

Docket Item:

Community College Approval: Chemeketa Community College, Certificate of Completion in Limited Electrician Apprenticeship Technologies within 46.0302 Electrician.

Summary:

Chemeketa Community College proposes a new Certificate of Completion in Limited Electrician Apprenticeship Technologies. Higher Education Coordinating Commission (HECC) staff completed a review of the proposed program. After analysis, HECC staff recommends approval of the degree as proposed.

Staff Recommendation:

The HECC recommends the adoption of the following resolution:
RESOLVED, that the Higher Education Coordinating Commission approve the following degree: CCo in Limited Electrician Apprenticeship Technologies.



Chemeketa Community College seeks the Oregon Higher Education Coordinating Commission's approval to offer an instructional program leading to a Certificate of Completion in Limited Electrician Apprenticeship Technologies.

Program Summary

Apprenticeship training is a method of vocational education recognized by the Apprenticeship and Training Division (ATD) of the Oregon Bureau of Labor and Industries (BOLI). It combines full-time on-the-job training (OJT) with committee-approved employers and trade-related instruction.

Apprentices work full time and take courses one or two evenings a week for four years.

The instruction at Chemeketa is for those already working in selected trades as apprentices, or for journey-level workers who wish to upgrade their skills or knowledge. First and second-year HVAC/R and sheet metal courses are open to the public. The programs require four years of OJT and related instruction to earn a journey card. HVAC/R technicians, plumbers, and electricians require state licensure at the conclusion of their training.

Chemeketa's Apprenticeship Department offers a Certificate of Completion and an Associate of Applied Science degree in Construction Trades, General Apprenticeship with specializations in Heating, Ventilation, Air-Conditioning, and Refrigeration (HVAC/R); Plumbing; and Sheet Metal, and a Certificate of Completion and an Associate of Applied Science degree in Electrician Technologies Apprenticeship for Inside Wire Electricians and a certificate of completion in Limited Residential Electrician. The program provides statewide transfer opportunities. The related training courses are based on ATD and local Joint Apprenticeship Training Committee-approved related training courses developed to meet industry standards. They are approved for BOLI-registered apprentices with limited courses available to the general student population.

If you are interested in becoming registered in an Oregon State Apprenticeship program, please visit oregonapprenticeship.org or boli.state.or.us for program and entrance requirements. For more information on Chemeketa's apprenticeship certificates and degrees, please call 503.399.5255 or go to go.chemeketa.edu/apprenticeship. IEC Oregon manages the electrician program and may be reached at iecoregon.org.

All students in the HVAC/R and Inside Wire Electrician apprenticeship programs must complete 8,000 hours of State of Oregon approved OJT; the Sheet Metal program requires 7,200 hours of OJT; and the Plumbing program requires 7,700 hours of OJT. In addition, students must successfully complete specific skill sets in their field of specialization.

Students Transferring into the Apprenticeship Program

Transcripts from students interested in transferring to Chemeketa for apprenticeship program completion, or for degree and certificate completion, will be evaluated on an individual basis. Learner outcomes will determine the courses and number of credits accepted. The total number of credits accepted may or may not equal the number of credits approved for Chemeketa students. Contact the apprenticeship office at 503.399.5255 or email apprenticeship@chemeketa.edu if you have questions about transferring into the HVAC/R or sheet metal programs. Contact other programs directly about transferring.

Electrician Apprenticeship Technologies Certificate, Limited Residential Electrician requirements:

- Journey-level status in the electrical industry.
- Complete a minimum of 30 credits at Chemeketa.
- Complete the required 24 program credit hours.
- Complete 11-12 general education credits: MTH095 (or higher), Human Relations elective, and WR115 (or higher).

1. ***Describe the need for this program by providing clear evidence.***

The Area II Inside Electrical JATC Advisory Committee met on October 21, 2020 and voted on this certificate of completion. There is a need for a limited completion certificate for students with journey cards who are employed by an electrician for on-the-job training and looking for a stackable credential to move forward in their career. According to Qualityinfo.org, "Employment in this occupation in 2019 was much larger than most occupations across the state. The total of job openings is projected to be much larger than most occupations in Oregon through 2029. This occupation is to grow at about the statewide average growth rate for all occupations through 2029." Furthermore, jobs are projected to grow by 16.9% between 2019-2029 with an approximate 231 jobs per year. Starting wages, which is reasonable with this certificate, is \$39,769/year though average salaries can reach \$68,536/year.

