

## Washtenaw Community College Comprehensive Report

### UAT 260A Methods in Teaching Steam Systems (UA 6081) Effective Term: Spring/Summer 2021

#### Course Cover

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

**Department:** United Association Department

**Discipline:** United Association Training

**Course Number:** 260A

**Org Number:** 28200

**Full Course Title:** Methods in Teaching Steam Systems (UA 6081)

**Transcript Title:** Teaching Steam Systems (6081)

**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 2021

**Course Description:** In this course, students will identify methods of teaching the principles of steam generation and distribution in the heating and power industries. Students will be provided with theoretical and practical techniques as well as instructional resources to explain installation, operation, and maintenance of steam systems. Discussions include safety controls, operating components and piping to promote further understanding of steam distribution. 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. Describe the steam processes used in heating and power industries.

### **Assessment 1**

Assessment Tool: Outcome-related essay 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: 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

2. Develop steam systems curriculum for local Training Centers.

### **Assessment 1**

Assessment Tool: Lesson plan worksheet

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

3. Access, utilize and customize steam systems United Association Online Learning Resources (UAOLR).

### **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

4. Prepare and present an instructional activity for Steam Systems using Blackboard Learning Management System (LMS) features.

### **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: 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. Review the history and uses of steam in today's industry.
2. Identify steam piping systems and their components.
3. Discuss steam distribution.
4. Identify the maintenance procedures needed for steam systems.
5. Identify personal protective equipment (PPE) and safety equipment needed when working on steam systems.
6. Discuss and review the current steam curriculum at the student's local Training Center.
7. Review Bloom's Taxonomy as it applies to the steam curriculum at the local Training Centers.
8. Discuss best practices in the development of a steam system training program.
9. Navigate and review UAOLR access for both the student and the instructor.
10. Review UAOLR categories and topics related to teaching Steam Systems.
11. Discuss best practices and customization of UAOLR resources for use at local Training Centers.
12. Review assessment techniques to customize a Steam Systems course.
13. Review Blackboard LMS features and create an instructional activity using online resources.
14. Present an instructional activity to the class.

### New Resources for Course

#### Course Textbooks/Resources

Textbooks

International Association of Plumbing and Mechanical Officials. *Steam Systems*, First ed. American Technical Publishers, 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>Sep 03, 2020</i>
<b>Department Chair/Area Director:</b> <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Sep 23, 2020</i>
<b>Dean:</b> <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Oct 01, 2020</i>
<b>Curriculum Committee Chair:</b> <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Dec 02, 2020</i>
<b>Assessment Committee Chair:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Dec 04, 2020</i>
<b>Vice President for Instruction:</b> <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Dec 07, 2020</i>