

# Appendix A

ON THE JOB LEARNING

AND

RELATED INSTRUCTION OUTLINE

DEVELOPED FOR

NORTH ALABAMA CRAFT TRAINING FOUNDATION

AL004020006

Sponsor: Wade Thompson Date: 1/23/2024

Registration Agency: Michael Bridier Date: 1/23/2024

Revised Appendix A, Occupation Registration Date: August 12, 2019

# Appendix A

## WORK PROCESS SCHEDULE PLUMBER

O\*NET-SOC CODE: 47-2152.00 RAPIDS CODE: 0432

National Occupation     State Occupation

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

**1. APPRENTICESHIP APPROACH - V.8 29 CFR § 29.5(b)(2)**

Time-based                       Competency-based                       Hybrid

**2. TERM OF APPRENTICESHIP - 29 CFR § 29.5(b)(2)**

The term of the apprenticeship is 8,000 competencies, supplemented by 697.5 total hours of related instruction.

**3. RATIO OF APPRENTICES TO JOURNEYWORKERS - 29 CFR § 29.5(b)(7)**

Every apprenticeship program is required to provide a numeric ratio of apprentices to journeyworkers consistent with proper supervision, training, safety, and continuity of employment.

The apprentice to journeyworker ratio is: 3 apprentice(s) to 1 journeyworker(s).

**4. APPRENTICE WAGE SCHEDULE - 29 CFR § 29.5(b)(5)**

Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the journeyworker wage rate. The entry wage must not be less than the minimum wage prescribed by the Fair Labor Standards Act, where applicable, unless a higher wage is required by other applicable Federal law, State law, or respective regulations.

The journeyworker wage for this occupation shall not be less than \$16.00/hr.

PERIOD	HOURS	% OF JOURNEYWORKER WAGE
1 <sup>st</sup>	0-2,000	50%
2 <sup>nd</sup>	2,001-4,000	60%
3 <sup>rd</sup>	4,001-6,000	70%

4 <sup>th</sup>	6,001-8,000	90%
5 <sup>th</sup>	Completion wage	100%

**5. PROBATIONARY PERIOD – 29 CFR § 29.5(b)(8) and (20)**

The probationary period may not exceed 25 percent of the length of the program or 1 year whichever is shorter. Full credit will be given for the probationary period toward the completion of the apprenticeship.

Every applicant selected for apprenticeship will serve a probationary period of 500 hours.

**6. SELECTION PROCEDURES – 29 CFR § 29.5(b)(10), (21) and 29 CFR § 30.10**

**SECTION I – MINIMUM QUALIFICATIONS**

Applicants will meet the following minimum qualifications to be eligible for the pool of applicants:

A. Age

Applicants must not be less than 18 years of age and provide appropriate verification of age respecting Alabama state laws.

B. Physical

Applicants will be physically capable of performing the essential functions of the apprenticeship program, with or without a reasonable accommodation, and without posing a direct threat to the health and safety of the individual or others.

C. Other

Applicants must possess a valid driver's license and must pass a drug screen prior to the acceptance of the apprenticeship program.

**SECTION II – SELECTION PROCEDURES**

The sponsor has adopted the following selection procedures, consistent with the requirements set forth in 29 CFR § 30.10(b):

The sponsor has adopted the following selection procedures, consistent with the requirements set forth in 29 CFR § 30.10(b):

1. An announcement of specific apprenticeship openings must be disseminated

thirty (30) days in advance of the earliest date for application at each interval to the following agencies/ organizations:

- Registration Agency
- Women's Organizations/Centers Local Schools
- Employment Service Center One Stop Centers
- Vocational Education Schools
- Other Organizations/Centers (which can effectively reach minorities and women)

The announcement shall include the nature of the apprenticeship, requirements for admission to apprenticeship, availability of apprenticeship opportunities, sources of apprenticeship applications, and the Sponsor's equal opportunity policy. The period for accepting applications as established by the Sponsor is July 9- July 20 of each year.

2. Cooperation with school boards and vocational educational systems to develop programs for preparing students to meet the standards and criteria to qualify for entry into the apprenticeship program.

3. Internal communication of the Sponsor's Equal Opportunity Policy; will conduct in such a manner to foster understanding, acceptance, and support among the Sponsor's various officers, supervisors, employees, and members to encourage such persons to take the necessary action to aid in meeting its obligations under Title 29, CFR, and Part 30.

4. Utilization of journeyworkers to assist in the implementation of affirmative action in the apprenticeship program.

5. Granting advance standing or credit based on previously acquired experience, training, skills, or aptitudes for all applicants equally.