2. ***Does the community college utilize systemic methods for meaningful and ongoing involvement of the appropriate constituencies?***

The college uses a range of sources to establish ongoing partnerships with its community constituencies. Some of these partnerships include: Northwest Commission on Colleges and Universities, the State Board of Education, Community College Workforce Development, employment advisory boards, student placement organizations, and licensing boards for appropriate occupations.

The Limited Residential Electrician Statewide Related Certificate of Completion was approved on February 23, 2021 by the Chemeketa Community College's Curriculum Committee and then approved by Chemeketa Community College's Board of Education on March 17, 2021.

Chemeketa Community College has partnerships with local high schools to offer courses in their schools for college credit. These courses will prepare students for entry into the program soon after graduating. Other required and general education courses will be valuable in preparation for entrance into the program and the workforce.

Collaboration with workforce and economic development partners assists the college to build a skilled and trained workforce ready to enter their fields immediately upon completion of the program. The Apprenticeship Department that will be offering this Limited Residential Electrician Statewide Certificate of Completion has an advisory committee composed of professionals from across the Willamette Valley:

Dan Drummer - Engleman Electric, Hubbard OR
 Steve Shepherd—Bear Electric, Donald OR
 Carl Redman—Bear Electric, Donald OR
 Kevin Simpson—Simpson Electrical Construction, McMinnville OR
 John Fobert - Whiskey Hill Electric, Hubbard, OR
 Ralph Williams—Clackamas County, Oregon City OR
 Chris Wheeler—City of Salem, Salem OR
 Lee Barklow—Whiskey Hill Electric, Hubbard OR
 Jason Rush, Lebanon OR
 Ben Fears—Rite Way Electric, Albany OR
 John Morris—John Morris Electrician, Pendleton OR
 Halden Fobert - Jet Industries, Salem OR
 Kayleen Williams—Area II Apprenticeship Director, JATC, Tigard OR

3. ***Is the community college program aligned with appropriate education, workforce development, and economic development programs?***

The courses for this program have been approved by the advisory committee so that students are fully prepared for the workforce. The program courses are:

- APR153A Electrician Apprenticeship Fundamentals (5)
- APR153B Electrician Apprenticeship AC/DC Circuits (5)
- APR153C Electrician Apprenticeship Measurements (3)
- APR153D Electrician Apprenticeship Theory (5)
- APR153E Electrician Apprenticeship Wiring and Print Reading (5)
- APR153F Electrician Apprenticeship Residential Installation (3)

These courses were approved by the advisory committee on October 21, 2020.

Chemeketa's Limited Residential Electrician program will lead to employable skills at the end of the program. Individuals in this field earn an annual wage of \$68,536 per year and starting wages at \$39,769 (qualityinfo.org), therefore it will allow these students to enter the workforce in a family-wage career.

4. Does the community college program lead to student achievement of academic and technical knowledge, skills, and related proficiencies?

The design of the program is a 38 credit hour approved Statewide Related Certificate of Completion. The primary audience for this program is students who wish to focus on becoming a residential electrician. The learner outcomes for each course provide a range of skills to allow graduates to pursue employment in this industry:

APR153A Electrician Apprenticeship Fundamentals (5)

- Solve mathematical formulas and equations related to theory and practices of the trade.
- Describe and apply basic theory of electrical sources in DC circuits, series and parallel circuits, and calculate voltage drop.
- Use Ohmmeters and other test equipment to make electrical measurements.
- Apply the Oregon Electrical Specialty Code.
- Work safely in a variety of electrical systems.

APR153B Electrician Apprenticeship AC/DC Circuits (5)

- Solve mathematics formulas and equations related to theory and practices of the trade.
- Describe and apply basic theory of electrical sources in AC circuit series and parallel circuit series, parallel circuits, and point-to-point methods for short circuit calculations.
- Use test equipment to make electrical measurements.
- Apply the Oregon Electrical Specialty Code to interpret and comply with applicable code requirements.
- Work safely in a variety of electrical systems.

APR153C Electrician Apprenticeship Measurements (3)

- Operate the different types of measuring instruments commonly used in the electrical field.
- Apply different types of batteries.
- Explain the concept of magnetic induction related to generators, motors, and transformers.
- Interconnect micro-electronic control schemes.
- Apply electrical code standards to inside electrical wiring.
- Interpret Oregon Electrical Specialty Code.
- Work safely in a variety of electrical systems.

