



# Plumbing

## Available Certifications:

OSHA Certification            Gastite Certification  
 Tracpipe Certification        NCCER Credentials

## Complete Task List:

Task Number	Description	Hours	Level
<i>*State Approved Program of Study</i>			
100	Safety		
101	RESERVED		
102	RESERVED		
103	RESERVED		
104	RESERVED		
105	RESERVED		
106	RESERVED		
107	RESERVED		
108	RESERVED		
109	RESERVED		
110	RESERVED		
111	RESERVED		
112	RESERVED		
113	Practice Occupational Safety and Health Administration (OSHA) safety standards as they relate to the industry.		
200	RESERVED		
300	Blueprints and Sketching of Pipe Systems		
301	Interpret types of drawings.		
302	Interpret various lines used on drawings.		
303	Interpret specifications and dimensions.		
304	RESERVED		
305	Interpret piping systems according to color-coding.		
400	Pipe Specifications and Systems		
401	Install pipe and connections according to manufacturer specifications.		
402	Follow plumbing standards, codes, and specifications.		
403	RESERVED		
404	RESERVED		
405	Research the effects and corrective measures for thermal expansion in a piping system.		
406	Install various types of pipe insulation.		
407	RESERVED		
500	Hand and Power Tools		
501	Use and maintain hand tools.		
502	Use and maintain power tools and equipment.		
503	Operate laser or transit level for sitework.		
600	Valves		

<b>Task Number</b>	<b>Description</b>	<b>Hours</b>	<b>Level</b>
601	Use backflow prevention devices.		
602	Use types of valves that start and stop flow.		
603	Use valves that regulate flow.		
604	Use valves that relieve pressure.		
605	RESERVED		
606	Disassemble and assemble various types of valves, e.g., gate valve, globe valve, flushometer.		
700	Copper Piping Operations		
701	Join, cut, and bend various types of copper pipe tube, e.g., solder, compression, flare, swage, press fit, brazing		
702	RESERVED		
703	RESERVED		
704	RESERVED		
800	Plastic Pipe and Tubing		
801	Measure, cut and assemble Polyvinyl Chloride (PVC), Chlorinated Polyvinyl Chloride (CPVC), and Acrylonitrile-Butadiene-Styrene(ABS).		
802	Measure, cut and assemble cross-linked Polyethylene (PEX) plastic tubing and Polyethylene (PE).		
803	RESERVED		
804	RESERVED		
900	Pipe Hangers and Supports		
901	Use hangers to secure horizontal and vertical pipe to masonry, metal, and wood.		
902	Layout and explain various fixture carriers.		
1000	Water Distribution Lines		
1001	RESERVED		
1002	Rough-in water supply lines for residential and commercial fixtures according to manufacturer spec sheet.		
1003	RESERVED		
1100	Steel Pipe Operations		
1101	Thread steel pipe with an adjustable die, power threading machine, and hand threader.		
1102	Measure, cut, ream, and assemble various types of steel piping.		
1103	Adapt steel pipe to other piping materials.		
1104	Assemble black steel pipe with mega press fittings.		
1105	Assemble Corrugated Stainless-Steel Tubing (CSST) pipe and fittings.		
1200	Cast Iron Pipe Operations		
1201	Use tools for working with cast iron pipe.		
1202	Measure and cut cast iron soil pipe with various cutting methods.		
1203	Assemble cast iron with No Hub, Fernco, and rubber gasketed joints.		
1204	Research lead joints.		
1300	RESERVED		
1400	Drains, Stacks and Sewers		
1401	Lay out and establish grade/slope for drain lines.		

