



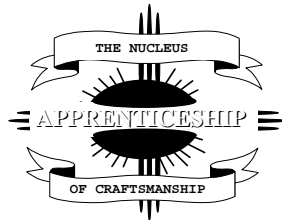
STANDARDS OF APPRENTICESHIP
Adopted by

AREA III SHEET METAL/HVAC ENVIRONMENTAL SYSTEMS JATC

(sponsor)

| <u>Skilled Occupational Objective(s):</u> | <u>SIC #</u> | <u>SOC #</u> | <u>SYMBOL</u> | <u>SUFFIX</u> | <u>Term</u> |
|--|--------------|--------------|---------------|---------------|-------------|
| Environmental Control System Servicer/Installer | 1711 | 49-9021 | 0637 | 000 | 8,000 hours |

| | | | | | |
|-----|------|-----------|--|---------|--|
| MA# | 3025 | SOC Title | Environmental Control System Servicer/Installer | License | Limited Energy Technician - Class B |
|-----|------|-----------|--|---------|--|



APPROVED BY THE
Oregon State Apprenticeship and Training Council
REGISTERED WITH THE
Apprenticeship and Training Division
Oregon State Bureau Labor and Industries
800 NE Oregon Street
Portland, Oregon 97232

APPROVAL:

March 19, 1990

Initial Approval Date

By: **BRAD AVAKIAN**
Chairman of Council

June 19, 2008

Last Date Revised

By: **STEPHEN SIMMS**
Secretary of Council

March 20, 2008

Committee Amended Date

APPRENTICESHIP STANDARDS

The Oregon State Apprenticeship and Training Council (OSATC) has the authority to develop, administer, and enforce apprenticeship program standards (Standards) for the operation and success of an apprenticeship or on-the-job-training program in the State of Oregon. Apprenticeship programs and committees function to administer, exercise or relinquish authority only with the consent of the OSATC and only apprentices registered with or recognized by the Oregon State Bureau of Labor and Industries (BOLI), Apprenticeship and Training Division (ATD) will be recognized by the OSATC. Parties signatory to these apprenticeship standards declare that their purpose and policy is to establish and sponsor an organized system of registered apprenticeship and training education.

These Standards are in conformity with and are to be used in conjunction with the Apprenticeship Rules, Chapter 839-011 OAR (Oregon Administrative Rules); Apprenticeship and Training Statutes, Chapter 660 ORS (Oregon Revised Statute); The National Apprenticeship Act, 29 U.S.C. (United States Code) 50; Apprenticeship Programs, Title 29 Part 29 CFR (Code of Federal Regulations); and Equal Employment Opportunity in Apprenticeship and Training, Title 29 Part 30 CFR which collectively govern the employment and training in apprenticeable occupations. They are part of the apprenticeship agreement and bind all signers to compliance with all provisions of registered apprenticeship.

If approved by the council, such amendment(s) and such changes as adopted by the council shall be binding to all parties on the first day of the month following such approval. Sponsors shall notify apprentices and training agents of changes as they are adopted by the council. If and when any part of these Standards becomes illegal, as it pertains to federal and/or state law, that part and that part alone will become inoperative and null and void, and the Bureau of Labor and Industries (BOLI) may recommend language that will conform to applicable law for adoption by the OSATC. The remainder of the Standards will remain in full force and effect.

See ORS Chapter 660 & OAR 839-011 for the definitions necessary for use with these Standards.

Sections of the standard inside of a border are specific to the individual standard and may be modified by the sponsor by submitting a revised standard for approval by the Oregon State Apprenticeship and Training Council. All other sections of the standard are boilerplate and may only be modified by the Council.

I. GEOGRAPHIC AREA COVERED:

The sponsor only has authority to recognize training agents (employers) that maintain their principal place of business inside of the geographical area covered by these standards. Training agents that maintain their principal place of business outside of the geographical area covered by this standard may only be recognized as traveling training agents when working in geographic area covered by this standard. The Sponsor will ensure compliance with the provisions for traveling training agents and of any Reciprocity Agreement recognized by the OSATC. (See ORS 660.137 / OAR 839-011-0260 / OSATC Policy # 16)

The geographic area covered by these standards shall be Douglas and Lane counties in the State of Oregon.

II. MINIMUM QUALIFICATIONS:

Minimum qualifications must be clearly stated and applied in a nondiscriminatory manner (See ORS 660.126 (1b)). Documentation must be provided for all minimum qualifications:

- Age: Must be at least 17 years of age to apply and may not be registered until they are at least 18 years of age
- Education: 1. Must be a high school graduate or have obtained the equivalent GED certificate.
2. Must have completed one year of high school algebra, integrated math 2, or equivalent post-high school algebra course(s) with a grade of C or better, or submit equivalent math placement test scores.
- Physical: None
- Testing: None
- Other: None

Note: See section X # 6 & 7

III. CONDUCT OF PROGRAM UNDER OREGON EQUAL EMPLOYMENT OPPORTUNITY IN APPRENTICESHIP PLAN (OAR 839-011-0200):

Standards must include the Oregon Equal Employment Opportunity in Apprenticeship and Training Pledge (See OEEOA Section 4)

THE SPONSOR HEREBY ADOPTS:

"The recruitment, selection, employment and training of apprentices during their apprenticeship shall be without discrimination because of race, sex, color, religion, national origin, age, disability or as otherwise specified by law. The sponsor shall take positive action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required by the rules of the Oregon State Apprenticeship and Training Council and Title 29, Part 30 of the Code of Federal Regulations."

Sponsors with five (5) or more apprentices in an apprenticeable occupation must adopt an Equal Employment Opportunity Plan and Selection Procedures and submit the plans for Council approval. (See OAR 839-011-0200 / Sections 5 & 6 of the Oregon Equal Employment Opportunity in Apprenticeship (OEEOA) / Council policy # 23).

