| | |
|---|---|
| **Course Name** | **Sanitary Drainage Systems** |
| **Credit Hours** | 4 Hours |
| **Instructor(s)** | Randy Drake |
| **Fee** | $40.00 |
| **Reference Materials** | 2021 Edition of the International Plumbing Code<br>2021 Edition of the Uniform Plumbing Code |

## Course Description

This course on sanitary drainage systems (SDS) is tailored for plumbing professionals and presents the general principles involved in designing, installing, and maintaining efficient sanitary drainage systems in residential and commercial settings. It examines the components of a well-designed SDS and provides insight into:

- proper installation practices,
- sizing methods,
- fluid dynamics,
- materials selection,
- and alternative systems.

The course also examines grease interceptors, their importance, and F.O.G. Participants will gain foundational knowledge and insight for further study and practice. This course emphasizes the importance of SDS in public health and environmental protection.

## Learning Objectives

At the completion of the course, plumbers will be able to:

- Understand the general principles of planning, installing, and maintaining sanitary drainage systems.
- Explain the basic components of a well-designed sanitary drainage system and their functions.
- Identify appropriate materials for sanitary drainage systems and the planning required for proper installation.
- Identify selected alternative sanitary systems and methods.
- Interpret relevant building codes and standards to ensure compliance and enhance system safety.
- Describe common types of grease interceptors and their role in sanitary drainage systems.
- Understand the critical role of sanitary drainage systems in public health and environmental protection by preventing contamination and ensuring effective wastewater management.

**Equipment Requirements**

You must have an active, working internet connection to access this course online, as well as a platform to access the internet, such as a computer, tablet, or phone. All popular web browsers are supported, including Google Chrome, Mozilla Firefox, Safari, and Opera. No specialized software, speaker, microphone, or web camera is required.

**Schedule and Location**

This course is available online at any time at [www.TradesmanCE.com](www.TradesmanCE.com). Upon enrolling in the course, students will have access for 365 days or until the agency-issued course expiration date, whichever comes first. After the access expiration date, the student may re-activate their course if the course approval has not expired. If they do not re-activate, the course will be removed from the student's account and any progress in the course will be lost. Before the access expiration date, the student may sign in and out of the course as many times as needed to complete the course.

**Student Support**

Both general and technical support is available to the student before, during, and after taking the course online. Students have access to general customer support via phone, chat, and email. Students have access to the course instructor via email. All questions, concerns, and comments received will be responded to within one business day.

**Participation/Interactivity Verification**

Timed Logs - Per our company's record retention policy, each student's every log-in, log-out, and lesson/assessment completion time is tracked and retained as part of the student record.

Review Questions - After each section of text, students must answer a review question. Students cannot progress in the course until the question between sections has been answered correctly.

Global Timer - Students will not get credit until they spend a minimum of 200 active minutes total in the course.

**Identity Verification**

Unique Username/Password - Each student that wants to complete a training course with us must create and account by registering a unique personal email address and password. The student must enter this unique identifier every time they take a break from the course.

**Assessment Details**

Review Questions - The licensee must complete all multiple-choice questions between sections correctly to get credit for the course. If their first response is incorrect, students will have to try again until they choose the correct answer.

# Sanitary Drainage Systems Timed Outline

| Section | Title | Questions | Minutes |
|---|---|---|---|
| 1 | Introduction | 1 | 4.2 |
| 2 | Basics of Sanitary Drainage Systems | | 2.3 |
| | Components of Sanitary Drainage Systems | | 13.1 |
| | Fluid Dynamics | 3 | 3.2 |
| 3 | Sizing of Systems | 1 | 5.1 |
| | Determining System Drainage Load | | 3.4 |
| | Continuous and Intermittent Flow Considerations | | 4.3 |
| | Pipe Sizing Methods | | 2.8 |
| | Tables and Charts | 3 | 6.3 |
| 4 | Installation | 1 | 9.9 |
| | Installation Techniques | | 11.6 |
| | Post-Installation | 3 | 3.3 |
| 5 | Codes and Standards | 1 | 4.9 |
| | UPC and IPC | | 5.2 |
| | Comparison of UPC and IPC | | 7.1 |
| | Local and State Regulations | | 2.2 |
| | ADA Compliance | 3 | 5.1 |
| 6 | Technical Considerations: Design and Engineering Principles | 1 | 6.7 |
| | Hydraulic Load Calculations | | 2.8 |
| | Pipe Gradient and Flow Rates | 3 | 9.5 |
| 7 | Technical Considerations: Materials and Equipment Standards | 1 | 7.9 |
| | Innovation in Materials and Technology | | 0.9 |
| | Case Study: The AGU Building | 3 | 8.5 |
| 8 | Alternative Sanitary Systems and Methods:  Eco-Friendly and Sustainable Practices | 1 | 6.2 |
| | Recyclable Materials in Construction | 3 | 13.2 |
| 9 | Alternative Sanitary Systems and Methods:  Advanced and Non-Traditional Systems | 1 | 12.1 |
| | Constructed Wetlands | 3 | 7.8 |
| 10 | Grease Interceptors: Functionality and Efficiency | 1 | 6.1 |
| | Types of Grease Interceptors | 3 | 12.8 |
| 11 | Grease Interceptors: Installation and Maintenance | 1 | 16.4 |
| | Cleaning Protocols and Maintenance Schedules | 3 | 8.1 |
| 12 | Conclusion | | 3.9 |
| | Totals: | 40 | 216.9 |
| | Student Minimum Time Required: | | 200 |