Washtenaw Community College Comprehensive Report

UAT 200 Emerging Welding Technologies (UA 8017)
Effective Term: Spring/Summer 2018

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: United Association Department
Discipline: United Association Training
Course Number: 200
Org Number: 28200
Full Course Title: Emerging Welding Technologies (UA 8017)
Transcript Title: Emerging Weld Technolo (8017)
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: New Course
Change Information:
Rationale: New U.A. Course
Proposed Start Semester: Spring/Summer 2018
Course Description: In this course, the students will explore the advancements in the ever-changing and expanding welding industry. Students will be introduced to how the integration of emerging welding processes such as gas metal arc welding (GMAW), waveform control, friction stir, keyhole TIG (K-TIG), and electron beam welding (EBW), will influence the next generation of welding equipment. 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 the integration of innovative welding process with the established procedures in the construction and manufacturing industry.
   Assessment 1
   Assessment Tool: Skills demonstration
   Assessment Date: Spring/Summer 2018
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Skills demonstration checklist
   Standard of success to be used for this assessment: 90% of the students will score 100%
   Who will score and analyze the data: U.A. training coordinator

2. Describe the increased productivity and cost savings involved in initiating the innovative efficiencies of the welding process by duration and materials used.
   Assessment 1
   Assessment Tool: Teaching demonstration
   Assessment Date: Spring/Summer 2018
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Observation checklist
   Standard of success to be used for this assessment: 90% of the students will score 100%
   Who will score and analyze the data: U.A. training coordinator

Course Objectives

1. Identify the welding process of remote video wire feed welding machine and friction stir welding machine.
2. Recognize and identify Waveform Control Technology and its benefits.
3. Identify the process and integration of advanced welding procedures including GMAW, keyhole TIG, and electron beam welding.
4. Compare and contrast differences between new and traditional inspection methods.
5. Identify hardware and software capabilities to enhance weld document tracking and skill level monitoring.
6. Recognize the new techniques and support processes with new welding technologies available in pipe welding.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Reviewer	Action	Date

Faculty Preparer:

Tony Esposito	*Faculty Preparer*	*Dec 13, 2017*
Department Chair/Area Director:		
Marilyn Donham	*Recommend Approval*	*Jan 03, 2018*
Dean:		
Brandon Tucker	*Recommend Approval*	*Jan 08, 2018*
Curriculum Committee Chair:		
David Wooten	*Recommend Approval*	*Apr 16, 2018*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Mar 28, 2018*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Apr 19, 2018*