

## Washtenaw Community College Comprehensive Report

### UAT 190 Water Quality Mechanical (UA 6080)

Effective Term: Fall 2020

#### Course Cover

**Division:** Advanced Technologies and Public Service Careers

**Department:** United Association Department

**Discipline:** United Association Training

**Course Number:** 190

**Org Number:** 28200

**Full Course Title:** Water Quality Mechanical (UA 6080)

**Transcript Title:** Water Quality Mechanical 6080

**Is Consultation with other department(s) required:** No

**Publish in the Following:**

**Reason for Submission:** New Course

**Change Information:**

**Rationale:** New United Association course

**Proposed Start Semester:** Fall 2020

**Course Description:** In this course, students will review pipefitting and mechanical systems water quality requirements as mandated by Centers for Medicare and Medicaid Services to reduce the risk of legionella bacteria and other diseases. Students will create and demonstrate methods to survey/map, monitor, assess risk and remediate health hazards in building water systems. Students will use documentation by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 188 Standard and ASHRAE 12 Guideline. In addition, students will review and take the American Society of Safety Engineers (ASSE) 12062 certification exam. 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 requirements and responsibilities of building mechanical systems, according to the ASSE 12060 Water Quality Program for Employers and Designated Representatives and the ASSE 12062 Water Quality Program for Pipefitters and HVAC Technicians.

### **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. Conduct a building risk assessment for a building mechanical system as per ASSE requirements.

### **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: Observational 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. Demonstrate taking water quality samples from an identified control point and complete a Chain-of-Custody form.

### **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: Observational 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. Discuss and review ASSE 12060 and 12062 regulations and policy.
2. Locate and review instructional resources available for the Water Quality Mechanical Program.
3. Demonstrate the use of instructional resources in classroom activities available for use at the local Training Center.
4. Identify and discuss procedures for performing a building risk assessment for a building mechanical system.

5. Identify pre-determined control points and explain their purpose.
6. Complete a sample risk assessment matrix form.
7. Discuss the safety precautions and the personal protective equipment (PPE) required when testing the water quality of building mechanical systems.
8. Discuss the process of taking water samples from a pre-determined control point.
9. Collect water samples from a pre-determined control point of a building mechanical system in accordance with protocol as per the ASSE 12062 Water Quality Program for Pipefitters and Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) Technicians.
10. Label and document water samples and complete a required Chain-of-Custody form.

## New Resources for Course

### Course Textbooks/Resources

#### Textbooks

International Association of Plumbing and Mechanical Officials. *Water Quality Program: Healthcare Application Handbook for Signatory Contractors and UA Members*, first ed. IAPMO Group, 2019

#### Manuals

#### Periodicals

#### Software

### Equipment/Facilities

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
<b>Faculty Preparer:</b> <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>Jul 07, 2020</i>
<b>Department Chair/Area Director:</b> <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Jul 08, 2020</i>
<b>Dean:</b> <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Aug 07, 2020</i>
<b>Curriculum Committee Chair:</b> <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Oct 26, 2020</i>
<b>Assessment Committee Chair:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Oct 27, 2020</i>
<b>Vice President for Instruction:</b> <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Oct 27, 2020</i>