

Free Plumbing Exam Prep Guide

Plumbers Training Institute



Preparing For Your Upcoming Plumbing Exam

Passing your Journeyman and Master/Contractor Exams is one of the most important steps a plumber can take in moving their career forward. For some, the exams can seem daunting, but with the right tools and guidance every apprentice can move forward and achieve their license. Having a thorough study guide for the exams is important. Your guide should not only provide the information you need to learn, but also how to learn it. This free plumbing exam prep guide will provide you with a basic understanding of what may be on your exam.

This free exam prep guide holds valuable information and strategies for passing your exam, BUT it is only the tip of the iceberg. [Plumbers Training Institute](#) helps thousands of tradesmen pass their exams with the best [Online Video Exam Prep Programs](#) available. This Free Exam Prep Guide gives a basic outline of what is covered in the Exam Prep Programs produced by Plumber's Training Institute.

About The Exam

Reading And Understanding The Exam Bulletin

For most state license-based trade exams, either the state or a testing company contracted by the state will publish a "Candidate Information Bulletin" which provides a very basic outline of:

- How the test will be administered
- Who is eligible to test and how to register
- Site Locations
- Reference Materials and other items that may be used during the test
- Topics you may be tested in
- Exam and License Options

The Content Outline is one of the most important parts of the Candidate Information Bulletin. It often provides both the general topics that are covered on the Exam, as well as the number of questions that each topic will be given. Most plumbing exams include questions on the following:

- General Plumbing Regulations
- Gas Systems
- Cleanouts
- Fixtures, Fittings, and Equipment
- Water Heaters
- Piping, Valves, and Controls
- Water Supply
- Hangers and Supports
- Drain, Waste and Venting
- Venting Requirements
- Backflow and Backflow Prevention
- Traps and Interceptors
- Developed Length
- Isometric Analysis and/or Drawing

- Plans Reading
- Joints and Connections
- Safety and Excavation
- Water Treatment
- Other Topics

Books You Should Have During The Exam

If the candidate information bulletin includes reference materials such as your state plumbing and fuel gas code book, the CFR 1926 Safety book, or other industry related publications, they are important. Generally, these reference materials include detailed information that you will be required to find during the exam. This is not information you would be able to memorize, but you are expected to be able to find it quickly and accurately. This list often includes:

- Your State Code Book
- Your State Fuel Gas Code
- Water Systems Handbook
- CFR 1926 OSHA
- Water Processing: Residential Commercial, Light Industrial
- Plumbing Math Book
- And Others

Effective Study Techniques

Many tradesman struggle with classic study techniques and bookwork, so having a guide on how best to study can be extremely helpful. Being able to study and actually remember and understand everything you are learning is important. A comprehensive exam prep program should provide not only the information that you need to know, but also teach you the most effective strategies on how to learn and use the information. This includes but is not limited to:

- Note taking strategies
- Study schedules and timing
- How to quickly and accurately reference information
- Learning and comprehension techniques
- Regulating blood sugar and water levels
- Test taking strategies
- And more

State Plumbing Rules And Laws

General Laws

Each state has the power to govern its skilled trades and create laws and rules that tradesmen are required to follow. Getting familiar with these laws and rules is important as they are included in plumbing exams, especially for Master Plumbers or Plumbing Contractors. Many of the rules and laws for each state can be found in Chapter 1 of the Code book, but there are others such as Acts and referenced requirements that you may need to find elsewhere.

Code Of Federal Regulations, Title 29 Part 1926 OSHA

Safety is a big part of being the qualified individual on the jobsite. Whether you aim to be a Journeyman or a Master/Contractor, the state wants to know that you are able to keep the jobsite safe and follow safety requirements. The Code of Federal Regulations, [Title 29 Part 1926 OSHA](#) is the bible of safety

requirements for employers in the United States. If your exam has this book listed as a reference it is important that you have access to a copy and be highly familiar with how to use it. Remember for open book tests, it is often not about being able to memorize information, but about being able to find the information quickly within the reference material.

