

# Washtenaw Community College Comprehensive Report

## UAT 294A Methods in Teaching Plumbing Service, Maintenance and Repair (UA 4009) Effective Term: Winter 2021

### Course Cover

**Division:** Advanced Technologies and Public Service Careers  
**Department:** United Association Department  
**Discipline:** United Association Training  
**Course Number:** 294A  
**Org Number:** 28200  
**Full Course Title:** Methods in Teaching Plumbing Service, Maintenance and Repair (UA 4009)  
**Transcript Title:** Plumbing Service & Maint 4009  
**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**

**Credit hours**

**Total Contact Hours**

**Outcomes/Assessment**

**Objectives/Evaluation**

**Rationale:** Update United Association course

**Proposed Start Semester:** Fall 2020

**Course Description:** In this course, students will develop methods for presenting plumbing service, maintenance and repair curriculum at their local Training Center. Topics will include the operation, installation, repair, and safety aspects of fixtures, flush valves, sewer systems, faucets, appliances, and electronics in the plumbing industry. Students will utilize classroom and hands-on training, such as training modules, tools, the UA Online Learning Resources (UAOLR) and the Plumbing Service, Maintenance and Repair manual. This course contains material previously taught in UAT 294. Limited to United Association program participants.

### Course Credit Hours

**Variable hours:** No

**Credits:** 3

**Lecture Hours: Instructor:** 45 **Student:** 45

**The following Lab fields are not divisible by 15: Student Min, Instructor Min**

**Lab: Instructor:** 3 **Student:** 3

**Clinical: Instructor:** 0 **Student:** 0

**Total Contact Hours: Instructor:** 48 **Student:** 48

**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 and demonstrate troubleshooting and repair techniques for various plumbing system components utilizing the appropriate tools.

#### **Assessment 1**

Assessment Tool: Skills 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

2. Identify and demonstrate the components and operation of residential and commercial water heating and conditioning equipment.

#### **Assessment 1**

Assessment Tool: Skills 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. Prepare and present plumbing service instructional activities using the textbook and UAOLR.

#### **Assessment 1**

Assessment Tool: Presentation

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: Rubric

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

4. Prepare and present an individual UA Blackboard course from uploaded content through UAOLR.

#### **Assessment 1**

Assessment Tool: Presentation

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: Rubric

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. Recognize how to troubleshoot using new fixture technology.
2. Demonstrate how to use drain line video to inspect and locate pipes.
3. Demonstrate how to service backflow preventers, frozen pipes, and water heaters.
4. Develop water closet installation training aids.
5. Demonstrate how to repair and/or replace a cast iron water closet collar.
6. Use training aids to repair and install faucet, tubs and shower valves.
7. Demonstrate how to use multiple types of pipe freezing and thawing equipment.
8. Develop training aids for water heater diagnosis, repair and installation methods.
9. Identify various flood control systems.
10. Discuss faucet and water closet repairs and troubleshooting techniques using appropriate tools.
11. Demonstrate troubleshooting techniques with predetermined faults.
12. Identify water heater components, operation, and maintenance.
13. Compare and contrast the features of gas water heaters and electrical water heaters.
14. Describe the purpose, components, and operation of water conditioning and its equipment.
15. Access and navigate the UAOLR, Blackboard, and instructor resources available for plumbing service.
16. Demonstrate customizing UAOLR resources for an instructional activity.

### **New Resources for Course**

#### **Course Textbooks/Resources**

Textbooks

International Association of Plumbing and Mechanical Officials. *Plumbing Service, Maintenance, and Repair Manual*, First ed. IAPMO Group, 2011

Manuals

Periodicals

Software

#### **Equipment/Facilities**

<b><u>Reviewer</u></b>	<b><u>Action</u></b>	<b><u>Date</u></b>
<b>Faculty Preparer:</b> <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>May 15, 2020</i>
<b>Department Chair/Area Director:</b> <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>May 20, 2020</i>
<b>Dean:</b> <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>May 27, 2020</i>
<b>Curriculum Committee Chair:</b> <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Sep 25, 2020</i>
<b>Assessment Committee Chair:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Sep 30, 2020</i>

**Vice President for Instruction:**

*Kimberly Hurns*

*Approve*

*Oct 06, 2020*