Washtenaw Community College Comprehensive Report

UAT 353 ASME Section IX Welding Code (UA 8015)
Effective Term: Fall 2020

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: United Association Department
Discipline: United Association Training
Course Number: 353
Org Number: 28200
Full Course Title: ASME Section IX Welding Code (UA 8015)
Transcript Title: ASME Sect IX Welding Code 8015
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Web Page
Reason for Submission: Course Change
Change Information:
Consultation with all departments affected by this course is required.
Course title
Course description
Outcomes/Assessment
Objectives/Evaluation
Rationale: Update United Association course
Proposed Start Semester: Fall 2020
Course Description: In this course, students will identify welding procedures, specifications, and welder qualifications in accordance with American Society of Mechanical Engineers (ASME) for Boiler and Pressure Vessel Code: Section IX. Students will evaluate the basic metallurgy and welding processes as well as identify welder qualifications and documentation that are compliant with Section IX. In addition, students will demonstrate these procedures in both classroom and lab environments. The title of this course was previously ASME Section IX Welding Code. Limited to United Association Instructor Training program graduates.

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 and describe ASME Section IX, the requirements and qualifications for the welding of boiler and pressure vessels.
   Assessment 1
   Assessment Tool: Outcome-related written exam 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: Answer key
   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 the basic metallurgy and welding process concepts that form the basis of the rules for welding qualifications.
   Assessment 1
   Assessment Tool: Outcome-related written exam 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: Answer key
   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 practical and instructive welding procedures that are compliant with Section IX.
   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

4. Identify welder qualifications and documentation that are compliant with Section IX.
   Assessment 1

Assessment Tool: Outcome-related written exam 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: Answer key
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 basic welding code concepts.
2. Apply rules of ASME Section IX code to welding procedures in the lab.
3. Identify the qualification for welders outlined in Section IX of the ASME code.
4. Explain to journeymen and apprentices welding certification requirements.
5. Discuss the historical perspective of welding and code development.
6. Interpret the relationship between the ASME Boiler and Pressure Code: Section IX Welding and Brazing Qualifications with other ASME construction codes.
7. Review welding processes of shielded metal arc, gas tungsten arc, and gas metal arc.
8. Analyze various welding process variables that affect the ASME code for pressure vessels.
9. Identify, analyze, and discuss practical aspects for using and complying with ASME Section IX.
10. Identify and locate resources of information for preparing welding procedure specifications.
11. Select, prepare, and weld the coupon.
12. Explain the purpose, requirements and process of documentation.
13. Review all safety procedures including personal protection equipment (PPE) needed while performing lab work.

New Resources for Course

Course Textbooks/Resources

Textbooks
ASME. *ASME Boiler and Pressure Code: Section IX*, ed. ASME BPVC, 2019
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Tony Esposito	*Faculty Preparer*	*May 18, 2020*
Department Chair/Area Director:		
Marilyn Donham	*Recommend Approval*	*May 20, 2020*
Dean:		
Jimmie Baber	*Recommend Approval*	*May 27, 2020*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Aug 13, 2020*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Aug 25, 2020*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Aug 26, 2020*