

O.9
WORK PROCESS SCHEDULE
IRONWORKER (ERECTOR)
O*NET-SOC CODE: 47-2221.00 RAPIDS CODE: 0669
ALTERNATE TITLES: STRUCTURAL STEEL WORKER

This trade schedule is attached to and a part of the Apprenticeship Standards for the above identified occupation. This sequence of Related Classroom Instruction is competency based and will be offered as traditional classroom training or independent study, which may include electronic media.

1. TERM OF APPRENTICESHIP

The term of the occupation shall be three (3) years with an OJL attainment of 6000 hours supplemented by the required hours of related technical instruction.

2. RATIO OF APPRENTICES TO JOURNEYPERSONS

One (1) Apprentice to four (4) Journeypersons **Ironworker East**: one apprentice for the first skilled journeyperson employed, and one additional apprentice for each four (4) additional skilled journeyperson employed thereafter. A fraction-there-of will be adhered to.

One (1) Apprentice to five (5) Journeypersons **Ironworker South**

3. APPRENTICE WAGE SCHEDULE

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

Term: 6000 Hours

East

South

1 st 1000 hours = 60 % of journeyperson's rate	1 st 1000 hours = 70 % of journeyperson's rate
2 nd 1000 hours = 70 % of journeyperson's rate	2 nd 1000 hours = 75 % of journeyperson's rate
3 rd 1000 hours = 75 % of journeyperson's rate	3 rd 1000 hours = 80 % of journeyperson's rate
4 th 1000 hours = 80 % of journeyperson's rate	4 th 1000 hours = 85 % of journeyperson's rate
5 th 1000 hours = 85 % of journeyperson's rate	5 th 1000 hours = 90 % of journeyperson's rate
6 th 1000 hours = 90 % of journeyperson's rate	6 th 1000 hours = 95 % of journeyperson's rate

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

Apprenticeship Oversight Committee may add to the work processes prior to submitting these Standards to the Division of Apprentice Training for approval.

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

Instruction can incorporate elements of both electronic media and traditional classroom including online training, distance learning, or independent study of established curriculum.

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.

O.9 - WORK PROCESS SCHEDULE

HOURS

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. Tools	175
a. Name and proper use	
b. Care	
c. Safety	
2. Materials	250
a. Identification	
b. Shapes	
3. Equipment-ornamental, reinforcing, structural	400
a. Light equipment-blocks, ropes, etc.	
b. Heavy equipment-derricks, etc.	
4. Erecting-job, erecting equipment	2000
a. Layout	
b. Drilling	
c. Welding-acetylene and electric	
1. Cutting	
2. Burning	
d. Riveting	
1. Selection of proper size and types of rivets	
2. Heating rivets	
3. Use and care of tools	
5. Dismantling, rigging equipment, scaffolding, floats	100
6. Ornamental, reinforcing, structural	375
a. Sorting materials	
b. Distributing	
7. Placing, spacing, tying	500
8. Ornamental layout and fabrication	300
a. Stairs and door bucks	
b. Hand railings and sash	
c. Metal partitions	

9. Hoisting	400
a. Hook on	
b. Learn signals	
c. Learn safety factors	
10. Fitting-up, plumbing-up	300
a. Use of cables and turnbuckles	
b. Use of instruments	
c. Use of hydraulic jacks	
11. Fabricating	800
a. Layout	
b. Fit-up	
12. Reading job plans and specifications	400
TOTAL HOURS	6000

O.9 - IRONWORKER (ERECTOR) RELATED CLASSROOM INSTRUCTION

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

Modules	Hours
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	
Introduction to the Trade	5
Means & Methods of Access	7.5
Tools and Equipment of the Trade	10
Construction Cranes I	10
Rigging for Ironworking I	10
Rigging Equipment and Hardware	7.5
Materials and Storage	5
Structural Ironworking I	7.5
Plumbing, Aligning & Guying	5
Fastening	5
Oxyfuel Cutting	17.5
Introduction to Arc Welding	15
Steel Joists and Joist Girders I	5
Metal Decking	10
Field Fabrication I	15
Position Arc Welding	20
Introduction to Reinforcing Steel And Steel Fabrication	10
Miscellaneous Ironworking	7.5
Trade Math Two	10

Blueprint Reading Two	10
Rigging Two	10
Structural Ironworking Two	30
Steel Joists And Joist Girders Two	15
Construction Cranes Two	15
Levels, Transits, And Electronic Survey Devices	17.5
Weld Testing	10
Pre-Engineered Systems	7.5
Ornamental Ironworking	5
Stud Welding	10
Post-Tensioning	5
Placing and Tying Reinforcing Steel	20
Construction Cranes III	10
Special Rigging	10
Field Fabrication II	25
Demolition	10
Precast/Tilt-Up Erection	20
Structural Ironworking III	20

TOTAL HOURS **505**

DAT apprenticeship program standards recommend 150 hours of related technical instruction per year.