



HVAC/Steamfitting Curriculum Map CIP # 47.0201

INDUSTRY STANDARDS

OSHA 10 Certification
EPA 608 Certification
Ladder Certification

L e v e l 1	<p>1st Quarter Classroom Rules Basic Safety (200) Intro to HVAC (100) PPE (203) Tools for HVAC (300 - 302)) Identify Piping Material (501) Demonstrate Duties as an HVAC Technician (103)</p>	<p>2nd Quarter OSHA Regulations (204) Basic Electricity (600-602, 604-608) Air Distribution (900-902)</p>	<p>3rd Quarter Introduction To Heating (800-802) Install Heating/AC Thermostats (811) EPA 608 Regulations (1108)</p>	<p>4th Quarter Career Opportunities in HVAC field (105) Use Stepladders, Extension Ladders, and Scaffolding. (205) Select Measure, Cut, Ream, Swedge, and Flare Piping Projects (502) Assemble Non-Metallic Pipe and Fittings and Pressure Test (504) Assemble Copper Tubing Projects and Pressure Test (505) Solder and Braze Copper and ACR (506-507) Locate and Describe Components of the Basic Refrigeration Cycle (703-704) Perform Maintenance On a Gas Furnace (804)</p>
L e v e l 2	<p>1st Quarter Blueprint Reading (400-401) Assemble Corrugated Stainless Steel Gas Tubing (510) Introduction to Cooling (700-702) Categorize and Manipulate Service Valves (711) Determine When to Charge Liquid Versus Vapor (1104)</p>	<p>2nd Quarter Read and Interpret Blueprint Plans (402) Classify and Test Various Types of Capacitors (610) Analyze and Test the Operations of Various Compressors (705)</p>	<p>3rd Quarter Size and Install Electric Disconnects, Circuit Breakers, and Fuses (609) Evaluate Effects of Airflow on Cooling Systems (710)</p>	<p>4th Quarter Identify Electrical Motors and Their Applications (611-612) Determine Transformers Ratings and Their Applications (614) Analyze and Test the Operations of Various Condensers (706-708) Identify Oil Heating Equipment (806) Perform Combustion Analysis on Oil and Gas Fired Equipment (814) Troubleshooting Electrical Components (1303) Install Heat Pump Systems (1403)</p>
L e v e l 3	<p>1st Quarter Test Velocity, Static Pressure, Temperature, Humidity, and Volume in a Duct System (903) Perform Refrigerant Recovery (1102) Troubleshooting Heating (1200) Heat Pumps (1400)</p>	<p>2nd Quarter Explain Heat Pump Modes of Operation (1401) Identify and Describe Heat Pump Components (1402)</p>	<p>3rd Quarter Perform Burner Flame Proving Test (1201) Troubleshoot Oil Fired Equipment (1202)</p>	<p>4th Quarter Locate Refrigerant Leaks Using Common Types of Leak Detectors (1101) Perform System Evacuation and Dehydration (1103)</p>
L e v e l 4	<p>1st Quarter Identify Components and Fuel Properties of Various Heating Systems (803) Install and Adjust Oil. Gas (Condensing and Non-Condensing), and Electric Heating Equipment (807) Maintenance on Oil Fired Equipment (808) Identify and Size Electric Equipment (810) Identify the Sequence Of Operations of Various Warm Air Furnaces (814) Compare, Identify, and Fabricate Using Various Duct Materials (906) Introduction to Hydronic Systems (1000) Weigh in Correct System Charge When Appropriate (1105) Identify Pump Down Applications and Perform System Pump Down Applications (1109-1110)</p>	<p>2nd Quarter Perform Basic Installation Practices, Including Duct Sealing and Leak Testing (907) Identify and Compare the Application of Air Distribution Secondary Accessories to Increase Air Quality and Comfort (908) Troubleshoot Oil Fired Equipment (1202) Identify Control System Components (1301)</p>	<p>3rd Quarter Identify and Compare Various Hot Water Heating System Components, Piping Schemes and Their Applications (1001)</p>	<p>4th Quarter Service and Maintain Hydronic Systems (1002) Use HVAC Computer and Mobile Applications (1503)</p>