Washtenaw Community College Comprehensive Report

UAT 216 Innovative Welding Techniques (UA 8006)
Effective Term: Fall 2020

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: United Association Department
Discipline: United Association Training
Course Number: 216
Org Number: 28200
Full Course Title: Innovative Welding Techniques (UA 8006)
Transcript Title: Innovative Weld Technique 8006
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 develop methods of teaching the advanced skills of Shielded Metal Arc Welding (SMAW) and Gas Tungsten Arc Welding (GTAW) at their local Training Center. Students will study welding processes and demonstrate various welding techniques, material selection, equipment selection, and current technology to provide proper weld preparation to improve their pipe welding skills. In addition, students will locate and navigate online resources and information to customize course material for their local Training Center. 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. Demonstrate skilled welding techniques in SMAW/GTAW using current welding technology.
   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

2. Demonstrate the proper use of pipefitting and forming equipment to prepare a high-quality weld joint using current technology.
   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. Prepare and present a lesson plan utilizing United Association Online Learning Resources (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: 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 welding techniques for the SMAW/GTAW processes.
2. Discuss current welding technology available to increase efficiency and accuracy.
3. Identify safety precautions and personal protective equipment (PPE) needed when welding.
4. Compare and contrast the advantages of current technology to standard practices, including costs.
5. Discuss and demonstrate best practices and techniques for weld preparation.
6. Discuss proper use of pipefitting and forming equipment to prepare weld joint.
7. Demonstrate the SMAW and GTAW processes using standard processes and current technology.
8. Prepare and present a five-minute lesson plan on one of the topics covered.

New Resources for Course

Course Textbooks/Resources

Textbooks

International Association of Plumbing and Mechanical Officials. *Welding Practices & Procedures for the Pipe Trades*, First ed. IAPMO Group, 2016

Manuals

Periodicals

Software

Equipment/Facilities

Reviewer	Action	Date
Faculty Preparer:		
Tony Esposito	*Faculty Preparer*	*Jun 02, 2020*
Department Chair/Area Director:		
Marilyn Donham	*Recommend Approval*	*Jun 05, 2020*
Dean:		
Jimmie Baber	*Recommend Approval*	*Jun 10, 2020*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Oct 16, 2020*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Oct 20, 2020*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Oct 22, 2020*