

Clackamas Community College

Online Course/Outline Submission System

Show changes since last approval in red

Section #1 General Course Information

Department: Apprenticeship

Submitter

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

Course Prefix and Number: APR - 231UW

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 Substation Wireman I

Course Description:

Advanced Substation Wireman I students will learn about local union by-laws, worker benefits, and labor management relations and their responsibilities as a journey-level worker. Also non-standard equipment such as static volt-amphere reactive (VAR) compensators, gas insulation stations. Additional topics include System Control and Data Aquisition (SCADA), and alternative energy sources. This course is part of the NJATC substation curriculum.

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: Successful completion of APR-123UW, Fundamental Substation Wireman III

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?

✓ Fall

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. summarize union by-laws and labor management relations.
2. distinguish the responsibilities of a journey-level worker,
3. identify substation control room equipment,
4. explain the function of static VAR compensators,
5. explain how protective relays and meters are tested, calibrated and maintained;
6. describe the role of System Control and Data Acquisition (SCADA),
7. explain how substation batteries, chargers, and inverters are connected and maintained;
8. describe the function of gas insulation stations,
9. identify the protocol to safely commission and energize a substation,
10. name alternative energy sources.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Almost a journeyman.
2. Understanding your local union by-laws.
3. Labor management relations/Labor Management Cooperation Council (LMCC).
4. Substation control rooms and system overview.
5. Control equipment.
6. System Control and Data Acquisition (SCADA).
7. Substation batteries.
8. Commissioning and energizing a substation.
9. Alternative energy sources.

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

:
