



Grays Harbor PUD

"It's your PUD!"™

HISTORY OF ELECTRICAL LINEMAN APPRENTICESHIP

- Partnership began for Lineman Apprenticeship about 1995
- Originally the courses were all below 100 level
- Program was approved as a certificate of completion and certificate of achievement in March 2020
- Students can now use these courses as general electives towards an AA degree
- PUD provides the curriculum based on the approved Washington State Apprenticeship Program Standards
- Required to complete 6,000 hours
- PUD provides the instructors and the training locations
- The college manages the registrations, pays the instructors, and awards the credits

LINEMAN APPRENTICESHIP PARTICIPATING UTILITY DISTRICTS

- City of Eatonville
- City of McCleary
- City of Port Angeles
- Clallum County PUD
- Grays Harbor County PUD
- Jefferson County PUD
- Lakeview Light & Power
- Lewis County PUD
- Mason County #1
- Mason County #3
- Ohop Mutual Light
- Pacific County PUD
- Peninsula Light Company

LINEWORKER'S APPRENTICE

Certificate of Completion

Prerequisite:

Must be an enrolled Lineworker's Apprentice.

Core Courses (36 credits)

		<u>Credits</u>
ELECT 111	Lineworkers' Apprenticeship Related Supplemental Instruction (RSI) I	4
ELECT 112	Lineworkers' Apprenticeship RSI II	4
ELECT 113	Lineworkers' Apprenticeship RSI III	4
ELECT 121	Lineworkers' Apprenticeship RSI IV	4
ELECT 122	Lineworkers' Apprenticeship RSI V	4
ELECT 123	Lineworkers' Apprenticeship RSI VI	4
ELECT 131	Lineworkers' Apprenticeship RSI VII	4
ELECT 132	Lineworkers' Apprenticeship RSI VIII	4
ELECT 133	Lineworkers' Apprenticeship RSI IX	4

General Education Courses (15 credits)

ENGL& 101	English Composition I <u>or</u>	5 <u>or</u>
ENGL 150	Vocational/Technical/Business Writing	5
MATH 101	Application of Algebra for Vocational/Technical Students (or higher)	5
PSYC& 100	General Psychology <u>or</u>	5 <u>or</u>
PSYCH 106	Applied Psychology	5

Minimum Credits Required

51

LINEWORKER'S APPRENTICE

Certificate of Achievement

Prerequisite:

Must be an enrolled Lineworker's Apprentice.

Core Courses (36 credits)

	<u>Credits</u>
ELECT 111 Lineworkers' Apprenticeship Related Supplemental Instruction (RSI) I	4
ELECT 112 Lineworkers' Apprenticeship RSI II	4
ELECT 113 Lineworkers' Apprenticeship RSI III	4
ELECT 121 Lineworkers' Apprenticeship RSI IV	4
ELECT 122 Lineworkers' Apprenticeship RSI V	4
ELECT 123 Lineworkers' Apprenticeship RSI VI	4
ELECT 131 Lineworkers' Apprenticeship RSI VII	4
ELECT 132 Lineworkers' Apprenticeship RSI VIII	4
ELECT 133 Lineworkers' Apprenticeship RSI IX	4

Minimum Credits Required

36

ENROLLMENT DATA LINEMAN APPRENTICESHIP

			2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Headcount (# of registered students)								
Fall			12	14	13	14	21	24
Winter			12	13	13	13	21	24
Spring			12	14	13	13	21	24
	Annual Headcount		36	41	39	40	63	72
FTE's								
<i>(# of student x 4 credits ea /15 quarterly FTE)</i>								
Fall			3.20	3.73	3.47	3.73	5.60	6.40
Winter			3.20	3.47	3.47	3.47	5.60	6.40
Spring			3.20	3.73	3.47	3.47	5.60	6.40
Annualized	<i>(annual HC x 4 cr/45 annual FTE)</i>		3.20	3.64	3.47	3.56	5.60	6.40

LINEMAN APPRENTICESHIP COST ANALYSIS

		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 Estimated
Annual FTE's		3.20	3.64	3.47	3.56	5.60	6.40
Cost							
Salaries		21,365	21,856	22,617	23,114	23,979	24,457
Benefits		1,747	1,776	1,826	1,886	1,954	2,000
Total Expenditures		\$ 23,112	\$ 23,632	\$ 24,443	\$ 25,000	\$ 25,933	\$ 26,457
Revenue							
Tuition (student/PUD paid)		7,344	8,692	8,775	9,000	14,238	16,272
State Reimbursement		0	0	0	0	0	0
Fees		0	0	0	0	0	0
Total Revenue		7,344	8,692	8,775	9,000	14,238	16,272
Net Income (Loss)		\$ (15,768)	\$ (14,940)	\$ (15,668)	\$ (16,000)	\$ (11,695)	\$ (10,184.96)
Cost per FTE		4,928	4,099	4,520	4,500	2,088	1,591
Revenue per FTE		2,295	2,385	2,531	2,531	2,543	2,543
Approximate revenue per FTE (\$4,000 per FTE)		\$ 12,800	\$ 14,578	\$ 13,867	\$ 14,222	\$ 22,400	\$ 25,600
Potential profit/Loss		\$ (2,968)	\$ (362)	\$ (1,801)	\$ (1,778)	\$ 10,705	\$ 15,415

HISTORY OF UTILITY WIREMAN APPRENTICESHIP

- Partnership began for Utility Wireman Apprenticeship in Fall 2020
- Program was approved as a certificate of achievement in Fall 2020
- Students can now use these courses as general electives towards an AA degree
- PUD provides the curriculum based on the approved Washington State Apprenticeship Program Standards
- Required to complete 8,000 hours
- PUD provides the instructors and the training locations
- The college manages the registrations, pays the instructors, and awards the credits

UTILITY WIREMAN APPRENTICESHIP PARTICIPATING UTILITY DISTRICTS

- Grays Harbor County PUD

UTILITY WIREMAN APPRENTICE

Course

Electrical Safety/OSHA and Applied Mathematics

Utility Wireman Basics and DC Theory/DC Circuits

Tool Identification and Substation Overview

Intro to Print Reading, Substation Construction and Substation Equipment Identification

Three Phase AC and Washington Administrative Code

Substation Hazards / Safety and Power Transformers

Circuit Breaker Maintenance & Testing and Substation Testing & Commissioning

Print Reading & Sequence of Events and Protective Relays

Metering and Line Equipment

Substation Maintenance and Washington Administrative Code

Washington Administrative Code, Job Site Safety, Substation Test Equipment and Single Phase Transformers

Credits

4

4

4

4

4

4

4

4

4

4

4

Total Credits

44

ENROLLMENT DATA UTILITY WIREMAN APPRENTICESHIP

				2020-21	2021-22 Estimated
Headcount (# of registered students)					
	Fall			2	2
	Winter			2	2
	Spring			2	2
		Annual Headcount		6	6
FTE's					
(# of student x 4 credits ea /15 quarterly FTE)					
	Fall			0.53	0.53
	Winter			0.53	0.53
	Spring			0.53	0.53
	Annualized	(annual HC x 4 cr/45 annual FTE)		0.53	0.53

UTILITY WIREMAN APPRENTICESHIP COST ANALYSIS

		2020-21	2021-22 Estimated
Annual FTE's		0.53	0.53
Cost			
Salaries		8,050	12,228
Benefits		656	1,500
Total Expenditures		\$ 8,706	\$ 13,728
Revenue			
Tuition (student/PUD paid)		1,356	1,356
State Reimbursement		0	0
Fees		0	0
Total Revenue		\$ 1,356	\$ 1,356
Net Income (Loss)		\$ (7,350)	\$(12,372)
Cost per FTE		13,781	23,198
Revenue per FTE		2,543	2,543
Approximate revenue per FTE (\$4,000 per FTE)		\$ 2,133	\$ 2,133
Potential Profit/Loss		\$ (5,217)	\$(10,239)

COLLEGE NEEDS TO CONTINUE SUPPORTING APPRENTICESHIPS

- Higher tuition reimbursement rate for colleges (currently on-half of residency tuition)
- Financial support from utility districts to colleges to support apprentices
- Stronger language to college administration to support apprenticeships
- Allow apprenticeship programs at the colleges to retain the FTE from the apprenticeships
- Need more wireman students to make it more cost effective



If you have additional questions or comments, feel free to contact me:

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