



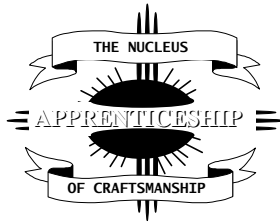
MINIMUM GUIDELINE STANDARDS OF APPRENTICESHIP
Adopted by

OREGON STATE INDUSTRIAL ELECTRICAL JATC

(sponsor)

<u>Skilled Occupational Objective(s):</u>	<u>SOC#</u>	<u>SYMBOL</u>	<u>SUFFIX</u>	<u>Term</u>
Limited Maintenance Electrician	49-9042	0644	000	4,000 hours

MA#	8001	SOC Title	Maintenance & Repair Workers, General	License	Limited Maintenance Electrician
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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:

December 11, 1996
Initial Approval Date

By: BRAD AVAKIAN
Chair of Council

March 19, 2009
Last Date Revised

By: STEPHEN SIMMS
Secretary of Council

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.

STATE COMMITTEES AND MINIMUM GUIDELINE STANDARDS

State joint apprenticeship committees are formed for the purpose of promoting and coordinating the apprenticeship goals of the occupation and for developing statewide standards and related instructional materials. At its discretion, or upon petition by two or more local committees directly affected by minimum guideline standards, OSATC will direct ATD staff to convene a state joint committee composed of members of local committees training in the occupation. The state committee will develop for Council approval proposed or revised Minimum Guideline Standards as may be dictated by the needs of the industry and occupation.

Minimum guidelines are established only in the following standards areas (OAR 839-011-0360):

Minimum qualifications (Section II below)

Hours of employment (Section IV)

Maximum probationary period (Section V)

Maximum ratio of apprentices to journey persons (Section VI)

Work processes and approximate hours (Section VIII)

Minimum related training hours and subjects (Section IX)

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: Be at least 18 years old
- Education:
 1. High school graduate or equivalent GED Certificate.
 2. Successfully complete one year of high school mathematics or an equivalent post high school placement test or course.
- Physical: None
- Testing: None
- Other: None

IV. TERM of APPRENTICESHIP:

The term of apprenticeship shall be 4,000 hours of employment.

NOTE: Total hours in local committee standards may not fluctuate below requirements dictated by minimum guideline standards (OAR 839-011-0370). In licensed occupations the apprentice must complete the minimum hours of documented legal experience.

V. INITIAL PROBATIONARY PERIOD:

The maximum probationary period shall be the first period after the current registration to the local committee 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 660.126 (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))

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

VIII. WORK PROCESSES:

Work processes	Approximate hours
a. Motors and generators	500
1. Assembly and testing	
2. Repair and maintenance	
3. Internal and external connections to change direction of rotation and speed, and for a change of supply of voltage	
4. Motor setting, drives, pulleys, gears, coupling devices	
5. Related mechanical equipment: Traction units, cranes, winches, hoists	
6. In place motor cleaning, 100 hours maximum credit	
b. Controls	1,000
Manual and automatic, including magnetic and solid state	
c. Trouble shooting	1,000
d. Power Distribution	500
Inside and outside, high and low voltage distribution systems, maintenance and replacement	
e. Lighting	500
f. Electrical oriented drawings	100
g. The remaining time necessary to complete the apprenticeship program shall be applied according to the apprentice's training needs by the apprenticeship committee and the employer	400
TOTAL	4,000
HAZARDOUS WORK	
<p>1. Safety training on the specific hazards shall precede work assignments in hazardous areas or on energized equipment. Work shall not be performed on or near energized equipment if such service or equipment can be disconnected.</p> <p>Temporary safety grounds shall be installed during such work and disconnecting devices shall be identified by safety tags. Work on signal systems, control systems, or other equipment energized at 50 volts or less shall not be considered hazardous under normal conditions.</p>	
<p>2. Where work must be done on energized lines or equipment, an apprentice may work with a journeyman as follows: After the first 1,000 hours on power supply voltage up to 125 volts; after 3,000 hours up to 250 volts.</p>	
<p>3. Work on supply voltage between 250 and 600 volts after 4,000 hours, or receipt of journeyman license.</p>	
<p>4. Electronic maintenance may be done by apprentices after 1,000 hours on equipment with in-put of 100 watts or less; after 3,000 hours up to 2500 watts in-put power.</p>	

NOTE: The committee realizes that the completion of 4,000 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.

Local committees proposing new or revised standards affected by minimum guideline standards will be allowed to redistribute no more than 5% of on-the-job training hours within existing individual work processes. (OAR 839-011-0370)

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

This is a licensed occupation and requires that all required hours of instruction and supervised OJT be completed prior to the apprentice being referred to the electrical licensure examination.

IX. RELATED/SUPPLEMENTAL INSTRUCTION:

A minimum of 144 hours of related training shall be required during the first year with a minimum of 288 hours over the term of apprenticeship. (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
a. Electricity and electronics	36
b. Fundamental mechanical principles	36
c. Mathematics of the trade	18
d. Instrumentation and controls	18
e. Federal, state and local electrical laws, codes and rules	140
f. Blueprint reading, electrical drawings and pictorial, block, one-line and schematic diagrams	36
g. Industrial electrical safety: A certified CPR (Cardiopulmonary Resuscitation) course of the committee's choice	4

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. State joint apprenticeship committees are formed for the purpose of promoting and coordinating the apprenticeship goals of the occupation and for developing statewide standards and related instructional materials. At its discretion, or upon petition by two or

more local committees directly affected by minimum guideline standards, OSATC will direct ATD staff to convene a state joint committee.

2. Each local committee training in the occupation shall designate no more than one employer and one employee representative (with alternates) to the state joint committee; notification of this action must be submitted to ATD in writing.
3. To determine a quorum, the total number of authorized representatives appointed by local committees will be counted; appointed representatives of local trade committees will be counted only if they are present at the state joint committee meeting. A quorum consists of 50% plus one of the total authorized local committee representatives.
4. The state joint committee will develop for OSATC approval proposed or revised Minimum Guideline Standards as dictated by the needs of the industry and occupation.
 - a. New or revised Minimum Guideline Standards presented to the OSATC for approval shall be first distributed to local committees training in the occupation for review and comment.
 - b. Each local committee shall have no more than 30 days to present any written objections they may have. After reviewing this information the state joint committee will prepare its final recommendations to OSATC.
 - c. If consensus is not reached by the state joint committee, a majority and minority report will be submitted to OSATC for consideration. The geographic area covered by each participating local committee as well as the number of apprentices served and the number of training agents affected will be taken into consideration in the OSATC's decision.
5. Each state joint committee may adopt rules consistent with ORS Chapter 660 as it deems necessary for the orderly conduct of its meetings. Unless the state committee determines otherwise, ATD staff will prepare and distribute state joint committee agendas and minutes as needed.