APR153D Electrician Technician Theory (5)

- Apply the theory and techniques of the trade to residential requirements and calculations.
- Describe to peers the skills required in print reading, specifications, installations, and hazardous locations.
- Interpret and apply the applicable section of the Oregon Electrical Specialty Code to installations and calculations.
- Work safely in a variety of electrical systems.

APR153E Electrician Apprenticeship Wiring and Reading (5)

- Apply the theory and techniques of the trade to the residential requirements and calculations.
- Relate to peers the skills required in print reading, specification, installations, and hazardous locations.
- Interpret and apply the applicable section of the Oregon Electrical Specialty Code to installations and calculations.
- Work safely in a variety of electrical systems.

APR153F Electrician Apprenticeship Residential Installation (3)

- Apply the theory and techniques of the trade to residential requirements and calculations.
- Describe to peers the skills required in print reading, specifications, installations, and hazardous locations.
- Interpret and apply the applicable section of the Oregon Electrical Specialty Code to installations and calculations.
- Work safely in a variety of electrical systems.

These courses lead to the following outcomes that students will be prepared to accomplish:

- Apply theory to electrical wiring.
- Repair and install electrical wire devices according to licensure regulations to meet National Electrical Code (NEC) and Oregon Electrical Specialty Code (OESC) standards for Residential Electricians.

Learning will be ensured through the assessment of these program outcomes with the following methods:

On-the-job training, projects, and exams

Instruction methods within this program will be face-to-face or online. Students will have general education courses for the degree. Any general education courses may be provided in a face-to-face, a hybrid, or an online environment. Program course lectures provide various hands-on activities.

The college has a unit planning process that includes a program assessment on an annual basis. Student, faculty, advisory committee, and administrative collaboration is incorporated to ensure students are prepared with appropriate skills to enter the workforce and meet the requirements of Limited Residential Electrician.

5. ***Does the community college identify and have the resources to develop, implement, and sustain the program?***

The Northwest Commission on Colleges and Universities (NWCCU) accredits Chemeketa Community College.

The new program will have startup costs of 0.

Year 0: Total Revenue: 0 Total Expenditures: 0 Net Income (Deficit): 0

Year 1: Total Revenue: 0 Total Expenditures: 0 Net Income (Deficit): 0

Year 2: Total Revenue: 0 Total Expenditures: \$9,000 Net Income (Deficit): \$(9,000)

Year 3: Total Revenue: 0 Total Expenditures: \$9,000 Net Income (Deficit): \$(9,000)

The Limited Residential Electrician program has 0 full-time faculty positions and 0 classified staff along with numerous adjunct faculty hired and paid by IEC Oregon who generally work full-time in the industry.

Chemeketa Community College started multiple programs over the last fifty years and has the institutional support to hire qualified and trained faculty to teach in all CTE programs.

This new program and its courses have been developed and approved by the employer-based advisory committee, as well as approved by the college's Curriculum Committee and Chemeketa Community College's Board of Education.

Faculty will regularly participate in professional development activities to stay current and up to-date with industry changes and requirements, which will translate into the classroom learning environment.

The program will reside at Independent Electrician Training Center, 3710 Portland Rd NE, Salem OR 97305.

The college has strong relationships with industry partners/employers and will continue to foster these relationships. This program has an employer-based advisory committee. The program will continue to work with local industry leaders and educational institutions to recruit students for this program.

Assurances

Chemeketa Community College has met or will meet the four institutional assurances required for program application.

1. *Access.* The college and program will affirmatively provide access, accommodations, flexibility, and additional/supplemental services for special populations and protected classes of students.
2. *Continuous Improvement.* The college has assessment, evaluation, feedback, and continuous improvement processes or systems in place. For the proposed program, there will be opportunities for input from and concerning the instructor(s), students, employers, and other partners/stakeholders. Program need and labor market information will be periodically re-evaluated and changes will be requested as needed.
3. *Adverse impact and detrimental duplication.* The college will follow all current laws, rules, and procedures and has made good faith efforts to avoid or resolve adverse *intersegmental* and *intra-segmental* impact and detrimental duplication problems with other relevant programs or institutions.
4. *Program records maintenance and congruence.* The college acknowledges that the records concerning the program title, curriculum, CIP code, credit hours, etc. maintained by the Office are the official records and it is the college's responsibility to keep their records aligned with those of the Office. The college will not make changes to the program without informing and/or receiving approval from the Office.