2024 HVAC/R Apprenticeship Standards are based on 2022 Plumber Pipe fitter Apprenticeship Standards.

Changes:

* Page 7 – Office Information – Changed to reflect new administration and staff

* Page 9  - Acceptance – Selection Process: II.i. Selection of applicants and the number to be offered apprenticeship will be determined by the Committee.

* Page 9 – Acceptance – Selection Process: II.iii The Committee may select apprentices from an eligibility pool of the workers already employed by the sponsors established employer partners.

* Throughout the document – Changed the hours per year from 220 hours to 246 hours per year.

* Page 25 – Ratio of Apprentices to Journeymen – Changed from 3:1 to 1:1 not to exceed the overall workforce.

* Page 45 – Selection Procedure – Items 4 & 5:

4. Applicants may be sponsored by an employer.

5. Selection on basis of rank from pool of eligible applicants:  The Committee may select apprentices from a pool of eligible applicants on the basis of the rank order of their scores on one or more qualification standards where there is a significant statistical relationship between rank order of scores and performance in the apprenticeship program.  The selection of any qualification standards beyond minimum legal working age, the use of oral interviews, the notification of applicants, and the establishment of goals for the admission of minorities and women (minority and nonminority) into the pool of eligibles must proceed in accordance with the requirements of 29 CFR § 30.5(b)(1) and NAC 610.845.

* Page 61 – Curriculum – Topics listed for overall apprenticeship – 246 hours per year x 5 years = 1230 total Related Instruction hours:

Related Trade Mathematics

Use and Care of Tools

Job Safety & Health

Soldering & Brazing

Plumbing Service

HVAC Refrigeration Systems

EPA 608 CFC/R410a/A2L/Hydrocarbon Refrigerant Safety & Training

Financial Literacy

HVAC Installation and Maintenance

Electrical and Control Systems

Airflow, Air Distribution and Ventilation

Psychrometrics

Pressure Enthalpy

Heat Pumps and Electric Heat

Gas Furnaces

Customer Service and Sales

Refrigerant Line Sizing & Press Fittings

Variable Refrigerant Flow Systems

Commercial HVAC

Industrial Motor Controls

Commercial Refrigeration

HVAC/R Diagnostics and Troubleshooting

EPRI Rigging & Crane Signaling

Hydronics

Chilled and Heated Water Systems

Pumps

Chiller Fundamentals

Boilers Fundamentals

Blueprint Reading

Heat Load Calculations

Variable Frequency Drives

Building Codes or Commercial HVAC II

Green HVAC Technologies

Building Automation System Controls

UA/MCA Foreman Awareness Training

OSHA 30

UA HVAC Star Mastery

Current Events - New Technologies and Updates occurring in the HVAC Industry

* Page 62 – Certifications Listed: EPA Section 608 Certification, EPRI Rigging and Crane Signaling, R-410a Safety Certification, ESCO

Employment Ready Certifications, OSHA 30 Certification, ASOPE License, Clark County

Journeyman License, UA-SS1, UA-51, UA/MCAA Foreman Awareness Certification.

* Page 63 – Textbooks Listed:

Math for HVACR

Print Reading for HVACR

EPA Section 608 Preparatory Manual

Low Pressure Boilers

Plumbing Service, Maintenance and Repair

Rigging

Hydronic Heating and Cooling

Fundamentals of HVACR or Modern Refrigeration and Air Conditioning

Heat Pumps

Gas Heating

Digital Multimeter Principals

Universal R-410a Safety & Training Manual

Hydrocarbon Refrigerants

Low GWP Refrigerant

System Performance

Combustion

Psychrometrics without Tears

Pressure Enthalpy without Tears

Pumps

Foreman Training

Start Test and Balance

Steam Systems

Uniform Plumbing Code

Uniform Mechanical Code

NFPA 70E

NEC