Washtenaw Community College Comprehensive Report

UAT 217 Welding Phase Array (UA 8036)
Effective Term: Spring/Summer 2018

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: United Association Department
Discipline: United Association Training
Course Number: 217
Org Number: 28200
Full Course Title: Welding Phase Array (UA 8036)
Transcript Title: Welding Phase Array (UA 8036)
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , 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, students will be introduced to the principles and process of Phase Array Ultrasonic Testing (PAUT). Students will analyze test results using the Phase Array computer display information to determine and assist in the detection of the location, size and characterization of weld defects. In addition, the course will address the key steps to passing the PAUT weld inspections. 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 correct Phase Array Ultrasonic Testing instruments and usage for weld testing.
   Assessment 1
   Assessment Tool: Written exam
   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: Answer key
   Standard of success to be used for this assessment: 90% of students will score 100%
   Who will score and analyze the data: U.A. training coordinator

2. Determine the set-up, operation, and calibration of the PAUT system, analyze the data and identify weld continuity, location, size, length, and acceptability.
   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

Course Objectives

1. Review the need, safety, and cost effectiveness for identification of defective welds.
2. Compare and contrast the PAUT system to other weld inspection techniques used in the field today.
3. Identify the correct PAUT instrument and probe used to test various sizes of pipe welds and various wall thicknesses.
4. Calibrate and set-up correct PAUT system for pipe weld testing being performed.
5. Analyze and evaluate the results of PAUT system testing of pipe welds.
6. Detect the location, length, size, and type of weld discontinuity (defect), and evaluate the acceptability of the weld to various codes.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Reviewer	Action	Date
Faculty Preparer:		
Tony Esposito	*Faculty Preparer*	*Dec 01, 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 04, 2018*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Mar 28, 2018*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Apr 07, 2018*