Commercial Plumbing Systems Essentials (RV-10588)

**Course Description**

This course will provide essential information regarding Plumbing Systems in the areas of water supply systems, drainage systems, commercial plumbing fixtures, and backflow compliance. If you’re involved in Plumbing systems in the areas of design, construction, maintenance, or management, this course will be a key training experience for your career. As a result of this training, you will have a better understanding of these core areas of Plumbing systems and will be able to successfully contribute to your company- in system design, overseeing construction and maintenance activities, and company management.

**Course Objectives**

By the end of this course, you will be able to:

* List technical terms and basic theoretical concepts involved in plumbing systems
* Recognize typical equipment and system components - understand operation
* Discuss critical design requirements for plumbing systems
* Identify key principles for system installation, operation, and maintenance
* List the safety and health impacts related to plumbing systems
* Identify applicable codes and regulations related to plumbing systems

**Course Outline**

**Introduction – 5 minutes**

The quality of the plumbing system serving a building ensures that the proper facilities are provided for the building occupants, and promotes a safe and clean work environment.

* Course Description and Learning Objectives
* Course Overview

**Water Supply Systems – 15 minutes**

The objective for water supply systems is to ensure an adequate water supply at adequate water pressure to all fixtures and equipment at all times. There are basically four (4) important reasons why the design of a water distribution is absolutely essential.

* Overview of Water Supply Systems
* Water Supply System Sizing
* Water Supply Metering
* Water Supply Piping
* Water Supply Valves
* Hot Water Systems
* Case Study #1

**Drainage and Vent Systems – 15 minutes**

Wherever public sanitary sewers or combined sewers discharge sewage from a building, the sanitary drainage system of the building is connected to the public system. If a public sewer is not available, the building will have a private system that conforms to the rules and regulations of the local jurisdiction.

* Overview of Drainage and Vent Systems
* Drainage Piping
* Drainage System Sizing
* Storm Drainage Systems
* Vent Systems
* Sump and Ejector Systems
* Case Study #2

**Commercial Plumbing Fixtures – 10 minutes**

Each plumbing fixture is designed for a specific function to maintain public health and sanitation, such as discharging potable water or carrying away waste. Some of the numerous plumbing fixtures used in plumbing systems are water closets and urinals, showerheads, faucets, drinking fountains, bidets, floor drains, and emergency eyewashes.

* Overview of Commercial Plumbing Fixtures
* Plumbing Fixtures Flushing Devices
* Sinks and Lavatories
* Case Study #3

**Backflow Compliance – 10 minutes**

The probability of contamination of drinking water through a cross connection occurring within a single plumbing system may seem remote; but, considering the multitude of similar systems, the probability is quite high.

* Overview of Backflow Compliance
* Backflow Systems
* Backflow Devices
* Backflow Device Applications
* Case Study #4

**Conclusion - 5 minutes**

* Summary