



Plumbing Curriculum

Week	Year 1 - Topic	Year 2 - Topic	Year 3 - Topic	Year 4 - Topic
1	Intro To Trade and Apprentices	Piping Materials	Residential Fixtures and Appliances	Intro to the International Plumbing Code; History of Code
2	Plumbing Careers and Laws	Sources and Treatment of Water	Commercial Fixtures and Appliances	How To Locate Code Items; Key Words and Phrases; Definitions
3	Intro To Tools; Rough-In Tools	Distribution Systems, Pipe Sizing	Industrial Fixtures and Appliances	Definitions
4	Finish/Repair Tools; Welding, Electrical, Power, Air, and Hydraulic Tools	Water Heaters	Industrial Fixtures and Appliances	Definitions
5	Trade Math: Fractions	Linear Measure	Residential Installation	Piping Materials
6	Changing Decimals To Fractions	Square and Cube Roots	Commercial and Industrial Installation	Water Supplies and Distribution Systems
7	Changing Fractions To Decimals	Offsets, Shapes, Area, and Volumes	Fixture Fittings and Trim; Installation	Water Connections to Fixtures
8	First Quarter Exam	First Quarter Exam	First Quarter Exam	First Quarter Exam
9	Folding and Scale Rulers, Gauges	Sewage Disposal, Sewers	National Fuel Gas Code Intro	Backflow Requirements and Provisions
10	Math Review and Exam	Trenching and Shoring	Properties of Gas; Materials	Waste Connections
11	Related Science, Water Sources, Sewage Disposal	Drainage Fixture Units	Fuel Gas Pipe Sizing and Installation	Traps
12	Installations	Building Drains; Stacks	Gas Appliances; Regulators and Meters; Controls	Vents
13	Piping	Rough-In Sheets and Single Line Drawings	Venting Materials, Sizing, and Installation	Fixtures; Bathroom Groups
14	Fittings	Detail Drawings	Gas Combustion	Waste Stack Vents
15	Special Materials; Connections	Exploded Views	Local Codes, Inspections, and Testing	Sewers
16	Midterm	Midterm Intro to Welding	Midterm	Midterm
17	Percents and Decimals	Welding and Cutting Theory	Elevations and Grades	Drainage Fixture Unit Valves
18	Percents and Decimals	Soldering, Brazing, Fillers and Flux	Levels and Transits	Residential Piping, Fixtures, and Installation
19	Square Roots, Angles, and Ratios	Oxyacetylene Welding	Offsets	Commercial Piping, Fixtures, and Installation
20	Offsets	Shielded Metal-Arc Equipment and Methods	Tank Capacities; Volume and Weight of Water; Ratios and Proportions	Industrial Piping, Fixtures, and Installation



Plumbing Curriculum

Week	Year 1 - Topic	Year 2 - Topic	Year 3 - Topic	Year 4 - Topic
21	CPR	Testing Welds and Advanced Methods	Storm Drainage and Sizing	Chemical Waste
22	CPR	Welding Exam; Begin Venting	Energy, Temperature, and Heat Transfer	Water Heaters
23	OSHA	Venting Materials and Sizing	Insulation; Water Heaters, Water Treatment	Gas Lines and Appliances
24	OSHA	Sizing, Hangers, and Elements	Third Quarter Exam	Third Quarter Exam
25	Third Quarter Exam	Properties Of Water	Basic Electricity, Circuits, and Safety	Hospitals
26	Installations; Fixtures	Water Pressure	Electrical Troubleshooting	Food Service Establishments
27	Fixtures; Faucets, Valves	Plumbing Traps 1	Blueprint Reading: Specifications	Practice Calculations
28	Lines, Sketching, Symbols	Plumbing Traps 2	Floor and Site Plans	Practice Exercises
29	Sketching, Symbols	Air	Plumbing, Electrical, and HVAC Plans	Practice Calculations
30	Detail Sketching, Isometric and Oblique Sketches	Rigging	Detail Plans	Practice Exercises
31	Review	Review	Review	Review and Practice Test
32	Final Exam	Final Exam	Final Exam	Final Exam
	Total Hours - 150	Total Hours - 150	Total Hours - 150	Total Hours - 150
	1-8 Math lab (30 hours)	1-8 Math lab (30 hours)	9-16 Term 2 Special project (27 hours)	9-16 Term 2 Special project (27 hours)
	9-24 Hands on Lab (24 hours)	9-24 Special project (24 hours)	17-24 Term 3 Special project (27 hours)	17-24 Term 3 Special project (27 hours)



Plumbing Work Processes

	Performance Completions	Hours Required
A. Care and Use of Tools	<ul style="list-style-type: none">• Use• Operation• Maintenance	250
B. Use of Materials Connected with Plumbing and Heating	<ul style="list-style-type: none">• identification of various grades of pipes	250
C. Preparation of Tools, Equipment, and Materials	<ul style="list-style-type: none">• Selection• Delivery to work site• Storage	250
D. Waste Pipe Systems	<ul style="list-style-type: none">• Installation and caulking, including leader pipes	1,000
E. Piping for Domestic Purposes	<ul style="list-style-type: none">• Hot and cold water piping	750
F. Piping for Heating Systems	<ul style="list-style-type: none">• Cutting, fitting, and connecting for system heat, hot water, and boilers	500
G. Plumbing and Draining Systems	<ul style="list-style-type: none">• Assemble in position• Connect fixtures and appliances	750
H. Plumbing Maintenance	<ul style="list-style-type: none">• Repairing or replacing old systems or individual parts	750
I. Copper Pipe Installation	<ul style="list-style-type: none">• Measuring, soldering, sweating, and attaching brackets	500
J. Gas and Oil Burners and Equipment	<ul style="list-style-type: none">• Installation, checking, repairing, replacing whole or parts	500
K. Job Layouts	<ul style="list-style-type: none">• Application of blueprints and specifications	750
L. Use of Measuring Instruments	<ul style="list-style-type: none">• Determining grades, elevations, contours, and layout of work	500
M. Code Applications	<ul style="list-style-type: none">• Layout, install, and inspect with reference to code	750



Plumbing Work Processes

N. Water Systems

- Connect to municipal systems 500

Total number of hours required 8,000

Make note of each different task you perform and record your work experiences in your log book. Enter the number of hours you spent performing a task in the column under the code letter for that task. There is a separate line to be used for each day of the month. Total each column and write these onto a new page at the beginning of each month. Call your VADOLI representative, 703-392-0900 ext. 102 or 131, if you have any questions.