A. SELECTION PROCEDURES:

The committee shall select apprentices from a pool of eligible applicants according to the following procedure: (ORS 660.137 (3) / OEEOA section 6)

1. All out of work apprentices in good standing will be offered the opportunity for re-employment prior to new applicants being registered in conformance with the committee's approved initial employment policy.
2. Application Notice and Schedule
 - a. The sponsor shall open for applications when its current pool of eligibles (including out-of-work apprentices) falls below the number established by committee action.
 - b. The sponsor shall be open for a minimum of ten working days to accept applications.

- c. Prior to distributing notices, the proposed public notice shall be provided to the BOLI/ATD Portland office and to the assigned Apprenticeship Representative.
 - d. Public notices shall be disseminated in accordance with the sponsor's Affirmative Action Plan. This notice shall be distributed not less than 30 days in advance of the first date applications will be accepted.
 - e. These items will be included on the public notice:
 - Date of notice
 - The trade/occupation
 - minimum qualifications
 - how to get an application
 - dates, times and places where applications will be accepted
 - geographic area of employment
 - general description and duties of the occupation
 - documentation requirements to show evidence of minimum qualifications and to receive points for education and work history
 - program content and duration
 - name and telephone number of contact person
2. Application Process
- a. The application form will provide a space for the applicant to indicate geographic availability as follows:
 - Lane County
 - Douglas County
 - b. An application shall be provided to any interested individual.
 - c. The sponsor shall maintain a log, which will identify all applicants by a log number that corresponds to the application number. The log will be used to track the history of the application, noting the date the application was provided, the manner by which it was provided (USPS, in person, fax), the date it was returned to the program sponsor, and the final disposition of the application.
 - d. The sponsor shall date and time stamp completed applications and supporting documentation upon receipt.
3. Verification of Minimum Qualifications
- a. All applications and supporting documentation will be reviewed to determine if minimum qualifications are met.
 - b. Applicants who do not meet the minimum qualifications established in the public notice and standards will be notified in writing. Notification will include the
 - reason for rejection
 - requirements for admission into the eligibility pool
 - appeal rights available to the applicant
4. Ranked Pool of Eligibles
- a. Selection of apprentices will not occur until all applications received during the open application period have been rated and ranked.
 - b. Individuals who complete the application and meet the minimum qualifications shall be ranked based upon the attached point system using documented previous experience and education and shall remain in the ranked pool of eligibles for two years.
 - c. Individuals may be removed from the pool at an earlier date by their request, following their failure to respond to a dispatch as established in the committee's

initial placement policy, or by submitting a new application during an open application period.

5. Placement Process

- a. Out-of-work apprentices will be given the opportunity for employment prior to selecting new apprentices. Out-of-work apprentices will be dispatched in order of seniority based on OJT hours in the program, i.e. the out-of-work apprentice with the most OJT hours in the program will be dispatched first.
- b. Sheet Metal eligibles will be dispatched from the ranked pool in descending order based on geographic availability.
- c. Individuals in the ranked pool of eligibles will be selected in descending order. If a training agent rejects an eligible, the training agent will provide the committee with a written, job-related reason that is consistent with the training agent's employment policies.
- d. When apprentices are hired, the sponsor will complete the apprenticeship agreement and submit it to the Bureau of Labor and Industries within 90 days of the agreement date.

6. EXCEPTIONS

2. EXPERIENCED APPRENTICE

Experienced apprentices who have earned at least 1,000 OJT hours and 48 hours of related training in a registered sheet metal program within the past 5 years may be permitted to return to the program, as far as practical, and resume their training where they left off by being placed at the bottom of the out-of-work list, providing the apprentice meets the current minimum qualifications and left the previous program in good standing.

3. NEW TRAINING AGENT

If an employer has not participated in the training of an apprentice under ORS Chapter 660 for at least two years prior to seeking entry or re-entry into the apprenticeship program, the employer may select as his/her initial apprentices, without going to the pool, those bona fide employees who have been on his/her payroll for at least three months and 300 paid work hours prior to the employer's application for an apprentice and who meet the minimum qualifications for entry into the program. Once the initial selection of apprentices has been made, the employer is thereafter restricted to a selection from applicants in the pool of eligibles.

10. SMALL EMPLOYER EXCEPTION

Provided that the use of this exception will not result in an adverse impact on apprenticeship opportunities based on an individual's protected class status, a family member, as defined below, who meets the minimum requirements for entry into the apprenticeship program, may be directly indentured by the committee and placed with a family business as defined herein, subject to the consent of the applicant, so long as the addition of the apprentice would result in no more than three individuals being employed by the training agent in the occupation. (Employed as applied in this exception is understood to mean all individuals working in the occupation.) Training agents using this exception

may not employ more than one apprentice at any time.

- 1) "Family business" means a business owned in whole or in part by a parent or grandparent of the applicant and has been in business under the same owners for at least five years.
- 2) "Family member" means the son, daughter, grandchild, or spouse of the family business owner and does not include minor children placed in the care of foster care parents certified by the Department of Human Services.

12. VETERAN'S ENTRY

Veterans may apply to the program at any time if they meet the minimum qualifications of the program and if they are:

- a) Members of the Regular services who have been discharged from active duty service with a DD214 issued within the past 24 months indicating an Honorable Discharge;
- b) Members of the Selected Reserve or Individual Ready Reserve with a DD214 issued within the past 24 months; or
- c) Members of the Oregon National Guard with a DD214 issued within the past 24 months.

Individuals qualifying under this exception will be scored and placed at the top of the Ranked Pool of Eligibles.

