

## **Appendix A**

**WORK PROCESS SCHEDULE  
WELDER, COMBINATION  
O\*NET-SOC CODE: 51-4121.02 RAPIDS CODE: 0622R**

This schedule is attached to and a part of these Standards for the above identified occupation.

**1. TERM OF APPRENTICESHIP**

The term of the occupation shall be 4 Year with an OJL attainment of 7328 hours supplemented by the required hours of related instruction.

**2. RATIO OF APPRENTICES TO MENTORS**

One (1) Apprentice may be employed in each department and/or jobsite employing one (1) qualified Mentor.

**3. APPRENTICE WAGE SCHEDULE**

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current Mentor wage rate.

*Note: Sponsoring Employers will show their Mentor wage rate on the Employer Acceptance Agreement*

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**4. SCHEDULE OF WORK EXPERIENCE (See attached Work Process Schedule)**

The Sponsor may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

**5. SCHEDULE OF RELATED INSTRUCTION (See attached Related Instruction Outline)**

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Curricula modules are based on industry standardized applications of current construction practices. Modules are knowledge and skill based including a system for assessment. The assessment will include task objectives, procedures, review materials, and competency-based performance tests.

<b><u>WELDER WORK PROCESS SCHEDULE</u></b>	<b><u>HOURS</u></b>
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This instruction and experience shall include the following operations, but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. General Trade	2000
a. Demonstrate proper safety precautions and procedures	
b. Electrode identification	
c. Interpretation of blueprints and specifications	
d. Proper use of welding tools and equipment	
2. Cutting Process	1164
Oxyfuel Cutting	
3. Welding Process	3000
a. Use of low hydrogen electrodes	
b. Fast freeze electrodes	
c. Pipe welding	
d. SMAW pipe welding	
e. GTAW pipe welding	
4. Related Welding Activities	1164
a. Welded joints	
b. Power joints	
c. Weld testing	
d. Polarities & Arc Blow	
e. Codes and Qualification	
<b>TOTAL HOURS</b>	<b>7328</b>

# Appendix A

**RELATED INSTRUCTION  
WELDER, COMBINATION  
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Related instruction - This instruction may include, but not be limited to:

*Note:* Due to regional and local code differences and climate conditions, duration of instructional competencies/modules are suggested estimates.

## WELDER RELATED CLASSROOM INSTRUCTION

<b>Modules</b>	<b>Hours</b>
Basic Safety	15
Introduction to Construction Math	15
Introduction to Hand Tools	10
Introduction to Power Tools	5
Introduction to Blueprints	7.5
Basic Rigging	20
Welding Safety	2.5
Oxyfuel Cutting	17.5
Base Metal Preparation	12.5
Weld Quality	10
SMAW - Equipment and Setup	5
SMAW - Electrodes and Selection	2.5
SMAW - Beads and Fillet Welds	120
SMAW - Groove Welds with Backing	10
Joint Fit-Up and Alignment	5
SMAW - Open V-Groove Welds	120
SMAW - Open-Root Pipe Welds	100
Welding Symbols	5
Reading Welding Detail Drawings	12.5
Stainless Steel Groove Welds	80
Air Carbon Arc Cutting and Gouging	12.5
Plasma Arc Cutting	7.5
GMAW and FCAW - Equipment and Filler Metals	10
GMAW and FCAW - Plate	80
GTAW - Equipment and Filler Metals	10
GTAW - Plate	40
GTAW - Aluminum Plate	50
<b>TOTAL HOURS</b>	<b>785</b>

\*DOL apprenticeship program standards recommend 144 hours related instruction per level and/or year.