



**First Select**

## **Advanced Water Plumbing, Installation & Drawings in Plumbing System**

| Date                | Venues  | (\$) <b>Fees</b> | Book your seat               |
|---------------------|---------|------------------|------------------------------|
| 15 Dec -19 Dec 2024 | Bahrain | 2900             | <a href="#">Register Now</a> |

### **Objectives:**

By the end of the program, participants will be able to:

- Read blueprints, drawings and specifications to determine layout of plumbing system, water supply network and waste and drainage systems
- Install, repair and maintain domestic, commercial or industrial plumbing fixtures and systems
- Locate and mark positions for pipe connections, passage holes and fixtures in walls and floors
- Cut opening in walls and floors to accommodate pipe and pipe fittings
- Measure, cut, bend and thread pipes using hand and power tools or machines
- Join pipes using couplings, clamps, screws, bolts, cement or soldering, brazing and welding equipment
- Test pipes for leaks using air and water pressure gauges

### **WHO SHOULD ATTEND?**

The Advanced Water Plumbing, Installation & Drawings in Plumbing Systems is intended for plumbing systems designers and plan checkers. The courses will also interest plumbing and building code officials, HVAC-R professionals, fire protection professionals and construction managers.

### **Course Outline:**

#### **Introduction to Plumbing:**

- This is a study of survey of the history of the industry, occupational information, job ethics and career information. Occupational hazards, health and safety practices are reviewed.

#### **Fundamentals of Plumbing:**

- This topic studies fundamentals of plumbing, mathematics and elementary drawings for beginners. Instruction is given in the principles and design of water supply and distribution.

#### **Basic Plumbing Principles and Practices:**

- Fundamentals of plumbing are explored in this course. Topics include pipe sizes and calculations, flow in pipe, friction, design, application and general specification of pipes and fittings

#### **Plumbing Layout and Estimating I:**

This topic emphasizes on layout procedures for one- and two-story residential, commercial and industrial units. Topics such as estimating procedures for each of this unit, such as pricing methods and bidding practices are covered

#### Plumbing Code:

- Instruction is given in plumbing codes and ordinances that affect rough-in work, in city and county areas. Installation of wastes, vents, cleanouts, traps, gas fittings and gas vents, and water pipe requirements are reviewed.
- Instruction in the uniform plumbing code that involves the current regulations of water and gas systems, fixture installation, water heaters, building sewers, joints/connections and introduction to appendix "A" and reference standards

#### Back Flow Prevention Devices:

- Fundamentals of cross-connection controls including state and municipal codes, rules and regulations are reviewed in this course. Emphasis is given to laboratory work in operating, testing and maintaining vacuum breakers, double check valves and reduced pressure devices.

#### Drawing and Layout:

- Instruction is provided in applied drafting as related to the plumbing industry. The proper methods and procedures of plan interpretation and application with emphasis on plumbing specifications are reviewed.
- Information and Practice Required to Make Coordinated Drawings

#### Principles and Practices of Plumbing Design and Layout:

Participants are trained on skills such as measuring with an architect's scale, construction drawings that include piping layout, fixture layout, disability requirements, orthographic drawings, and basic isometric drawings

#### Advanced Layout and Procedures:

- Proper methods of layout and installation procedures in fabrication and erection of piping in commercial buildings are reviewed in this course. Local and national codes are also studied.

#### Design and Construction Specialties:

- Instruction is given in plumbing layout drawing, blueprint reading, principles and practices of water supply and distribution, special waste piping practices, use of elementary back-flow prevention devices, plumbing installation techniques, introductory principles and practices of solar domestic water heating.

#### Plumbing Drafting and Design:

- This topic emphasizes on principles, sizing and layout of sanitary waste and vent systems, hot and cold water systems and gas distribution systems, selection and specification of fixtures and plumbing system accessory devices.

#### Plumbing Practices and Installation:

- The study and practice of the proper methods and procedures used in installing plumbing fixtures and accessories are explored in this course. Installing, fabricating, and testing fixtures applicable to residential and commercial plumbing are covered.

#### Servicing of Plumbing Fixtures and Appliances:

- This topic focuses on proper methods of repairing plumbing fixtures and appliances. Students are trained in preparing for the repair job and costing the job.

#### Special Purposes Installation:

- Fabrication and erection of piping for the proper installation of special appliances and fixtures are studied in this course. Special methods used in the construction of these fixtures as well as special testing procedures are also reviewed

#### WORKSHOP STYLE:

A mixture of short presentations, interactive discussion, individual exercises and group work. The emphasis throughout is on a practical approach using case material and examples.



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