B. EQUAL EMPLOYMENT OPPORTUNITY PLAN:

1. A sponsor's commitment to equal opportunity in recruitment, selection, employment and training of apprentices shall include the adoption of a written affirmative action plan. (See OAR 839-011-0200 / OEEOA sections 5 a, b and c)
2. In addition the sponsor will set forth the specific steps that it will take under this plan, review and update the specific steps that it will take to implement the plan at least yearly and submit the updated steps to the Apprenticeship and Training Division (ATD) for review and approval. (OEEOA section 5 & 8)
3. Numerical goals and timetables for the selection of minority and female apprentices shall be included with the sponsor's annual updated steps. (OEEOA section 5 & 8)
4. The sponsor hereby adopts the following activities in order to enable it to meet its affirmative action obligations.

5.

1: DISSEMINATE INFORMATION

Dissemination of information concerning the nature of apprenticeship, requirements for admission to apprenticeship, availability of apprenticeship opportunities, sources of apprenticeship application, and the equal opportunity policy of the sponsor. For programs accepting applications only at specified intervals, such information shall be disseminated at least 30 days in advance of the earliest date for application at each interval. For programs customarily receiving applications throughout the year, such

information shall be regularly disseminated but not less than semiannually. Such information shall be given to Council, local schools, employment offices, women's centers, outreach programs and organizations that can effectively reach women and minorities, and shall be published in newspapers circulated in the minority community and among women, as well as the general areas in which the sponsor operates.

3: PREPARE STUDENTS FOR ENTRY INTO APPRENTICESHIP

Cooperate with local school boards and vocational education systems to develop programs for preparing students to meet the standards and criteria required to qualify for entry into apprenticeship programs.

4: INTERNAL COMMUNICATION

Internal communication of the equal opportunity policy in such manner as to foster understanding, acceptance, and support among the various officers, supervisors, employees, and members and to encourage such persons to take necessary action to aid in meeting our obligations under this plan.

5: OUTREACH

Engage in programs such as outreach for the positive recruitment and preparation of potential applicants for apprenticeship; where appropriate and feasible, such programs shall provide for pre-testing experience and training. If no such programs exist, seek to initiate these programs, or when available, to obtain financial assistance from the Department. In initiating and conducting these programs it may be necessary to work with other sponsors and appropriate community organizations. The sponsor shall also initiate programs to prepare women and encourage women to enter traditionally male programs.

8: GRANT ADVANCED STANDING OR CREDIT EQUALLY FOR ALL APPLICANTS

Grant advanced standing or credit on the basis of previously acquired experience, training skills, or aptitude for all applicants equally.

9: PREVENT ILLEGAL DISCRIMINATION

Take other appropriate action to ensure that the recruitment, selection, employment, and training of apprentices during apprenticeship shall be without illegal discrimination because of race, color, religion, national origin, disability, age, or sex; such as, general publication of apprenticeship opportunities and advantages in advertisements, industry reports, articles, etc.; use of present minority and female apprentices and journeypersons as recruiters; career counseling; periodic auditing of affirmative action programs and activities; and development of reasonable procedures between the sponsor and employers of apprentices to ensure that equal employment opportunity is being granted including reporting systems, on-site reviews, briefing sessions, etc.

C. DISCRIMINATION COMPLAINTS:

1. Any apprentice or applicant for apprenticeship who believes they have been discriminated against with regards to apprenticeship by the committee may file a complaint. (See OAR 839-011-0200 / OEEOA Section 11)

2. The basis of the complaint may be:
 - a. Discrimination on the basis of race, sex, color, religion, national origin, age, disability or as otherwise specified by law by a sponsor or a sponsor's program
 - b. The equal employment opportunity plan has not been followed; or
 - c. The sponsor's equal employment opportunity plan does not comply with the requirements of the Oregon Equal Employment Opportunity in Apprenticeship Plan.
3. Any such complaint must be filed with the Director of the Apprenticeship and Training Division (Secretary of the OSATC) in writing within 180 days of the alleged illegal discrimination or specified failure to follow the equal opportunity requirements.
4. The written complaint must include the name, address and telephone number of the person allegedly discriminated against, the sponsor involved and a description of the circumstances of the complaint.
5. For complaints dealing with program operations see section X of this document.

IV. TERM of APPRENTICESHIP:

1. The term of apprenticeship will not be less than 2,000 hours of work experience in the apprenticeable occupation identified in this Standard. (See ORS 660.126 (d))
2. The term of apprenticeship must be stated in hours unless otherwise required by a collective bargaining agreement, civil service or other governing regulation. (See ORS 660.126)
3. The sponsor may accelerate, by an evaluation process, the advancement of apprentices who demonstrate abilities and mastery of the occupation to the level for which they are qualified. (See ORS 660.137 (4))
4. When the apprentice is granted advanced standing, the employer must pay the apprentice at the appropriate wage per the wage progression schedule specified in these standards. (See ORS 660.142)

NOTE: In licensed occupations the apprentice must complete the minimum hours of documented legal experience.

The term of apprenticeship shall be 8,000 hours of employment. NOTE: 4,000 of the total of 8,000 hours are required for the Limited Energy Technician Class B License.

V. INITIAL PROBATIONARY PERIOD:

1. All apprentices are subject to an initial probationary period, stated in hours of employment during this time; an apprenticeship agreement may be terminated without cause. It is the period following the effective date of the apprentice's current registration into the program and during which the apprentice's appeal rights are restricted. (See ORS 660.126 (1g))

2. The initial probationary period must be reasonable in relationship to the full term of the apprenticeship unless otherwise required by Civil Service, CBA or law. (The registration agency recommends that this not exceed twenty percent (20%) (See ORS 660.126 (1g))
3. During the initial probationary period either party to the agreement may terminate the apprenticeship agreement upon written notice to the Apprenticeship and Training Division of the Oregon Bureau of Labor and Industries. (See ORS 660.126 (1g) & ORS 660.060 (6))
4. An appeal process is available to apprentices who have completed the initial probationary period. (See ORS 660.060 (6) & (7) and section X of this standard)

The probationary period shall be the first 1,000 OJT hours of employment and 48 hours of related training after the current registration to this standard. (See ORS 660.126 (g))

