



Course Name	Water Heaters
Credit Hours	4 Hours
Instructor(s)	Randy Drake
Fee	\$49.00
Reference Materials	2021 Edition of the International Plumbing Code

Course Description

The course includes an overview of the general components and operation of residential water heaters - gas and electric - and is followed by a brief examination of relevant codes and resource identification, discussion of common safety and maintenance concerns, and sections dedicated to energy conservation, renewable energy, and commercial applications for new energy-saving technology.

Learning Objectives:

At the end of this class students will be able to:

- Understand the various types of water heaters available and determine the appropriate selection for different applications.
- Identify current and projected changes to federal energy regulations and guidelines for water heater installation.
- Demonstrate knowledge of how gas and electric water heaters function, including their fundamental processes and mechanisms.
- Ensure compliance with local, state, and national codes and standards when installing and maintaining water heaters.
- Identify how pressure affects the operation and safety of water heaters.
- Select the correct size of water heaters based on specific requirements and usage.
- Understand the importance of maintenance to ensure the longevity and efficient operation of water heaters.
- Understand the potential safety hazards and conduct proper testing to ensure the safe operation of water heaters.
- Explain the role of renewable energy technologies and energy conservation methods in modern water heating systems.
- Identify (generally) the unique challenges and requirements involved in installing and maintaining water heaters in commercial settings.

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.CertifiedTrainingInstitute.com. Upon enrolling in the course, students will have access for 180 days or until the agency-issued course expiration date, whichever comes first. After the access expiration date, the course will be visible in the account but no progress can be made. 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 lesson/assessment completion time is tracked and retained as part of the student record.

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 an 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

Quiz - Please see the attached timeline for quiz question placement. The student must complete all quizzes with a score of at least 70% to progress to the final exam.

Water Heaters Timed Outline

Section	Title	Questions	Minutes
1	Introduction to Water Heaters	1	7
2	Types of Water Heaters Overview	3	17
3	Important Terms/Glossary	2	19
4	Water Heater Parts: Gas & Electric (General Overview)	3	18
5	Basics of Operation	3	18
6	Codes & Standards	3	15
7	Pressure	3	19
8	Water Heater Sizing	3	20
9	Maintenance	3	20
10	Safety	3	21
11	Hydronic Systems	3	17
12	Energy Conservation	3	20
13	Commercial Water Heaters	3	13
14	Innovation in Commercial Materials and Technology	3	12
15	Conclusion	1	2
	Totals:	40	237
	Student Time Minimum Requirement:		200