

## **Apprenticeship Learning Outcomes Assessment Report for 2018-2019 Academic Year**

For the 2018-2019 Academic Year, the Apprenticeship and Trades Department is assessing the Degree Learning Outcomes for our AAS in the Electrician Apprenticeship Technologies Degree for Manufacturing Plant Electricians (MPE). The Courses used for this assessment have an APR designation. These courses are overseen by the Oregon Bureau of Labor and Industry (BOLI).

Since each Apprenticeship Student has a Journey Level person accompanying and overseeing them daily at their worksite, Apprenticeship instruction has an imbedded assessment tool provided by the Journey Person who is required by BOLI standards to be in constant daily communication at the worksite with the Apprenticeship Student who is under their charge. There are even rules on when the Apprentice must be within the line of sight of the Journey Person and how far they can be physically separated. The Journeyperson is the best judge of how an individual Apprentice is progressing.

Accordingly, we asked each Journey Person who has an Apprentice under their tutelage to assist us in this year's assessment of our Learning Outcomes for the Degree.

The following Ranking Survey Packet was sent to each Journeyperson asking them evaluate their Apprentice on how that Apprentice is applying the skills learned in their APR classes to their real time real world Job as a Manufacturing Plant Electrician (MPE).

Greetings Journeyperson or Supervisor:

I am Rick Willebrand and I am the Subject Area Committee Chairperson for the Department of Apprenticeship and Trades at Portland Community College's Swan Island Trades Center and I am asking for your help and expertise.

Currently an Apprentice (s), who is working under your supervision and mentoring, is taking his/her Related Training Courses here at PCC. Each year our Department is asked to complete an Assessment of how well our Courses are meeting the expected learning outcomes for the College as a whole, for the Degrees and Certificates we grant, and also for our individual Courses. This year we are assessing the Degree Outcomes for our AAS Degree in Electrical Apprenticeship Technologies for the MPE Apprenticeship Program. These courses we are using for the Degree Assessment have an APR Course designation and were taught here at Swan Island Trades Center to the MPE Apprentice in your care. We are assessing for only one APR Degree outcome: Repair and install electrical wiring devices according to licensure regulations to meet NEC and OSC. We are asking that you will complete the enclosed, brief Ranking Survey and return it to us in the pre-paid postage envelope by the second week in June. Also enclosed is an instruction sheet that explains the three ranking levels of 1, 2, or 3.

This assessment is only to help us evaluate and improve our classroom instruction and is in no way an evaluation of a Training Agent, an Apprentice, or a PCC Instructor. It will never be used to assign a grade in a class. The information will only be viewed by the Apprenticeship and Trades Department and will only be shared with PCC as general statistical data and never as personal data. The surveys are shredded after we compile data from them and they are not kept on file.

I thank you for your help.

Appreciatively,

Rick Willebrand

SAC Chair

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# **Learning Outcomes/Skills Assessment Levels**

## **For the level of Professional Competence**

### **Level 1- Limited**

Limited demonstration and application of knowledge and skills.

Apprentice exhibits limited skill and speed, applies few learned skills and knowledge and struggles to perform task, does not complete task or requires excessive supervision from Journeyperson.

### **Level 2 - Basic**

Basic demonstration and application of knowledge and skills.

Apprentice exhibits basic skill and speed, applies knowledge and uses developing skills to perform task, completes tasks with some supervision from Journeyperson.

### **Level 3 - Advanced**

Demonstrates advanced comprehension and is able to apply essential knowledge and skill.

Apprentice exhibits advanced skill and speed, applies knowledge and Uses proficient skills to perform task, completes task with an amount of supervision considered appropriate by Journeyperson.

## Electrical Apprenticeship Degree Outcomes Learning Assessment

1 2 3

Repair and install electrical wire devices according to licensure regulations to meet NEC and Osc.

## Course Level Outcomes Learning Assessment

1 2 3

Calculate voltage drop.

Demonstrate safe working conditions In accordance with state and federal regulations.

Solve electrical equations using trades specific mathematical formulas.

Draw and interpret industrial blueprints and schematics

Use Test equipment to make electrical measurements.

Describe various troubleshooting techniques for trade-specific equipment

Use the general theories of magnetism, electromagnetism, and magnetic flux to discuss, explain, and apply the general operating principles of motors, transformers, Inductors, capacitors, and generators for both A/C and D/C currents as applied to the workplace

Use lighting fundamentals, battery theory, trade-specific math, NEC rules for fuses and receptacles to discuss, explain, Install, and repair electrical devices in the workplace

Use the basic principles of electrical theory to discuss, explain, and calculate how electrical current flows in conductors and electrical circuits as applied to the workplace

Knowledge & use of basic tools

Our SAC asked twenty five Apprenticeship Students to hand carry this Learning Assessment packet to each of their respective Journey Persons and requested that the Journey Person complete and return it by the last week of Spring Term.. The response was sixty five percent return. We had set a thirty percent return as acceptable to make the Ranking Survey a valid assessment tool and were glad that we were able to exceed that mark.

The information collected was entered into a chart similar to an excel spreadsheet so that the SAC could do a better side by side comparison of the data.

Here are the highlight results of that data evaluation:

Six percent had a single score at the lowest level. Category #one

Sixty nine percent scored at the highest level of learning. Category #three exclusively.

Twenty five percent scored lower but with only thirty seven percent of those getting a score in in category #two

Our SAC was gratified by these results especially for APR Curriculum that is full of technical data, formulas, and step by step instruction. The above scores were unexpectedly high and well above acceptable.

Of most interest to our SAC was that, consistently, the low category, # two rankings, appeared in the same two Course Level outcomes: *Draw and interpret Industrial blueprints and schematics and Solve electrical equations using trade specific mathematical formulas.*

We will be reviewing our APR 164 – Calculations for the Trades Math Course to add course content in order to improve those scores.

Appreciatively,

The Apprenticeship and Trades Subject Area Committee.