The Sponsor may grant credit towards the term of apprenticeship to new apprentices who demonstrate previous acquisition of skills or knowledge equivalent to that which is under these Standards. Apprentice applicants seeking credit for previous experience gained outside the supervision of the Sponsor must submit the request at the time of application and furnish such records, affidavits, and a letter from his/her employer to substantiate the claim. Applicants requesting such credit whom selected into the apprenticeship program will start at the beginning wage rate. The request for credit will consist of an evaluation and a determination made by the Sponsor during the probationary period when actual on-the-job and related instruction performance during observation. Prior to completion of the probationary period, the amount of credit to be awarded will be determined after the review of the apprentice's previous work and training/education record and evaluation of the apprentice's performance and demonstrated skill and knowledge during the probationary period. An apprentice granted credit should be advance to the wage rate designated for the period to which such credit accrues. The sponsor will advise the Registration Agency on any

credit granted and the wage rate to which the apprentice. The granting of advanced standing is, uniformly applied to all apprentices as determined above.

6. NACTF will fill from an internal pool of employees and employers agree to post apprenticeship openings in locations visible to all employees

### **SECTION III – DIRECT ENTRY**

The sponsor who invokes a direct entry provision may do so without regard to the existing selection procedure or minimum qualifications used for entry into the apprenticeship program. Direct entry shall be done without regard to race, color, religion, national origin, sex (including pregnancy and gender identity), sexual orientation, genetic information, or an individual with a disability or a person 40 years old or older. The methods for direct entry are as follows:

- A. A military veteran who has completed military technical training school and/or participated in a registered apprenticeship program or related occupation while in the military in the occupation registered. Applicants must submit a DD-214 to verify military training and/or experience if they are a veteran and wish to receive consideration for such training/experience. The sponsor, with the assistance of the training provider and employer, will evaluate the training received to grant appropriate credit.
- B. An individual who has completed an AOA certified pre-apprenticeship training program and meets the minimum qualifications of the apprenticeship program. may be admitted directly into the program. The applicant shall provide official documentation confirming that they fulfilled the specific requirements of the pre-apprenticeship program, such as skills assessments, completion/graduation certificates, and transcripts. The sponsor will evaluate the pre-apprenticeship training received to grant appropriate credit.
- C. Individual who is a current employee by an employer with an Employer Acceptance Agreement. The employer will evaluate the current employee's skills to grant appropriate credit.

**ON-THE-JOB LEARNING OUTLINE  
PLUMBER**

**O\*NET-SOC CODE: 47-2152.00    RAPIDS CODE: 0432**

**On-the-Job Learning Guidelines:**

- During the apprenticeship, the apprentice shall receive work experience and job-related education in all phases of the occupation, including safe work practices, necessary to develop the skill and proficiency of a skilled professional.
- The program sponsor must ensure apprentices are rotated throughout the various job functions to ensure a well-rounded professional upon completion of the apprenticeship and identify what methodology will be used to track progression of experience on-the-job.
- The on-the-job learning outline does not need to be followed in any particular sequence. In all cases, the apprentice is to receive sufficient experience to make them fully competent in all job functions.
- Such on-the-job learning shall be carried on under the direction and guidance of a qualified professional.

<b>Work Processes</b>	<b>Approximate Hours</b>
<b>Care and Use of Tools and Materials</b>	<b>550</b>
Identifying materials, fittings, grades, and types of pipe.	
Use and operation of trade tools.	
Maintaining tools and equipment.	
<b>Preparation of Tools, Equipment and Material for Plumbing and Heating</b>	<b>400</b>
Selecting cast iron, galvanized and other types of piping for roughing in and finish work.	
Loading required material and equipment.	
Unloading at jobsite, using safety precautions and care in not damaging equipment and material.	
<b>Caulking Cast Iron Pipe</b>	<b>400</b>
Selecting and using proper tools for yarning oakum and caulking lead joints.	
Operating and maintaining several types of furnaces (gasoline, bottled gas, etc.) in melting pig lead following established safety precautions.	
Using safety measures in handling hot oakum and pig lead required in pouring joints.	

Checking for presence of water to avoid danger when pouring molten lead, etc.	
<b>Drainage Piping and Fittings</b>	<b>800</b>
Determining kinds of pipes used underground, within a building above grade.	
Installing cast iron, steel, or terra cotta piping.	
Pitching pipe for proper drainage, using recessed drainage fittings as required by codes and determining number of fixtures permissible on certain size waste lines.	
<b>Venting</b>	<b>450</b>
Learning the application and importance of venting.	
Installing main and branch venting, back venting, and reventing in accordance with State and City codes.	
<b>Pipe Cutting, Reaming, Threading and Flanging</b>	<b>400</b>
Setting up and operating threading machine.	
Using hand cutters.	
Using taps and reamers.	
Operation power drills.	
<b>Installation and Maintenance of Steam and Hot Water Heating Systems</b>	<b>1,500</b>
Installing main components.	
Fabrication of piping.	
Cutting and patching walls.	
Operating and testing for leaks	
Repairing and replacing components.	
<b>Power and Industrial Process Piping</b>	<b>900</b>
Fabrication and installing high pressure and special alloy piping.	
Welding pipe.	
Detail testing prior to operation of system.	
<b>High and Low Pressure Boilers</b>	<b>500</b>
Installing boilers.	
Fabricating and installing piping.	
Testing and placing in operation.	
Instructing operating personnel.	
<b>Hot and Cold-Water Systems for Domestic Purposes</b>	<b>200</b>
Measuring and cutting pipes for specifications.	
Sweating copper joints.	

