

ATPL-2410: CITY & STATE BACKFLOW CERT

Cuyahoga Community College

Viewing: ATPL-2410 : City & State Backflow Cert

Board of Trustees:

2012-06-28

Academic Term:

Spring 2019

Subject Code

ATPL - Applied Ind Tech - Plumbers

Course Number:

2410

Title:

City & State Backflow Cert

Catalog Description:

Preparation to test and repair various backflow prevention devices that are used to protect the public water supply.

Credit Hour(s):

2

Lecture Hour(s):

2

Requisites

Prerequisite and Corequisite

Departmental approval: admission to Plumbers' apprenticeship program.

Outcomes

Course Outcome(s):

1. Identify the City and State authorities and explain their responsibilities with respect to protection of the public water supply.

Course Outcome(s):

2. Identify the various devices that are used to prevent contamination of the water supply and discuss the function of each.

Course Outcome(s):

3. Identify the various tests that are used in conducting back flow prevention and explain the administration of each test.

Course Outcome(s):

4. Identify the sections of the American Society of Sanitary Engineers Code, cross sections 1013, 1015, and 1020 and explain how they are used to repair backflow valves.

Methods of Evaluation:

1. Homework
2. Quizzes
3. Tests
4. Participation

Course Content Outline:

1. Regulatory agencies
 - a. EPA
 - i. Responsibilities
 1. Rules and regulations
 - ii. Water supply
 - iii. Retention tanks
 - b. Water purveyors
 - i. Municipalities
 - ii. Containment principle
 1. Protects water supply
 2. Enforce EPA regulations
 - c. Ohio Department of Commerce
 - i. Regulate certifications
 1. Backflow licenses
 2. Re-certifications
 - ii. Maintain compliance
 - d. Local plumbing inspectors
 - i. Jurisdiction
 - ii. Ohio Plumbing Code
 - iii. Isolation principle
2. Contamination prevention
 - a. Principles
 - i. Back siphonage
 - ii. Back pressure
 - b. Types of valves
 - i. Double check
 - ii. Pressure vacuum breaker
 - iii. Atmospheric vacuum breaker
 - iv. Air gap
3. Venturi principle
 - a. Reduced pressure devices
 - b. Effects
 - c. Velocity of fluids
 - d. Air gap
 - i. Backflow preventer
 - ii. Water supply
 - iii. Safe-waste
 - e. ANSI
 - i. Governing body
 - ii. Sets mechanical specifications
4. Tests and test parameters
 - a. Three valve gauge
 - i. Reduced principle
 - ii. Multiple applications
 1. Reduced pressure
 2. Double check
 3. Pressure vacuum
 4. Atmospheric vacuum
 - b. Test procedure
 - i. Attachments and readings
 - ii. Analysis/approval-disapproval
 - c. Five valve test
 - i. Monitor placement
 - ii. Results comparison
 - d. Pressure vacuum breaker test
 - i. Flow direction
 - ii. Pressure differentials
 - e. Back siphoning
 - f. Analog test gauge

- i. Five valve
- ii. Pressure differences
- iii. Bleed valves

Resources

State of Ohio. *2007 Ohio Plumbing Code*. Country Club Hills, IL : International Code Council, 2007.

Resources Other

1. National Fire Protection Association 99 copy right 2005
2. National Fire Protection Association 99C copy right 2005
3. National Fire Protection Association 50 copy right 2005
4. Bavco Products parts and accessories Catalog
5. Power points and handouts - Plumbers Local 55 JATC
6. Ohio Department of Commerce [Backflow Prevention & Cross –Connection Control Manual](#)

Top of page

Key: 630