VI. RATIO OF APPRENTICES TO JOURNEY LEVEL WORKERS:

1. There shall be a maximum numeric ratio of apprentices to journey-level workers consistent with proper supervision, training, safety and continuity of employment. (See ORS 126 (1f))
2. The ratio shall be specifically and clearly stated as to its application to the job site, workforce, department, shift, plant or combination therein. (See ORS 660.126 (1f))
3. The Sponsor will assure that apprentices are under the supervision of competent and qualified journey-level workers on the job who are responsible for the work being performed, to ensure safety and training in all phases of the work. (See ORS 660.126 (1f), OAR 839-011-0140 (2g), OAR 839-011-0360)

The ratio of apprentices to journey-level workers shall not be more than one (1) apprentice to the first one (1) journey-level worker on the on the jobsite for the each of the first two (2) apprentices . Additional apprentices are authorized at a ratio of one (1) apprentice for each additional three (3) journey-level workers on the jobsite (See ORS 660.126 (f))

VII. APPRENTICE WAGES and WAGE PROGRESSION:

1. The apprentice shall be paid according to a progressively increasing schedule of wage based on specified percentages of the average journey-level wage consistent with skills acquired. (See ORS 660.126 (1h))
2. Wage progressions shall be indicated in hourly or monthly periods (the registration agency recommends the use of hour periods) set by the Sponsor. (See ORS 660.126 (h))
3. The entry wage will not be less than the federal or state minimum wage rate, whichever is higher. (See ORS 660.142 (4))
4. The wage listed in this standard at all periods establishes a minimum and a higher wage

may be required by other applicable federal law, state law, respective regulations, or by a collective bargaining agreement. (See ORS 660.126 (1h), ORS 660.137 (6), ORS 660.142 & OAR 839-011-140 (2f))

5. The sponsor must re-determine the average journey-level wage at least annually and submit the new average journey wage to the Director of the Apprenticeship and Training Division with a statement explaining how such determination was made and the effective date of the new average journey wage. (See ORS 660.137 (6))
6. Upon approval by the Director, the Division will notify all training agents and apprentices of the new wage. (See ORS 660.142 (2))

The average wage for those journey-level workers employed by the participating employers in this occupation on **July 1, 2009** is \$ **24.23** per **hour** .

| Period | Number of required hours | % of the journey level rate |
|--------|--------------------------|-----------------------------|
| 1st | 0-1000 | 50 |
| 2nd | 1001-2000 | 55 |
| 3rd | 2001-3000 | 60 |
| 4th | 3001-4000 | 65 |
| 5th | 4001-5000 | 70 |
| 6th | 5001-6000 | 75 |
| 7th | 6001-7000 | 80 |
| 8th | 7001-8000 | 80 |

VIII. WORK PROCESSES:

1. The apprentice shall receive the necessary instruction and experience to become a journey-level worker versed in the theory and practice of the occupation. (See ORS 660.155 / ORS 660.157 / OAR 839-011-0360)
2. The following is a condensed schedule of work experience that every apprentice shall follow as closely as conditions will permit. (See ORS 660.126 (1c) OAR 839-011-0360; OAR 839-011-0140)

NOTE: In licensed occupations apprentices must complete the minimum required total hours prior to being referred to the license examination.

Work processes Approximate hours

The work processes to be learned and the minimum hours required for each to be eligible for the Limited Energy Technician – Class B license (4,000 hours) are:

- | | |
|---|-------|
| a. Limited energy installations, including: cables & supports, wire pulling, splices, conduit, flex tray & duct, control panels & controls, wiring devices, removal & finish work, stock room & materials, overhead & underground | 1,750 |
|---|-------|

| | |
|--|-------|
| b. Troubleshooting & maintenance | 250 |
| c. Occupation-specific applications, including: | 2,000 |
| i. Communications systems, including data telecommunication, intercom, paging | |
| ii. Specialized control systems, including HVAC, medical, boiler, clock, instrumentation | |
| Mechanical (4,000 hours) | |
| d. Installation, troubleshooting and service of HVAC and ventilation systems | 1,100 |
| e. Duct design, airflow, layout, and refrigeration theory | 400 |
| f. Welding, brazing, soldering, and piping | 300 |
| g. Electronic and pneumatic controls | 1,000 |
| i. Installation | |
| ii. Maintenance | |
| iii. Troubleshooting | |
| h. Basic refrigeration | 1,200 |
| i. Air Conditioning | |
| ii. Heat Pump | |
| iii. Refrigeration | |
| iv. Maintenance | |
| TOTAL | 8,000 |

NOTE: The committee realizes that the completion of 8,000 hours of on-the-job training is the ideal, but recognizes that most apprentices will not be able to fulfill the total amount of hours specified in every work process as set forth in this standard. When an apprentice is unable to fulfill the total work hours in each work process the committee will evaluate the apprentice's knowledge, skills and abilities and provide appropriate additional related instruction to assure that competency is acquired in each work process. The evaluation and summary of the additional instruction will be noted in the apprentice's file.