Course Breakdown

Our exam prep courses are designed to cover the above subjects in detail, so you are able to pass the exams on your first try. Below is a detailed description of what will be included on your exam and what is covered in our programs.

Reading The Exam Bulletin

How to Study for the Plumbing Exam

International Plumbing Code (IPC)

IPC Chapter 1: Administration, Scope And Intent/Purpose

- How to read the code book
- Plumbing Administration
- Permits and Approvals
- Inspecting and Testing
- Violations

IPC Chapter 2: Definitions And Symbols

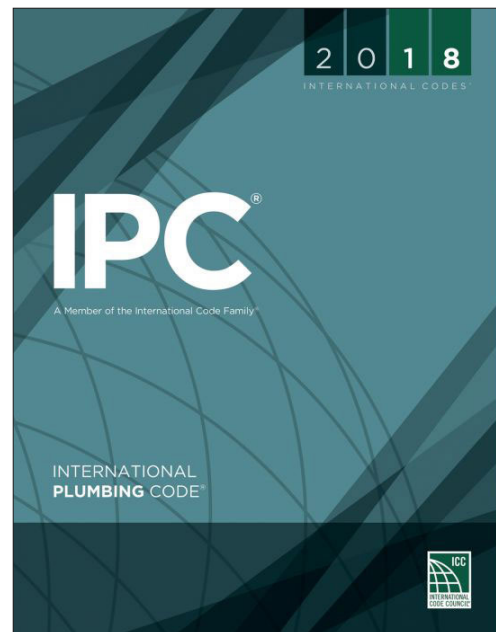
- Study Techniques – Test Taking and Definitions
- Definitions
- Symbols on Plans
- Lines on Plans
- Fitting and Valve Symbols

Plumbing Math

- Water Facts and Constants
- Bend Angle Conversions
- Fraction and Decimal Conversions
- Area and Volume
- Temperature Conversions
- Calculating Offsets
- Calculating Pressures
- Grades and Slopes

IPC Chapter 3: General Regulations

- Materials and Requirements
- Structural and Protections
- Tables
- Testing and Inspection

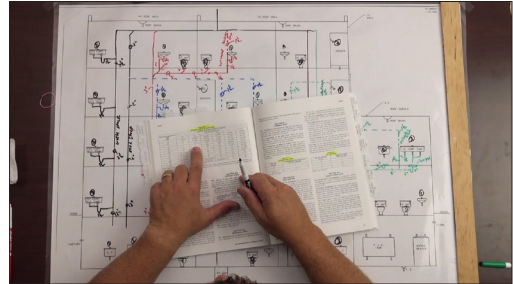


IPC Chapter 4: Fixtures, Faucets, And Fixture Fittings

- Calculating Minimum Requirements
- Fixture Requirements
- Referencing Tables
- Employee and public facilities
- Specific Appliances
- Practice problems

IPC Chapter 5: Water Heaters

- Safety Requirements
- Drains and Valve
- Installation and Access



IPC Chapter 6: Water Supply And Distribution

- Water Supply Requirements
- Distribution System Requirements
- Separate Service and Sewers
- GPM Vs. PSI
- Referencing Tables
- Potable Water Supply
- Backflow Prevention
- Pressures / Velocity
- Volume
- Allowable Pressure Drops and Considerations

IPC Chapter 7: Sanitary Drainage

- Drainage
- Cleanouts
- Fixture Units
- Drainage System Sizing
- Sumps and Ejectors
- Backwater Valves

IPC Chapter 8: Indirect And Special Waste

- Requirements
- Traps and Indirect Waste
- Receptor and Drain Requirements
- Specific Appliances

IPC Chapter 9: Vents

- Materials
- Vent Extensions, Connections and Grades
- Pipe Sizing, Developed Length
- Stack Offsets, Branches

Calculating Volume of a Cylinder

What is the volume of this cylinder tank in cubic feet?

$$A = \pi \times R^2$$
$$A = 3.14 \times (10 \times 10)$$
$$A = 314$$
$$V = A \times H$$
$$V = 314 \times 28 = 8792 \text{ cu in}$$

How much will it weigh when full of water?

