

Washtenaw Community College Comprehensive Report

UAT 357 TIP TIG Wire Feed Welding Process (UA 8016)

Effective Term: Fall 2020

Course Cover

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 357

Org Number: 28200

Full Course Title: TIP TIG Wire Feed Welding Process (UA 8016)

Transcript Title: TIP TIG Wire Feed Welding 8016

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 title

Course description

Outcomes/Assessment

Objectives/Evaluation

Rationale: Update United Association course

Proposed Start Semester: Fall 2020

Course Description: In this course, students will recognize the process of using TIP TIG (Tungsten Inert Gas) welding and its relationship to the Gas Tungsten Arc Welding (GTAW) and Hot Wire Feed welding. Students will identify and demonstrate TIP TIG welding procedures and how the filler metal deposit maintains GTAW quality. In addition, students will study the safety, operation, technology, and equipment set up associated with advanced TIP TIG welding systems. The title of this course was previously TIP TIG Wire Feed Welding. 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 assemble the components of the TIP TIG welding process for operation.

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. Demonstrate TIP TIG welding at various welding positions.

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

3. Describe failures, causes, and troubleshooting recommendations within the TIP TIG process.

Assessment 1

Assessment Tool: Observational checklist

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: 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

Course Objectives

1. Identify the components of a TIP TIG unit.
2. Weld 6" pipe in the 2G and 5G positions.
3. Demonstrate the TIP TIG welding process.
4. Identify power sources and adjustable power settings available to use for the TIP TIG process.

5. Demonstrate a lesson covering the background history of the TIP TIG process.
6. Identify, disassemble and reassemble TIP TIG torch assembly and the consumables involved.
7. Evaluate a weldment and choose its parameters.
8. Analyze resulting weldment for quality, and make adjustments as needed.
9. Discuss variables inherent in the system and process.
10. Discuss the different techniques and hand positions used when welding.
11. Evaluate the finished product for compatibility with applicable codes.
12. Review all safety precautions and personal protection equipment (PPE) needed to safely perform weld.

New Resources for Course

Course Textbooks/Resources

Textbooks
 Manuals
 Periodicals
 Software

Equipment/Facilities

Level III classroom
 Other: Welding lab with a minimum of 6 welding stations.

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>May 01, 2020</i>
Department Chair/Area Director: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>May 07, 2020</i>
Dean: <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>May 27, 2020</i>
Curriculum Committee Chair: <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Sep 25, 2020</i>
Assessment Committee Chair: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Sep 30, 2020</i>
Vice President for Instruction: <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Oct 06, 2020</i>