IX. RELATED/SUPPLEMENTAL INSTRUCTION:

1. The apprentice must attend related/supplemental instruction for at least 144 hours per year unless otherwise stated in this standard. Time spent in related/supplemental instruction will not be considered as hours of work, and the apprentice is not required to be paid for time so spent. (See ORS 660.126 (1e))
2. The Committee must provide for instruction of the apprentice during the related/supplemental instruction in safe and healthful work practices in compliance with the Oregon OSHA regulations and applicable federal and/or state regulations. (See ORS 660.137)
3. In case of failure on the part of any apprentice to fulfill the related instruction obligation, the sponsor has the authority to withhold the apprentice's periodic wage advancement; or with a

reasonable opportunity to remedy deficiencies, suspend, or cancel the Apprenticeship Agreement. (See ORS 660.157 (4))

- 4. Clock hours of actual attendance by the apprentice in related/supplemental instruction classes at the community college, training trust or other approved training provider shall be documented and tracked by the Committee. (See ORS 660.157 (2a))
- 5. Related instruction activities must be at the direction of a qualified instructor. (See ORS 660.157 (3))

Methods of related/supplemental training must consist of one or more of the following: (See ORS 660.157)

- d. (X) Community college;

A minimum of 144 hours of related training shall be required during each year the apprentice is registered in the program. (See ORS 660.126 (e))

The following is a summary of related instruction including required class hours in each element of instruction. A committee may establish and submit clear objectives and outcomes in lieu of hours for each class subject. (See ORS 660.157)

Related training must cover the following subjects and must be completed with a grade of 'C' or better for graded classes or 'Pass' for non-graded classes. (see OAR 918-282-0170 to -0365).

| Course | Hours |
|---|-------|
| LIMITED ENERGY TECHNICIAN CLASS B (per MA 8007 guideline standard): | 288 |
| A minimum of 144 hours to include all of the following components: | |
| a. Electrical mathematics | |
| b. Safety and accident prevention | |
| c. Care and use of hand and power tools | |
| d. Blueprint reading and electrical symbols | |
| e. Introduction to the National Electrical Code | |
| f. Electrical fundamentals and basic theory, including AC and DC | |
| g. Electrical measuring devices | |
| h. Wiring methods | |
| i. Related electrical statutes and rules | |
| j. Fundamentals of electronics | |
| k. Transformers | |
| l. Lighting circuits | |
| m. Basic mechanics; applied physics and theory | |

A minimum of 144 hours to be distributed among the following components:

- a. Communication systems, including: data telecommunication, intercom, paging
- b. Specialized control systems, including: HVAC, medical, boiler, clock, instrumentation

Program Objectives: The committee has established measurement tools to verify that each apprentice has met the minimum competencies in each component listed below prior to referral to the electrical licensing examination:

- a. Demonstrate math and algebra skills as they relate to the electrical trade
- b. Demonstrate basic rules of safety and how they affect all people on the job
- c. Demonstrate proper care and use of hand and power tools used in the electrical trade
- d. Demonstrate working knowledge of architectural and electrical blueprints, including electrical symbols
- e. Identify NEC articles that apply to assigned tasks
- f. Demonstrate problem-solving with series and parallel AC and DC circuits
- g. Perform system measurements testing and calibration
- h. Demonstrate knowledge of low voltage structure wiring system design and installation
- i. Demonstrate knowledge of Oregon electrical statutes and rules
- j. Identify basic electronic components used in limited energy installations
- k. Demonstrate knowledge of transformer theory and identify types of transformers
- l. Demonstrate basic physical laws and how they relate to the electrical trade
- m. Demonstrate basic knowledge of communication systems, including data telecommunication, intercom, and paging systems
- n. Demonstrate basic knowledge of specialized control systems, including HVAC, medical, boiler, clock, and instrumentation control systems

MECHANICAL (per MA 8020 guideline standard):

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Safety practices, materials, tool and equipment handling, regulatory requirements, basic industry theory and mathematical applications shall be an integral part of the each related training component.

Local committees will establish the mechanical curricula in each component certified to meet work process requirements for this trade, and all other components which are the focus of that committee.

The committee has adopted curricula and means to determine basic knowledge and competency in the following areas:

- a. HVAC systems – including, but not limited to, air conditioning, heat systems, refrigeration and properties of air
- b. Motors and fans
- c. Controls and pneumatics
- d. Piping, brazing, welding, and soldering
- e. Pipe drafting and blueprint reading
- f. Layout
- q. Basic First Aid and safety regulations: OSHA, State. Obtain a valid basic first

aid and CPR card within the first twelve (12) months of apprenticeship and maintain the validation through the duration of the apprenticeship program.

TOTAL 576

X. ADMINISTRATIVE/DISCIPLINARY PROCEDURES:

See: ORS 660.120 OAR 839-011-0073

1. Local committee rules or policies and any employment requirement such as driver's license, drug test etc. will be located in this section.
2. The committee may include provisions for committee-imposed "disciplinary probation," which is a time assessed when the apprentice's progress is not satisfactory; a "disciplinary probation" may only be used to provide an opportunity for the apprentice to correct deficiencies and cannot affect the apprentice's appeal rights after the initial probation is completed. (See ORS 660.137 (4))
3. During disciplinary probation the committee may withhold periodic wage advancements, suspend or cancel the apprenticeship agreement, or take other disciplinary action. (See ORS 660.137 (4))
4. The apprentice has the right to file an appeal of the committee's disciplinary action with the Director of the Apprenticeship and Training Division. (See ORS 660.137 (4))
5. Complaint and Appeal Procedures:
 - a. Each committee shall adopt and submit complaint review procedures for Division approval.
 - b. All approved committees are expected to administer the program's approved complaint review process in a fair and consistent manner. (See ORS 660.120, ORS 660.060 & OEEOA Section 9)
 - c. Complaints that involve matters covered by a collective bargaining agreement are not subject to the complaint review procedures in this section. (See ORS 660.126 (2))
 - d. After the initial probationary period the apprenticeship agreement may be canceled by a written request from the apprentice. (See ORS 660.126 (1g) ORS 660.060 (7))
 - e. After the initial probationary period the committee may only suspend, cancel or terminate the apprentice agreement for good cause, which includes but is not limited to: failure to report to work, nonattendance at related instruction, failure to submit work progress reports and lack of response to committee citations. (See ORS 660.060 (7))
 - i. Due notice and a reasonable opportunity for correction must be provided to the apprentice.
 - ii. Upon suspension a written notice must be provided to the apprentice and to the Apprenticeship and Training Division.

