Clackamas Community College

Online Course/Outline Submission System

Show changes since last approval in red Print Edit Delete Back Reject Publish

Section #1 General Course Information

Department: Apprenticeship

Submitter

First Name: Shelly
Last Name: Tracy
Phone: 0945
Email: shellyt

Course Prefix and Number: APR - 123UE

 # Credits: 4

Contact hours

Lecture (# of hours): 44
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 44

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: Line Estimator Theory III: Power Line

Course Description:

Discover electrical laws, work safety habits and electrical apparatus for power line work. Focus on safe working loads, street lighting circuits, connectors, conductors and ways to protect lines from abnormal voltage.

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: None

Requirements: Accepted 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?

✓ 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. list and explain laws and codes that govern electric utility operations and dictate performance standards,
2. summarize factors considered by the courts in sexual harassment cases,
3. identify and describe electrical apparatus for outside power line work,
4. discuss and employ work safety habits, especially regarding proper procedures for operating a boom truck, safe working loads for wire rope and chain, and factors for tying-in circuits;
5. differentiate among the different types of connectors used in joining conductors and list the four methods of sagging line conductors,
6. compare and contrast the English and metric systems of measurement and use them to solve math problems involving area and volume,
7. describe the differences between incandescent and electric-discharge lamps and closed-loop and open-loop series in street lighting,
8. identify and explain the use of devices that protect lines from abnormal voltage,
9. review and implement procedures used for tower erection,
10. define common traffic signal terminology,
11. articulate the meaning of each element of the standardized conductor color code.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Electrical principles.
2. Laws that govern electric utility operations.
3. Codes that dictate performance standards.
4. Work safety habits.
5. Electrical apparatus for outside power line work.
6. Factors which are considered by the courts in sexual harassment cases.
7. Safety procedures for operating a boom truck.
8. Safe working loads for wire rope and chain.
9. Different types of connectors used in joining conductors.
10. Four methods of sagging line conductors.
11. Comparing the English system with the metric system.
12. Math problems involving area and volume.
13. Difference between incandescent lamps and electric-discharge lamps used in street lighting.
14. Difference between a closed-loop and an open-loop series street lighting circuit.
15. Devices that are used to protect lines from abnormal voltage.
16. Operations in tower erection.

17. Traffic signal terminology.
18. Standardized conductor color code.
19. Safety factors that should be observed when tying-in circuits.

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
: