

## Washtenaw Community College Comprehensive Report

### UAT 166 Applied Water (UA 2120) Effective Term: Spring/Summer 2023

#### Course Cover

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

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

**Department:** United Association Department

**Discipline:** United Association Training

**Course Number:** 166

**Org Number:** 28200

**Full Course Title:** Applied Water UA 2120

**Transcript Title:** Applied Water (UA 2120)

**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:** Spring/Summer 2023

**Course Description:** In this course, students will identify, analyze, and evaluate sources of water contamination in designed water systems including piping, delivery, and storage. Students will apply scientific methods and knowledge of water characteristics for practical applications as well as documentation with the proper nomenclature. In addition, students will identify proper test selection procedures, hands-on test procedures, and analyze test results for preventative maintenance and incident response techniques. 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

## **Request Course Transfer**

### **Proposed For:**

## **Student Learning Outcomes**

1. Identify the categories of water quality as well as the regulated and aesthetic contaminants in drinking water.

### **Assessment 1**

Assessment Tool: Outcome-related test questions

Assessment Date: Spring/Summer 2023

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. Demonstrate the testing procedures for specific harmful pathogens, including recording, documentation, notification and filing.

### **Assessment 1**

Assessment Tool: Demonstration

Assessment Date: Spring/Summer 2023

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: 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. Identify the methods, processes, costs, and benefits of treating water through equipment and chemicals.

### **Assessment 1**

Assessment Tool: Outcome-related quiz questions

Assessment Date: Spring/Summer 2023

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

## **Course Objectives**

1. Discuss the properties and characteristics of water.
2. Compare and contrast organic and inorganic impurities that affect water quality.
3. Identify the residential, commercial, and industrial use of conditioned water as well as the types of delivery and storage available.
4. Discuss the terms associated with the classifications of potable water systems, aesthetically acceptable drinking water, and water contamination.
5. Discuss the process of water quality testing using test kits.
6. Review safety procedures and potential hazards, including the required personal protective equipment (PPE) associated with water quality testing.

7. Demonstrate water quality testing procedures.
8. Analyze water quality test results and determine the course of action needed.
9. Discuss water treatment options for water impurities.
10. Compare and contrast possible long-term outcomes effects of the water treatment options available.

## New Resources for Course

### Course Textbooks/Resources

#### Textbooks

EPA. • *SPL – Puzzled by Legionella? A guide to Understanding Detection, Prevention, and Water Management*, 1st ed. Not Available, 2021

EPA. *Introduction to Contaminants and Treatment, Trainer's Guide*, 1st ed. N/A: Not Available, 2021

#### 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>Sep 16, 2022</i>
<b>Department Chair/Area Director:</b> <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Sep 29, 2022</i>
<b>Dean:</b> <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Oct 13, 2022</i>
<b>Curriculum Committee Chair:</b> <i>Randy Van Wagnen</i>	<i>Recommend Approval</i>	<i>Nov 03, 2022</i>
<b>Assessment Committee Chair:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Nov 12, 2022</i>
<b>Vice President for Instruction:</b> <i>Victor Vega</i>	<i>Approve</i>	<i>Nov 14, 2022</i>