- iii. Upon cancellation a written notice must be provided to the apprentice and to the Apprenticeship and Training Division.
- f. Each committee shall utilize the following procedures and time lines for disciplinary action (cancellation or termination). Committees may adopt and submit alternate complaint procedures for Division review and approval providing the procedures are reasonably expected to offer equal protection to the apprentice. (See ORS 660.060 (8))
 - i. At least 22 days prior to potential disciplinary action by a committee
 - o The committee must notify the apprentice in writing of alleged reason for the proposed disciplinary action and potential action to be taken if the allegation is substantiated
 - o The decisions are effective immediately upon committee action
 - o The committee will send written reason(s) for such action to the apprentice by registered or certified mail and will include the appeal rights of the apprentice
 - ii. Within 30 days of receipt of committee decision the apprentice may request reconsideration of the action taken by the committee
 - o The apprentice's request for the local committee to reconsider their disciplinary action must be submitted in writing and must include the reason(s) the apprentice believes the committee should reconsider the disciplinary action.
 - iii. Within 30 days of apprentice's request for reconsideration
 - o The local committee must provide written notification of their final decision including the appeal rights of the apprentice if the committee upholds its decision on the disciplinary action
- g. If the apprentice chooses to pursue the complaint further
 - i. Within 30 days of notification of the committee's final action
 - o The apprentice must submit the complaint describing in writing the issues associated with the disciplinary action to the Director of the Apprenticeship and Training Division
 - o The apprentice must describe the controversy and provide any backup information
 - o The apprentice must also provide this information to the local committee/organization
 - ii. Within 60 working days the Director of the Apprenticeship and Training Division will complete a review of the record
 - o If no settlement is agreed upon during review, the Director must issue a non-binding written decision resolving the controversy.
- h. If the apprentice or local committee disputes the Director's decision
 - i. Within 30 days of Director's decision the dissenting party must submit a request for the OSATC to hear its case
 - o Request must be in writing
 - o Must specify reasons supporting the request
 - o Request and supporting documents must be given to all parties

- o OSATC Rules and Policy Sub-Committee conducts hearing within 45 days and reports its findings to the next regular quarterly meeting of the OSATC
 - o The OSATC renders a decision based on the sub-committee's report.
 - ii. Within 30 days of the OSATC meeting
 - o The Secretary of the OSATC issues the decision in writing
- 6. Employers hiring apprentices may require a valid driver's license.
- 7. Employers hiring apprentices may require drug testing.

XI. COMMITTEE – RESPONSIBILITIES AND COMPOSITION:

The following is an overview of the requirements associated with administering an apprenticeship committee and/or program. These provisions are to be used in conjunction with the corresponding ORS and/or OAR.

1. The committee is the policymaking and administrative body responsible for the operation and success of this Apprenticeship program.
2. The committee is responsible for the day-to-day operation of the apprenticeship program and must be knowledgeable in the application of Chapter 660 ORS, OAR 839 division 011 and other law and rule as appropriate to the occupation(s).
3. Sponsors must develop policies and procedures for committee operations (ORS 660.060 (8), ORS 660.135, ORS 660.137, OAR 839-011-0170). The committee's specific policies pertaining to the operation of the program are included in this standard. The procedures for the implementation of the approved policies are maintained by the committee. After approval by the division the approved procedures shall be distributed to all apprentices and training agents.
4. Committees must convene meetings at least semi-annually that are attended by a quorum of committee members as defined in the approved Standards. (See ORS 660.137 (4))
 - a. A quorum for a local joint or trade committee shall consist of at least two (2) members representing the employers and two (2) members representing the employees. (See ORS 660.135 (3), ORS 660.145)
 - b. Conference call meetings may be conducted in lieu of regular meetings but must not exceed the number of attended meetings during a calendar year and may not authorize disciplinary action of apprentices. (See ORS 660.060 (8))
 - c. Minutes of all meetings must be submitted to the Apprenticeship and Training Division within 10 working days of the meeting. (See OAR 839-011-0170)
5. Program Operations (ORS 660.135, ORS 660.137, OAR 839-011-0170, OAR 839-011-0200:
 - a. The Committee will record and maintain records pertaining to the local administration of its Apprenticeship Program and make them available to the OSATC or its representative

on request.

- i. These records include, but are not limited to
 - o Selection of applicants
 - o Administration of the apprenticeship program
 - o Affirmative action plans
 - o Documentation necessary to establish a sponsor's good faith effort in implementing its affirmative action plan
 - o Qualification standards

b. Records required by the Oregon Equal Employment Opportunity in Apprenticeship rules (OAR 839-011-0200) will be maintained for five (5) years; all other records will be maintained for five (5) years after the final action taken by the committee on the apprenticeship agreement.

c. The following must be submitted by all programs through the Apprenticeship Representative assigned to assist the committee:

- i. Apprenticeship Registration Agreement – within the first 90 days of employment as an apprentice. (See ORS 660.020, OAR 839-011-0088) (In licensed occupations registration must occur prior to employment in the trade)
- ii. Committee Minutes – within 10 working days of the meeting. (See OAR 839-011-0170)
- iii. Authorized Training Agent Agreements – within 10 working days of committee action to approve the training agent. (ORS 660-020)
 - o Interim recognition may be authorized by committee policy but may not exceed 90 calendar days.
 - o Any recognition of a training agent prior to formal action of the committee must be in conformance with the committee's council approved policy.
- iv. Revision of Occupation Standards - as necessary, no later than 45 days prior to OSATC meeting. (See OAR 839-011-0030) (Programs should review their Standards at least annually)
 - o Forms are available from the Apprenticeship Representative. If approved by the OSATC, such amendment(s) and such changes as adopted by the OSATC will be binding to all parties on the first day of the month following OSATC approval.
- v. Revision of Committee Member Composition as necessary (included in committee minutes). (See OAR 839-011-0074)
- vi. Average Journey Level Wage – at least annually or whenever changed (included in minutes and by letter to the Director summarizing how the average wage was determined). (See ORS 660.137 (6), ORS 660.142)
- vii. Authorization of Signature - as necessary (See ORS 660.135 (4))
- viii. Authorization for issuance of initial license may be granted after the committee is found to be in compliance for operational purposes (See Council Policy #22)

- d. Adopt, as necessary or as directed, local program policies and procedures for the administration of the apprenticeship program in compliance with this Standard. (See ORS 660.060 (8), ORS 660.120 (2), OAR 839-011-0073)
 - i. Policies must be submitted to the OSATC for review and approval.
 - ii. Procedures must be submitted for Division (ATD) approval and inclusion by reference in this Standard prior to implementation.

