

O.15
WORK PROCESS SCHEDULE
PLUMBER
O*NET-SOC CODE: 47-2152.02 RAPIDS CODE: 0432

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 four (4) years with an OJL attainment of 8,000 hours supplemented by the required hours of related technical instruction.

2. RATIO OF APPRENTICES TO JOURNEYPERSONS

1:3 A fraction-there-of will be adhered to.

3. APPRENTICE WAGE SCHEDULE

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

Term: 8,000 Hours

1st 2000 hours = 35 % of journeyman's rate
2nd 2000 hours = 40 % of journeyman's rate
3rd 2000 hours = 55 % of journeyman's rate
4th 2000 hours = 65 % of journeyman's rate
(Steps are one (1) year/2000 hours)

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.15 - 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. Interior and exterior underground sanitary and storm sewer or private sewage system work	1200
2. Vertical stacks, horizontal lines, and branch lines for soil, waste, and venting piping	2100
3. Water supply system – Sizing of lines, selecting of material to use, and job, cross-laying out connection control and water treatment equipment	1700
4. Setting and connecting of all types of plumbing fixtures and appliances and water treatment equipment	1500
5. Care and safe use of tools, materials and equipment used on the job. Job lay out and site safety requirements. Driving and operating of equipment used in the job	500
6. Industrial, process piping, gas piping, compressed air piping, and chemical piping. welding and rigging of equipment.	500
7. Installing and maintenance of high/low pressure boilers, and chilled water cooling systems	500
TOTAL HOURS	8000

O.15- PLUMBER 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 Plumbing Trade	5
Plumbing Tools	7.5
Introduction to Plumbing Math	7.5
Introduction to Plumbing Drawings	12.5
Plastic Pipe and Fittings	10
Copper Pipe and Fittings	10
Cast Iron Pipe and Fittings	10
Carbon Steel Pipe and Fittings	10
Fixtures and Faucets	10
Introduction to Drain, Waste, and Vent (DWV) Systems	10

Introduction to Water Distribution Systems	10
Intermediate Math	15
Reading Commercial Drawings	20
Installing and Testing DWV Piping	30
Installing Roof, Floor, and Area Drains	5
Types of Valves	5
Installing and Testing Water Supply Piping	25
Installing Fixtures, Valves, and Faucets	15
Installing Water Heaters	5
Fuel Gas Systems	20
Servicing Fixtures, Valves, and Faucets	5
Applied Math	17.5
Codes	7.5
Types of Venting	15
Indirect and Special Waste	15
Sewage and Sump Pumps	17.5
Sizing Water Supply Piping	20
Backflow Preventers	20
Water Pressure Boosters and Recirculating Systems	20
Servicing Piping Systems, Fixtures, and Appliances	20
Business Math for Plumbers	10
Sizing DWV and Storm Systems	15
Private Water Supply Systems	12.5
Private Waste Disposal Systems	12.5
Locating Buried Water and Sewer Lines	12.5
Hydronic and Solar Heating Systems	15
Water Supply Treatment	25
Swimming Pools and Hot Tubs	15
Compressed Air	10
Corrosive-Resistant Waste Piping	12.5
Plumbing for Mobile Homes & Mobile Home Parks	10
TOTAL HOURS	622.5

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