



Alaska Distribution System Review (4.5 hours)

Course Syllabus

Purpose

This course covers important topics for Distribution System Operators.

Topics

System Design and Layout
Distribution Piping
Water Storage
Fire Hydrants and Valves
Water Meters
Pumps and Motors
Cross-Connection Control
Corrosion Control

CEUs (Contact Hours)

Upon completion of this course, you will receive a certificate for 0.45 CEUs (4.5 contact hours).

Completion Requirements

In order to receive [IACET CEU](#) credit for this course, you must complete the following:

- Complete each individual lesson module by watching the video lecture, completing the lesson handout, and passing the lesson quiz.

Once you have completed all of these elements, your course completion certificate will be automatically placed into your learning account for printing/downloading. It will remain in your learning account even after your course access has expired.

Learning Objectives

System Design and Layout

Upon completion of this lesson the student will be able to:

- Define system design and layout vocabulary
- Identify what makes a water system “public”
- Identify the different types of public water systems
- Describe distribution system design considerations
- Describe different system layout designs

Distribution Piping

Upon completion of this lesson the student will be able to:

- Define piping vocabulary
- Identify the four main pipe selection considerations
- Describe the construction material and construction characteristics of common pipe
- Describe different pipe joints and their applications

Water Storage

Upon completion of this lesson the student will be able to:

- Define water storage vocabulary
- Identify the purpose of water storage
- Describe the differences between various types of storage facilities
- Describe how storage facilities are constructed

Hydrants and Valves

Upon completion of this lesson the student will be able to:

- Define hydrants and valves vocabulary
- Identify the four main types of hydrants
- Describe gate valve construction and use
- Describe globe valve construction and uses
- Describe ball valve construction and use
- Describe butterfly valve construction and uses
- Describe relief valve construction and uses
- Describe pressure regulating valve construction and uses
- Describe air and vacuum relief valve construction and uses
- Describe altitude valve construction and uses

Water Meters Review

Upon completion of this lesson the student will be able to:

- Define water meters vocabulary
- Describe the construction and operation of the different types of water meters
- Describe the normal application of the various water meters

Pumps and Motors Review

Upon completion of this lesson the student will be able to:

- Define pumps and motors vocabulary
- Describe the construction and operation of velocity type pumps
- Describe the functions of the main components of a centrifugal pump
- Describe the theory of operation and common uses of positive displacement pumps
- Describe the differences between the various types of single and three-phase motors

Cross-Connection Control Review

Upon completion of this lesson the student will be able to:

- Define cross-connection control vocabulary
- Describe the purpose of cross-connection control
- Describe potential cross-connections
- Describe backflow control devices

Corrosion Control Review

Upon completion of this lesson the student will be able to:

- Define corrosion control vocabulary
- Recall the factors affecting corrosion
- Describe the tools used to control corrosion
- Identify the LCR (Lead and Copper Rule) requirements

Support

Students can contact our student support staff with any course-related, content-related, or technology-related inquiries.

Our office hours are Monday-Thursday, 9-5 CT, and Friday 9-12 CT.

Contact Info

Phone Number: (661) 874-1655

General Course Inquiries: Info@americanwatercollege.org