6. Apprentice Management:

- a. Applicants accepted by the committee, who have documented legal experience creditable to the apprenticeship in the skilled occupation or in some other related capacity, may be granted advanced standing as apprentices. (See OAR 839-011-0088 (3a) Apprentices admitted to advanced standing will be paid the wage rate for the period to which such credit advances them. (In licensed occupations previous credit must be documented legal experience)
- b. Each apprentice (and, if under 18 years of age, the parent or guardian) will sign an Apprenticeship Agreement with the Sponsor, who will then register the Agreement, with the Apprenticeship and Training Division of the Bureau of Labor and Industries within the first 90 days of employment as an apprentice. (See ORS 660.020 (1), ORS 660.060, OAR 839-011-0088)
- c. The Apprenticeship and Training Division must be provided a copy of the committee minutes approving any change of disposition or modification of the Registration Agreement within 10 working days of the committee meeting. (See OAR 839-011-0170)
 - i. Requests for disposition or modification of Agreements include: (1) Certificate of completion, (2) Additional credit, (3) Suspension, military service, or other, (4) Reinstatement, (5) Cancellation, (6) Re-rates, (7) Holds, (8) Examination Referral, (9) Corrections, (10) Limited Supervision-electrical, (11) Phased Supervision-plumbing.
- d. Rotate apprentices in the various processes of the skilled occupation to ensure the apprentice is trained to be a competent journey-level worker. (See ORS 660.137 (2c), OAR 839-011-0265.
- e. At least once every six months the sponsor must review and evaluate each apprentice's progress and take action to advance based on the apprentice's progress or hold the apprentice at the same level for a reasonable period and opportunity for corrective action or terminate for continued inadequate progress. (See ORS 660.137 (4))
- f. The evidence of such action will be the record of the apprentice's progress on the job and during related/supplemental instruction.
 - i. If the apprentice's progress is not satisfactory, the committee has the obligation to withhold the apprentice's periodic wage advancements, suspend or cancel the

Apprenticeship Agreement, or take other disciplinary action as established under the "Administrative/Disciplinary Procedures."

- g. The committee has the obligation and responsibility to provide insofar as possible, reasonably continuous employment for all apprentices in the program. (See ORS 660.126, ORS 660.020)
 - i. The committee may arrange to transfer an apprentice from one training agent to another or to another committee when the committee is unable to provide reasonably continuous employment, or they are unable to provide apprentices the diversity of experience necessary for training and experience in the various work processes as stated in this Standard.
 - ii. If, for any reason, a layoff of an apprentice occurs, the Apprenticeship Agreement will remain in effect unless canceled by the committee.
 - h. An apprentice who is unable to perform the on-the-job portion of apprenticeship training may, if the apprentice so requests and the committee approves, participate in related/supplemental instruction classes, subject to the apprentice obtaining and providing written medical approval for such participation. However, time spent will not be applied toward the on-the-job portion of apprenticeship training. (See ORS 660.126 (i))
 - i. The committee will hear and adjust all complaints of violations of apprenticeship agreements. (See ORS 660.137)
 - j. Upon successful completion of apprenticeship, as provided in these Standards, and passing any examination that the committee may require, the committee will recommend that the Oregon Commissioner of Labor award a Certificate of Completion of Apprenticeship. (See ORS 660.137, ORS 660.205)
7. Training Agent Management:
- a. Offer training opportunities on an equal basis to all employers and apprentices. (See OAR 839-011-0084)
 - b. Grant equal treatment and opportunity for all apprentices through reasonable working and training conditions and apply those conditions to all apprentices uniformly. (See OAR 839-011-0200, Council Policy # 13)
 - c. Provide training at a cost equivalent to that incurred by currently participating employers and apprentices. (See OAR 839-011-0084)
 - d. An employer shall not be required to sign a collective bargaining agreement or join an association as a condition of participation. (See OAR 839-011-0162)
 - e. Determine the adequacy of an employer to furnish proper on-the-job training in accordance with the provisions of these Standards. (See ORS 660.137)
 - f. Require all employers requesting approved training agent status to complete a training

agent application and comply with all Oregon State apprenticeship laws and the appropriate apprenticeship Standards. (See ORS 660.137)

- g. Submit approved training agent agreements to the Apprenticeship and Training Division within 10 working days of committee approval with a copy of the agreement and/or the list of approved training agents and committee minutes where approval was granted. (See OAR 839-011-0170)
- h. Make periodic checks of approved training agents and withdraw approval when approval qualifications are no longer met or when it appears to the committee that the employer is in violation of the terms of the apprenticeship agreement, standards, rules, regulations and policies of the committee or OSATC. (See ORS 660.137)
- i. If a committee acts to withdraw training agent status from an employer the action must be recorded in the committee minutes and submitted to the Apprenticeship and Training Division within 10 working days of the committee action. (See OAR 839-011-0170)

8. COUNCIL REQUIRED POLICIES: (See ORS 660.120 - ORS 660.137)

a. Credit for prior experience

The committee will grant credit for previous experience based on the knowledge, skills, and abilities of the apprentice.

b. OJT requirements (hours, work processes, rotation/partial rotation, monthly progress reports, timelines, applicable penalties)

