

# Clackamas Community College

## Online Course/Outline Submission System

Show changes since last approval in red

APR-111UW Basic Substation Wireman I

General education certified:  Yes  No

- Writing
- Oral Communication
- Arts and Letters
- Science & Computer Science
- Mathematics
- Social Science
- Cultural Literacy
- Health & Physical Education

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Approved Date (mm/dd/yyyy):  /  /

### 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 - 111UW

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**# 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.

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**Course Title:** Basic Substation Wireman I

**Course Description:**

In this course, students will examine apprentice responsibilities including job conduct, absenteeism, sexual harassment, drug use and safety. Students will also begin the first step of electrical trade theory by studying basic math concepts, including whole numbers, fractions, decimals, percentages and equations. As the lessons progress, electrical components such as current, voltage, resistance, Ohm's Law and power will be introduced. This course is part of the NJATC Substation Curriculum.

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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):** Electrical Apprenticeship AAS

Are there prerequisites to this course?

Yes

**Pre-reqs:** Successful completion of APR-110UW

**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. explain the academic responsibilities of an apprentice in this program,
2. list and describe the terms and conditions of the Apprenticeship Agreement,
3. solve fundamental math problems involving subtraction, multiplication, division, fractions, decimals and percentages,
4. develop algebraic equations and formulas to solve word problems,
5. explain the fundamentals of electricity including current, voltage, resistance and power,
6. describe common electrical hazards,
7. discuss safety codes and safety devices used by electrical workers,
8. use Ohm's Law to solve unknown values in an electrical circuit,
9. identify various hand and power tools of the wireman trade.

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This course does not include assessable General Education outcomes.

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**Major Topic Outline:**

1. Understanding your apprenticeship and responsibilities.
2. Math basics with whole numbers.
3. Solving algebraic equations and formulas.
4. Introduction to OSHA/1910.269 and responsibility for safety.
5. Electrical hazards.
6. Safety codes and safety devices.
7. The electrical circuit and Ohm's Law.
8. Basic tools of the trade, their use and care.
9. Digger Derrick capabilities, rigging calculations and rigging hands-on using hand signals.

**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:**

Specify term: Fall 2014

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