

Washtenaw Community College Comprehensive Report

UAT 199 Operation of Destructive Cutting and Strap Bending Equipment for UA Weld Test (UA 8042) Effective Term: Fall 2020

Course Cover

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 199

Org Number: 28200

Full Course Title: Operation of Destructive Cutting and Strap Bending Equipment for UA Weld Test (UA 8042)

Transcript Title: Strap Bending Weld Test (8042)

Is Consultation with other department(s) required: No

Publish in the Following:

Reason for Submission: Course Change

Change Information:

Consultation with all departments affected by this course is required.

Course description

Total Contact Hours

Outcomes/Assessment

Objectives/Evaluation

Rationale: Updating United Association course

Proposed Start Semester: Fall 2020

Course Description: In this course, students will perform the safe handling and operation of weld test equipment as verified by a United Association Authorized Testing Representative (ATR) Certified Weld Inspectors (CWI). Students will review weld testing procedures according to the American Society of Mechanical Engineers (ASME) code requirements for bend and destructive cutting tests of equipment at the regional Authorized Testing Facility. In addition, students will demonstrate testing and bending methods on abrasive cutters and wrap around benders. 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. Discuss and demonstrate the wrap around bender and the equipment used to test United Association welds for certification.

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 students will score 80% or higher.

Who will score and analyze the data: U.A. instructors

2. Evaluate specimens in accordance with Section IX of the ASME Code as it relates destructive cutting and strap bending equipment.

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

3. Prepare and present best practices for CWIs at the regional level for delivery of the test, operation of the equipment and interpreting the ASME Code requirements.

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 United Association Authorized Testing Representative/ Certified Welding Inspector (UA ATR/CWI) specifications, certifications, and procedures needed for weld testing.
2. Identify U.A. Authorized Testing Facilities (ATF) and equipment needed to be labeled as an ATF.
3. Review section IX of the ASME Code as it relates to ATR/CWI weld testing equipment.
4. Compare bends and cuts performed on machines to determine the accuracy of the weld test for certification.
5. Evaluate the types, sizes, and bends required to determine accuracy for non-standard welding practices and scenarios.
6. Describe and demonstrate the proper preparation requirements for operation of the triangle abrasive cutter and wrap around bender
7. Review safety and personal protective equipment (PPE) needed for operation of equipment.
8. Discuss clean-up and re-calibration of equipment.
9. Identify discontinuities of test specimens in accordance with the ASME Code.
10. Assess possible problems in test specimens or samples.
11. Identify equipment used to test specimens and describe satisfactory results.
12. Discuss techniques for the safe set-up and delivery of the UA Weld test.
13. Interpret the ASME Code requirements.
14. Discuss best practices for conducting specimen analysis at a regional ATF.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>Jun 04, 2020</i>
Department Chair/Area Director: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Jun 05, 2020</i>
Dean: <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Jun 10, 2020</i>
Curriculum Committee Chair: <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Oct 26, 2020</i>
Assessment Committee Chair: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Oct 27, 2020</i>
Vice President for Instruction: <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Oct 27, 2020</i>