transformer training is required to be taken each of the three years of a line apprenticeshp in order to meet degree requirements.
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):Electrical Apprenticeship Technologies AAS
Are there prerequisites to this course?
Yes
Pre-reqs:APR-118UL
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: None
Requirements: Journeyman lineman or in second-year apprenticeship
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 or Pass/No Pass
Audit:No
When do you plan to offer this course?

✓ Not every term

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. identify proper transformer bank connections,
- 2. explain the results of wrong polarity, wrong taps and wrong connections;
- 3. implement safety procedures in connections of transformer banks and regulators,
- 4. perform voltage and current readings,
- explain the relationship between mathematics and electricity in a distribution environment.

# This course does not include assessable General Education outcomes.

### **Major Topic Outline:**

- 1. Vectoring.
- 2. Single phase theory.
- 3. Transformer concepts.
- 4. Transformer connections.
- 5. Installing transformers.
- 6. Voltage ratings.

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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