The apprentice shall work for the approved training agent as assigned by the committee and shall record work hours.

c. Related training requirements (attendance, grades)

The apprentice must attend and satisfactorily complete classroom instruction and self study education (a.k.a. related training) as directed by the committee.

d. Complaint procedures

The committee will promptly and fairly resolve any complaints brought to its attention.

e. Process for the review and evaluation of apprentice progress

The committee will regularly review and evaluate the progress of each apprentice as to job performance and related instruction.

f. Advancement requirements (re-rates, completions)

The committee will advance the apprentice to the next level in the wage progression when the apprentice demonstrates the required knowledge, skills, and abilities.

g. Disciplinary process (appearances, holds, cancellations)

The committee will take corrective action for any failure to satisfy program requirements.

h. Training agent requirements (approval, discipline, removal)

The committee will recognize the employer as an approved training agent when (and so long as) the employer demonstrates that it meets all qualifications established by the committee.

i. Traveling training agent policy

Approved training agents domiciled in other jurisdictions must meet the committee's requirements for an approved training agent.

j. Initial employment policy

An applicant who has been placed in the ranked pool shall be afforded a reasonable opportunity for employment and shall only be removed from the pool in accordance with the committee's published procedures.

k. Placement procedures for out-of-work apprentices

All unemployed apprentices in good standing with the committee will be given the opportunity to be re-employed as soon as possible and prior to indenturing new apprentices.

l. License requirements, including exam referral and completion requirements (for licensed trades only)

The committee will ensure that all apprentice training satisfies the requirements of the appropriate license.

9. Optional Policies

None

10. Composition of Committee:

- a. Joint apprenticeship and training committees must be composed of an equal number of employee and employer representatives composed of at least four principal members but no more than eight principal members. An alternate member may be appointed for each principal member. A quorum shall consist of at least two employer members and two employee members. (See ORS 660.135; OAR 839-011-0074)
- b. Trades apprenticeship and training committees must be composed of an equal number of employee and employer representatives composed of one principal employee and one principal employer member for each occupation covered by the trades committee. An alternate member may be appointed for each principal member. A quorum shall consist of at least two employer members and two employee members. (See ORS

660.145; OAR 839-011-0074)

- c. Employee representatives shall not be supervisors as defined by the National Labor Relations Act (as amended). (See OAR 839-011-0074)
- d. Employee representatives shall be skilled practitioners of the trade, except;
- e. A labor organization which is the recognized bargaining representative may designate elected representatives as employee members. (See ORS 660.135 & OAR 839-011-0074)
- f. The committee shall elect a chairperson and a secretary from the committee members. One of the offices must be held by an employer member and one office must be held by an employee member.
- g. Committee members or officers may be removed for failure to abide by ORS 660 or the rules and policies of the council or committee. (See OAR 839-011-0078)

The program administered by this committee is a: JATC

(See ORS 660.135) or (ORS660.145)

The employer representatives shall be:

(See attached committee list)

The employee representatives shall be:

(See attached committee list)

XII. SUBCOMMITTEE:

Subcommittee(s) may be approved by the sponsor but may only recommend actions to the parent Committee.

XIII. TRAINING DIRECTOR/COORDINATOR/ADMINISTRATOR/CONTACT PERSON:

The Sponsor may employ a person(s) as a full or part-time Training Coordinator(s)/Training Director(s)/Administrator(s). This person(s) will assume responsibilities and authority for the operation of the program as are specifically delegated by the Sponsor.

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Appendix: Application rating for Environmental Control System Servicer/Installer ¹

| RATING FACTOR | | POINTS |
|---------------|---|------------------------------------|
| a. | General Educational background | |
| | i. GED (mandatory) | 3 |
| | or | or |
| | ii. HS diploma (mandatory) | 3 |
| | And the greater of the following: | and |
| | iii. Trade school diploma (at least a 9-month program) | 5 |
| | or | or |
| | iv. College | 2/semester ² |
| | Maximum points allowed for section 1 | 16 |
| b. | Classes with a grade of "C" or higher or "P" that provide relevant theory or that require ability to follow written instructions to produce hands-on projects or related preparatory programs | |
| | i. 2 semesters of Algebra I or equivalent post HS or college placement test results | 6 |
| | ii. Algebra II | 3/sem or 2/qtr credit |
| | iii. Geometry | 3/sem or 2/qtr credit |
| | iv. Trigonometry | 3/sem or 2/qtr credit |
| | v. Calculus | 3/sem or 2/qtr credit |
| | vi. Blueprint reading | 3/sem or 2/qtr credit |
| | vii. Industrial Arts | 3/sem or 2/qtr credit |
| | viii. Graphic design/art | 3/sem or 2/qtr credit |
| | ix. Electricity or Electronics | 3/sem or 2/qtr credit |
| | x. First Aid certification | 3/current certification |
| | xi. CPR certification | 3/current certification |
| | xii. Completion of B-Fit or a plumbing pre-apprenticeship program | 5/program |
| | Maximum points allowed for section b | 30 |
| | RATING FACTOR | POINTS PER 1,000 HRS. ³ |
| c. | HVAC construction experience | 5 |
| | Experience may be military, civilian or volunteer | |
| | Maximum points allowed for section c | 30 |
| d. | General construction experience | |
| | i. Experience may be military, civilian or volunteer | 4 |
| | Maximum points allowed for section d | 24 |
| e. | Work experience not related to construction | |
| | i. Experience may be military, civilian or volunteer | 3 |
| | Maximum points allowed for section e | 18 |

¹ Points will be awarded based on credible documentation provided by the applicant. Examples of acceptable documentation include academic transcripts, grade reports, W-2 forms, DD-214, certificates, and letters on organizational letterhead.

² To receive credit for a semester, documentation must show completion of at least 12 academic units.

³ 1000 hours is equal to 6 months full-time employment; military experience will be credited at 1,000 hours for every 6 months service credit.