

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 - 128UW

Credits: 2

Contact hours

Lecture (# of hours):

Lec/lab (# of hours): 40

Lab (# of hours):

Total course hours: 40

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 Shop Overview

Course Description:

This course is designed to instruct students on types of transformers, their construction, testing and overhaul procedures, tranformer parts, oil used and the chemicals they contain. This training is through the transformer shop.

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?

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?

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. summarize the facility tour: how to classify junkers and workers, describe polychlorinated biphenyl (PCB) testing and PCB hold, identify the general layout of the storage area and explain the processes that take place in the oil processing room and storage tank area;
2. name general overhaul procedures for overhead transformers,
3. define different testing procedures (ratio, hipot primary and secondary);
4. demonstrate how to overhaul a transformer (replace gaskets, primary caps, secondary caps, secondary studs, fuses when needed and drain and replace oil, etc.);
5. modify 120/210 secondary to 120 multiple,
6. name general overhaul procedures for pad mount transformers,
7. overhaul mini pads (ranch runner), replace pad, extend secondary leads, replace fuse, etc. all under the direct supervision of a journeyman;
8. overhaul a single phase pad mount transformers (replace primary load break bushings, replace fuse, replace secondary buss bar, etc.);
9. overhaul 3 phase pad mount transformers (drain and replace oil, change fuses, primary load break bushings, secondary paddles, etc.);
10. explain the general operation of a recloser and their testing procedures,
11. overhaul a recloser,
12. explain the general operation of voltage regulators and their testing procedures,
13. overhaul a regulator, or if one is not available then describe what the process would be;
14. explain the general operation of a federal pacific switchgear, its testing and overhaul procedures.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. General tour.
2. Overhead transformers.
3. Pad mount transformers.
4. Reclosers.
5. Voltage regulators.
6. Federal Pacific Switchgear.

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

:
