

Washtenaw Community College Comprehensive Report

UAT 238 Methods of Teaching Downhill Welding Effective Term: Fall 2020

Course Cover

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 238

Org Number: 28200

Full Course Title: Methods of Teaching Downhill Welding

Transcript Title: Methods of Teach Downhill Weld

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Web Page

Reason for Submission:

Change Information:

Consultation with all departments affected by this course is required.

Course description

Total Contact Hours

Outcomes/Assessment

Objectives/Evaluation

Rationale: Update United Association course

Proposed Start Semester: Fall 2020

Course Description: In this course, students will develop methods of teaching the techniques for downhill welding that can be used at local Training Centers. Students will review procedures in joint preparation, coupon alignment, and welding of large diameter pipe in both classroom and lab environments, according to the United Association Shielded Metal Arc Weld (UA-1 SMAW) Weld Certification requirements. They will also discuss best methods of student demonstrations for classroom instruction. 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 preparation and alignment of weld coupons.

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: 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

2. Identify and define the requirements and procedures for a visually acceptable downhill weld.

Assessment 1

Assessment Tool: Outcome-related quiz 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: Departmentally-developed 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. Demonstrate a visually acceptable downhill weld of 16" diameter coupon.

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: 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. Explain methods of teaching downhill welding.
2. Discuss best practices for the weld preparation of coupons.
3. Demonstrate weld coupon preparation using grinder and welding equipment.
4. Align coupons for downhill welding.
5. Identify safety precautions and personal protective equipment (PPE) needed for welding coupons.

6. Discuss the requirements for a visually acceptable downhill weld.
7. Identify and define the United Association Shielded Metal Arc Weld (UA-1 SMAW) Weld Certification requirements.
8. Describe the process of weld analysis.
9. Discuss the rationale and procedure for the inspection of welding equipment prior to welding.
10. Demonstrate the alignment of coupons, root pass weld, cleaning and the inspection of a root pass weld.
11. Discuss and demonstrate the last two weld passes for a visually acceptable downhill weld.
12. Discuss and demonstrate alternate techniques to achieve acceptable welds.

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>Aug 25, 2020</i>
Department Chair/Area Director: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Sep 23, 2020</i>
Dean: <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Oct 01, 2020</i>
Curriculum Committee Chair: <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Oct 30, 2020</i>
Assessment Committee Chair: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Nov 04, 2020</i>
Vice President for Instruction: <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Nov 09, 2020</i>