

Sheet Metal Industry

**Minimum Industry
Training Criteria**

**For
California
Apprenticeship**

**October 5, 2010
REVISION**

SHEET METAL INDUSTRY
Minimum Industry Training Criteria for Apprenticeship
Occupation: Sheet Metal Worker, O*Net Code 47-2211.00
CALIFORNIA CODE OF REGULATIONS SECTION 212.01

1. PURPOSE AND POLICY

- a. Program Sponsors shall, within the program's stated purpose, include: "development of highly trained sheet metal workers, proficient in all areas of sheet metal construction, including "green", resource conservation and construction techniques".

2. LENGTH OF TRAINING

- a. Program sponsors shall establish a minimum 4 year program of not less than 6,500 hours of on-the-job training.

3. RELATED AND SUPPLEMENTAL INSTRUCTION

- a. The required prescribed courses of related and supplemental instruction shall be no less than 160 hours per year. This instruction must include at a minimum the related and supplementary training processes listed in Exhibit "A".
- b. All training courses must include a minimum of one instructor/student session at the start of a course and an instructor/student session during the course and students should perform all final testing in the presence of the proctor or instructor. A course, for this purpose, would be defined as one semester or less. An instructor/student session and final testing for this purpose would each be at least 3 hours in length, with students in the presence of the proctor or instructor.

4. ON THE JOB TRAINING

- a. (Skills to be learned) See Exhibit "B"

5. COMPETENCY TESTING

- a. All apprentices must pass a competency test prior to the time of their pay rate advancement to the next higher pay period. The test shall be based on Related and Supplemental Instruction and manipulative skills test's based on laboratory assignments.

6. COMPLETION PERCENTAGES

- a. Program sponsors who are not able to demonstrate a completion rate of 75% of the apprentices indentured into the program will be subject to review by the D.A.S.

7. REVISIONS

The schedule for revisions to the Sheet Metal trade's industry training criteria shall be in accordance with Section 212.01.

EXHIBIT "A"

RELATED AND SUPPLEMENTAL INSTRUCTION: Apprentices shall receive related and supplemental instruction in the following topics, not necessarily in the order listed:

1. Trade Math
2. Safety – CPR
3. Welding & Soldering
4. Tools & Equipment
5. Trade Orientations and Orientation to Green Construction Practices
6. Pattern development and drafting
7. Plans and specifications
8. Codes and standards
 - California Mechanical Code Awareness
 - LEED Awareness
 - Title 24 Awareness
 - SMACNA Standards
9. Test and balance
10. Service and repair
 - Energy Costs and Efficient HVAC Systems
11. Principles of air flow and efficient duct design
12. Fasteners – hangers/seismic requirements
13. Current fabrication/installation methods and materials
14. Principles of Supervision

EXHIBIT "B"

ON THE JOB TRAINING: The work processes in which the apprentice shall be trained are as follows. Work processes will not necessarily be in the order listed, nor will they necessarily be continuous.

Programs will endeavor to provide balanced on the job training in all work processes listed, including action to make job changes, if necessary. Apprentices will receive significant on the job training in a majority of the processes listed, at a minimum.

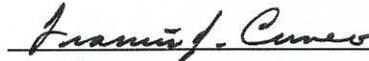
<u>WORK PROCESS - SHEET METAL WORKER</u>	<u>APPROXIMATE HOURS</u>
A. Fabrication (may include, but not be limited to the following)	1,500
1. Material fabrication	
2. Design, detail and layout	
3. Welding, brazing and soldering	
4. Industrial	
5. Quality Assurance and Material Conservation	
6. Kitchen equipment	
7. Architectural	
8. Metal Roofing	
B. Installation (may include, but not be limited to the following)	4,000
1. Material installation	
2. Service and repair	
3. A/C, Heating and Ventilation and Duct Sealing	
4. Welding, brazing and soldering	
5. Exhaust and blowpiping	
6. Solar Installations	
7. Tool and equipment usage	
8. Kitchen equipment	
9. Flashing, roofing and siding	
10. Equipment setting	
11. Plans, specifications and construction documents	
12. Air distribution	
13. Testing and balancing	
14. Architectural Sheet Metal	
15. Metal Roofing	
16. Seismic Restraints	
17. Fire Damper Installation	
C. Miscellaneous (may include, but not be limited to the following)	1,000
1. Job planning	
2. Insulation	
3. Safety	
4. Sign construction	
5. Rigging	
6. Delivery and cleanup	
7. Indoor air quality	
8. Incorporating Green Construction Practices	
TOTAL NUMBER OF MINIMUM HOURS	6,500

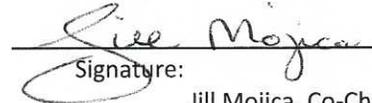
8. **APPROVAL:** Following an October 5, 2010 majority vote of the Sheet Metal MITC Committee in favor of submitting these minimum criteria for DAS/CAC approval, these revised minimum criteria are hereby signed for submission by the Chair and Co-Chair on behalf of the Committee:

2010 Sheet Metal MITC Committee

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Non-Signatory Employee Representatives

 10/13/2010
Signature: Date:

 10/5/10
Signature: Date:

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Alternates

Mark Paavola-Signatory
Frank Stevens-Non-signatory
Gary Johnson-Non-signatory
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The foregoing criteria, being in conformity with the rules and regulations of the California Apprenticeship Council, California Code of Regulations, and applicable Federal Regulations are hereby approved on _____.

Signature – Glen Forman, Acting Chief
Division of Apprenticeship Standards