<b>Task Number</b>	<b>Description</b>	<b>Hours</b>	<b>Level</b>
1402	Explain backwater prevention.		
1403	RESERVED		
1404	RESERVED		
1405	Rough-in drain lines for residential and commercial fixtures according to manufacturer specification sheet.		
1500	Fixtures		
1501	Install gravity, pressure assist, or flush valve type water closets.		
1502	Install bathtubs.		
1503	Install wall mounted fixtures.		
1504	RESERVED		
1505	Install kitchen sinks.		
1506	Install prefabricated shower base drains.		
1507	Install lavatories.		
1508	RESERVED		
1509	Install fixture traps.		
1600	Appliances		
1601	Install a dishwasher		
1602	Install electric and gas water heater.		
1603	RESERVED		
1604	Install a clothes washing machine.		
1605	Install specialty water heaters (oil, tankless, indirect, or heat pump).		
1606	Install a water re-circulating pump.		
1607	Install a garbage disposal unit.		
1608	Install a sump pump.		
1609	Research a sewage ejector pump.		
1700	Vents		
1701	Apply principles and purposes of venting, e.g., common, individual, wet vent.		
1702	RESERVED		
1703	Explain vent termination.		
1704	Explain air admittance valves.		
1800	Plumbing Systems Maintenance		
1801	Clear obstructions from lavatory drains.		
1802	Clear obstructions from main drain lines.		
1803	Clear obstructions from water closets.		
1804	Repair/replace leaking water faucets or valves.		
1805	RESERVED		
1806	RESERVED		
1807	RESERVED		
1808	Research methods to thaw frozen pipes.		
1809	RESERVED		
1810	RESERVED		
1811	Replace all components in a gravity and/or pressure assist toilet tank.		

<b>Task Number</b>	<b>Description</b>	<b>Hours</b>	<b>Level</b>
1812	Research sewer camera(s) for pipe inspection.		
1900	Tests on Systems		
1901	RESERVED		
1902	RESERVED		
1903	RESERVED		
1904	Perform tests according to local plumbing and mechanical codes (air, hydrostatic, head pressure, etc.)		
2000	Advanced Pipe Fabrication		
2001	Calculate simple piping offsets.		
2002	Calculate three-line, 45° equal-spread offsets around a vessel.		
2003	Calculate three-line, 45° unequal-spread offsets.		
2004	Convert center, back throat, and/or face measurement to an end measurement.		
2100	Pressure Boilers		
2101	Research various near boiler fittings, controls, and accessories.		
2102	Research various types of boilers and fuel sources.		
2103	RESERVED		
2104	RESERVED		
2105	RESERVED		
2106	Research the operation of water and steam boilers and their various controls.		
2107	RESERVED		
2108	RESERVED		
2200	Hydronic Heating System		
2201	Research piping for hydronic heating system.		
2202	Research a primary and secondary piping system.		
2203	Research a radiant system.		
2300	Ladders and Scaffolds		
2301	Use different types of ladders and scaffolds.		
2302	Set up and inspect stepladders, extension ladders, and scaffolding.		
<b>*Local Task List</b>			
VA3513	13.2.11.A- Apply effective speaking and listening skills used in a job interview.		
VA3514	13.2.11.B- Apply research skills in searching for a job. (CareerLink, O-NET, Networking, Newspapers, Professional Associations, Resource Books (OOH), etc.		
VA3515	13.2.11.C-Develop and assemble, for career portfolio placement, career acquisition documents, such as, but not limited to: job application, letter of appreciation, Cover Letter, Resume, Post-Secondary Application, etc.		
VA3516	13.2.11.E- Demonstrate, in the career acquisition process, the application of essential workplace skills/knowledge, such as, but not limited to: Communication, Health and Safety, Resilience, Integrity, Problem Solving, Teamwork and Communication.		

<b>Task Number</b>	<b>Description</b>	<b>Hours</b>	<b>Level</b>
VA3517	13.3.11.A- Evaluate personal attitudes and work habits that support career retention and advancement, with focus on Resilience, Integrity, Problem Solving, Communication, Teamwork.		
VA3518	13.3.11.B-Evaluate team member roles and describe and illustrate active listening techniques: clarifying, encouraging, reflecting, restating, and summarizing.		
VA3519	13.3.11.C- Evaluate conflict resolution skills as they related to the workplace.: constructive criticism, group dynamics, managing leaderships, mediation, negotiation, problem solving.		
VA3520	13.3.11.D- Develop a personal budget based on career choice, such as but not limited to : fixed/variable expenses, gross pay, net pay, saving, taxes.		