Measuring, cutting, and threading galvanized pipe.	
Selecting, fitting, and installing valves.	
Installing in accordance with accepted code standards.	
<b>Gas System Appliances</b>	<b>500</b>
Selecting proper piping.	
Measuring, cutting, and threading piping.	
Application, unions, and joints.	
Testing for leaks.	
Venting in accordance with accepted code standards.	
<b>Single Fixture Installation (Commodes, Bathtubs, etc.)</b>	<b>600</b>
Preparing position rests.	
Hanging, fastening, connecting, and testing.	
<b>Water Heater Installation</b>	<b>800</b>
Checking for proper size and type of heater in accordance with job orders.	
Disconnecting old heater on replacement job.	
Installing and connecting new heater in conformance with accepted code standards.	
Venting unit.	
<b>Total Program OJL Hours</b>	<b>8,000</b>



**RELATED INSTRUCTION OUTLINE  
PLUMBER**

**O\*NET-SOC CODE: 47-2152.00    RAPIDS CODE: 0432**

**Related Instruction Guidelines:**

- The course listings outline the related instruction that supplements the on-the-job learning. It is through the combination of both the on-the-job learning and the related instruction that the apprentice can reach the skilled level of the occupation.
- Each apprentice’s attendance and progress in related education must be tracked and appropriate records maintained.
- Time devoted to the job-related education shall not be considered as part of the on-the-job learning.
- Failure on the part of the apprentice to fulfill their obligation as to the related education and/or attendance, or their failure to maintain passing grades therein, shall constitute adequate cause for cancellation of their Apprenticeship Agreement.

Hours Instruction Provided:  During Work Hours     During Non-Work Hours     Both  
 Instruction Method:  Classroom     Correspondence/Shop     Web-Based Learning

RTI Provider Name: North Alabama Craft Training Foundation  
 Contact Name: Wade Thompson  
 Contact Phone: 256-690-1677  
 Contact Email: wade@nactf.org  
 Contact Address: P.O. BOX 6145, Huntsville, AL 35813

Subject / Topic	Contact Hours
<b>NCCER Core</b>	
Basic Safety	12.5
Introduction to Construction Math	10
Introduction to Hand Tools	10
Introduction to Power Tools	10
Introduction to Construction Drawings	10
Basic Communication Skills	7.5
Basic Employability Skills	7.5
Introduction to Material Handling	5
<b>Total NCCER Core RTI Hours</b>	<b>72.5</b>
<b>Level 1 -Plumbing</b>	
Introduction to the Plumbing Profession	5
Plumbing Safety	22.5
Tools of the Plumbing Trade	10

Introduction to Plumbing Math	12.5
Introduction to Plumbing Drawings	17.5
Plastic Pipe and Fittings	12.5
Copper Tube and Fittings	12.5
Cast-Iron Pipe and Fittings	12.5
Steel Pipe and Fittings	12.5
Introduction to Plumbing Fixtures	7.5
Introduction to Drain, Waste, and Vent (DWV) Systems	10
Introduction to Water Distribution Systems	10
<b>Total Level 1 RTI Hours</b>	<b>145</b>
<b>Level 2 - Plumbing</b>	
Plumbing Math Two	15
Reading Commercial Drawings	25
Structural Penetrations, Insulation, and Fire-Stopping	15
Installing and Testing DWV Piping	30
Installing Roof, Floor, and Area Drains	5
Installing and Testing Water Supply Piping	20
Types of Valves	5
Installing Fixtures and Valves	20
Installing Water Heaters	10
Basic Electricity	10
Fuel Gas and Fuel Oil Systems	20
<b>Total Level 2 RTI Hours</b>	<b>175</b>
<b>Level 3 - Plumbing</b>	
Applied Math	17.5
Sizing and Protecting the Water Supply System	30
Potable Water Supply Treatment	15
Types of Venting	20
Sizing DWV and Storm Systems	20
Sewage Pumps and Sump Pumps	12.5
Corrosive-Resistant Waste Piping	7.5
Compressed Air	10
Service Plumbing	27.5
<b>Total Level 3 RTI Hours</b>	<b>160</b>
<b>Level 4 - Plumbing</b>	
Business Principles for Plumbers	15
Fundamentals of Crew Leadership	20
Water Pressure Booster and Recirculation Systems	12.5
Indirect and Special Waste	17.5
Hydronic and Solar Heating Systems	17.5
Codes	12.5

Private Water Supply Well Systems	10
Private Waste-Disposal Systems	10
Swimming Pools and Hot Tubs	7.5
Plumbing for Mobile Homes and Travel Trailer Parks	7.5
Introduction to Medical Gas and Vacuum Systems	15
<b>Total Level 4 RTI Hours</b>	<b>145</b>
<b>Total Program RTI Hours</b>	<b>697.5</b>