Washtenaw Community College Comprehensive Report

UAT 259 Backflow Repair and Maintenance (UA 4007)
Effective Term: Fall 2020

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: United Association Department
Discipline: United Association Training
Course Number: 259
Org Number: 28200
Full Course Title: Backflow Repair and Maintenance (UA 4007)
Transcript Title: Backflow Repair & Mainten 4007
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Web Page
Reason for Submission: Course Change
Change Information:
Consultation with all departments affected by this course is required.
Course title
Course description
Outcomes/Assessment
Objectives/Evaluation
Rationale: Revise course for UA
Proposed Start Semester: Spring/Summer 2020
Course Description: In this course, students will identify the need for and safety of backflow devices as well as demonstrate the repairing, trouble-shooting, and testing of backflow systems. Students will be provided with extensive hands-on practical experience dealing with repair and maintenance of large diameter assemblies from various manufacturers. In addition, students are required to test and document the various types of backflow devices currently used in the field. Online resources relating to backflow repair and maintenance will also be discussed and utilized. The title of this course was previously Backflow Repair and Maintenance. Limited to United Association program participants.

Course Credit Hours

Variable hours: No
Credits: 1.5
The following Lecture Hour fields are not divisible by 15: Student Min ,Instructor Min
Lecture Hours: Instructor: 22.5 **Student:** 22.5
The following Lab fields are not divisible by 15: Student Min, Instructor Min
Lab: Instructor: 1.5 **Student:** 1.5
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 24 **Student:** 24
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

General Education

Degree Attributes

Below College Level Pre-Reqs

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Identify the correct protection assembly for the potable water supply based on the design and degree of hazard.
   Assessment 1
   Assessment Tool: Outcome-related written exam questions
   Assessment Date: Fall 2020
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of the students will score 80% or higher.
   Who will score and analyze the data: U.A. instructors

2. Safely remove and replace the component parts of backflow assemblies.
   Assessment 1
   Assessment Tool: Demonstration
   Assessment Date: Fall 2020
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Skills checklist
   Standard of success to be used for this assessment: 80% of the students will score 80% or higher.
   Who will score and analyze the data: U.A. instructors

3. Perform the procedures for test and repair of different types of backflow assemblies.
   Assessment 1
   Assessment Tool: Demonstration
   Assessment Date: Fall 2020
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Skills checklist
   Standard of success to be used for this assessment: 80% of the students will score 80% or higher.
   Who will score and analyze the data: U.A. instructors

Course Objectives

1. Identify concepts, terms, and principles of backflow, back-pressure, and back siphonage.
2. Identify proper backflow methods, devices, and approved assemblies.

3. Recognize the importance of maintenance, repair, and troubleshooting in relation to safety and test procedures.
4. Recognize the methods of performing cross-connection control surveys.
5. Discuss current technologies used in backflow repair and maintenance procedures.
6. Identify components and parts from various backflow assemblies.
7. Troubleshoot, identify and execute proper repairs on various backflow assemblies.
8. Identify different local, state and national codes and standards related to backflow maintenance and repair procedures.
9. Describe the operation of various backflow assemblies.
10. Discuss the applications of various backflow assemblies based on their degree of hazard.
11. Compare and contrast factory-authorized parts from different manufacturers.
12. Remove components and identify parts from assemblies of different manufacturers per repair manuals.
13. Explain testing procedures and documentation to evaluate backflow performance.
14. Demonstrate testing procedures to diagnose specific problems with backflow assemblies.
15. Determine and demonstrate repairs needed for a failed backflow test.

New Resources for Course

Course Textbooks/Resources

Textbooks

UA / IAPMO. *Backflow Prevention Reference Manual 3rd Edition*, Third ed. IAPMO Group, 2018, ISBN: 1938936892.

Manuals

Periodicals

Software

Equipment/Facilities

Other: Large open classroom to set up 12 tables with backflow assemblies.

Reviewer	Action	Date
Faculty Preparer:		
Tony Esposito	*Faculty Preparer*	*Apr 20, 2020*
Department Chair/Area Director:		
Marilyn Donham	*Recommend Approval*	*Apr 28, 2020*
Dean:		
Jimmie Baber	*Recommend Approval*	*May 27, 2020*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Aug 10, 2020*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Aug 25, 2020*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Aug 26, 2020*