The diagram shows a cylinder with a diameter of 20 inches and a height of 28 inches. The radius is labeled as 10 inches. The diagram is circled in red.

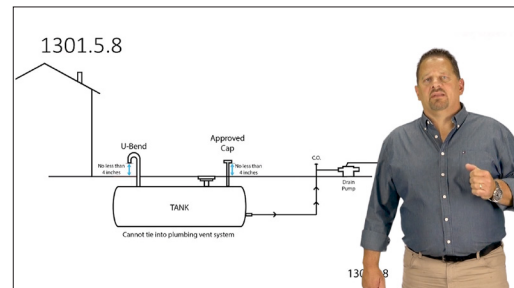
- Fixture Vents
- Wet Vents
- Stack Vents
- Circuit Vents
- Admittance Valves

IPC Chapter 10: Traps, Interceptors And Separators

- Trap Requirements
- Interceptors and Separators

IPC Chapter 11: Storm Drainage

- Area, Volume and Drainage Practice Problems
- Sizing Methods
- Drain Design Methods
- Secondary Drains
- Sumps and Pumping Systems



IPC Chapter 13: Nonportable Water Systems

- Reclaimed vs. Potable
- Safety and Requirements
- Tanks and Venting
- Problems

IPC Chapter 14: Subsurface Landscape Irrigation Systems

- System Design and Sizing
- Installation

Appendix E

- Developed Vs. Effective Vs. Equivalent
- Sizing of Water Piping Systems
- Friction Charts and Lengths

Private Sewage Systems

- 2018 IPSD (International Private Sewage Disposal Code)
- Percolation Rate
- Soil Absorption Systems
- Tank Sizing

Plan Reading

Hands-On Practical Application

- Measuring, fitting, and soldering copper piping

Master Isometrics

Practice Test

Hundreds of Practice Questions and Problems for plumbers to work through. Completing practice exams can be highly effective in preparing you for the exam as well as pinpointing sections that you may want to focus on.

International Fuel Gas Code (IFGC)

General Overview

- IFGC Scope and Administration
- Applicability
- Permits
- Inspection and Testing

IFGC Definitions

IFGC General Regulations

- Structural Safety
- Appliance Location
- Combustion, Ventilation and Dilution Air
- Installation
- Access and Service
- Condensate Disposal
- Clearance Reduction
- Electrical Bonding



Gas Piping Installation

- Pipe Sizing
- Piping Materials
- Piping System Installation
- Inspection, Testing, and Purging
- Appliance and Manufactured Home Connections
- Support Intervals
- Overpressure Protection Devices

Chimney And Vents

- General
- Vents
- Appliances and venting

- Sizing Venting Systems

Specific Appliances

- Forced Air Furnaces
- Gas Fired Toilets
- Chimney Openings

Gaseous Hydrogen Systems


- General Definitions and Base Requirements

Study Techniques for Definitions

An example of question based directly on a definition might be something like:

Q: _____ is a pipe inside the building that conveys storm water from the roof to a storm or combined building drain.

- a. Building trap
- b. Cistern
- c. Conductor**
- d. Effective Opening



Appendix A

Appendix B

Appendix C

Appendix D

Practice Tests

Benefits Of Taking A Plumbers Training Institute Course



This course covers everything mentioned above and more. Each prep course is tailored to your state's exam so you can pass on your first try.



Study at your own pace 24/7 from any computer or mobile Device.



HD video courses with an on-screen Master Plumber Instructor. Learn by watching a licensed industry professional.



Save money and time by completing your exam prep, continuing education, or code updates online rather than traveling to a in-class course.



A full staff of licensing experts are available to help answer any questions you have Monday through Friday from 8 am to 5 pm EST. Call **1-800-727-7104**.

Gain the skills and knowledge you need to pass your state's plumbing exam on the first try!