

**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 - 134UE

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**# Credits:** 3

Contact hours

Lecture (# of hours): 30  
Lec/lab (# of hours):  
Lab (# of hours):  
Total course hours: 30

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:** Estimator Phase Design

Course Description:

This course will cover principles and concepts that govern field operations. Students will explain and summarize the basics of electric utility energy systems. The focus is on single and three phase construction projects.

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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 Technology AAS

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

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

Yes

**Recommendations:**

**Requirements:** Acceptance into the Line Estimator apprenticeship program

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?

- Summer
- Fall
- Winter
- Spring
- ✓ Not every term**
- Not every year

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 requirements of single phase residential both underground (UG) and overhead (OH);
2. compile field notes from residential site visits;
3. complete the work process by sketching, design, customer interaction, approval and material ordering;
4. explain three phase OH line construction;
5. compile field notes from construction site visits.

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

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Major Topic Outline:

1. Single Phase Residential both UG and OH
2. Three Phase OH Line construction

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

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

Percent of course: 0%

First term to be offered:

Next available term after approval

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