Washtenaw Community College Comprehensive Report

WAF 131 Thermal Cutting, Gouging and Weld Repair
Effective Term: Fall 2016

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Welding and Fabrication
Discipline: Welding and Fabrication
Course Number: 131
Org Number: 14600
Full Course Title: Thermal Cutting, Gouging and Weld Repair
Transcript Title: Cutting, Gouging & Weld Repair
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: New Course
Change Information:
Rationale: This course is being created to update the WAF program so it meets current industry needs.
Proposed Start Semester: Fall 2016
Course Description: In this course, students are introduced to the following cutting and gouging processes: Oxy-fuel cutting (OFC), Gouging, Plasma Arc Cutting (PAC), Plasma Arc Gouging, Carbon Arc Cutting (CAC), Carbon Arc Gouging, Oxygen Lance Cutting and Gouging. These processes will be applied to plate, sheet metal and pipe.

Course Credit Hours

Variable hours: No
Credits: 3
Lecture Hours: Instructor: 30 **Student:** 30
Lab: Instructor: 30 **Student:** 30
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 60 **Student:** 60
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

Prerequisite
WAF 109 minimum grade "C"; may enroll concurrently

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Recognize and interpret cutting and gouging theory.
   Assessment 1
   Assessment Tool: Written exam
   Assessment Date: Fall 2019
   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 students will score 80% or higher.
   Who will score and analyze the data: Departmental faculty

2. Identify and apply repair techniques on a welded part.
   Assessment 1
   Assessment Tool: Lab assignment
   Assessment Date: Fall 2019
   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 students will score 80% or higher.
   Who will score and analyze the data: Departmental faculty

3. Perform an arc cutting procedure on plate and pipe.
   Assessment 1
   Assessment Tool: Lab assignment
   Assessment Date: Fall 2019
   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 students will score 80% or higher.
   Who will score and analyze the data: Departmental faculty

4. Perform an arc gouging procedure on plate.
   Assessment 1
   Assessment Tool: Lab assignment
   Assessment Date: Fall 2019
   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 students will score 80% or higher.
   Who will score and analyze the data: Departmental faculty

Course Objectives

1. Demonstrate safe work practices when cutting and gouging.
2. Oxy-fuel cut an objective on plate, sheet metal and pipe.
3. Plasma arc cut an objective on plate, sheet metal and pipe.
4. Oxygen lance cut an objective on plate, sheet metal and pipe.
5. Oxy-fuel gouge an objective on plate.
6. Plasma arc gouge an objective on plate.

7. Oxygen lance gouge an objective on plate.
8. Assemble a line burner to simulate production use.
9. Identify on a welded sample when weld repair is necessary.
10. Identify an appropriate process for a weld repair.
11. Prepare a cracked part for weld repair.
12. Prepare a broken assembly for weld repair.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Reviewer	Action	Date
Faculty Preparer:		
Amanda Scheffler	*Faculty Preparer*	*Aug 30, 2015*
Department Chair/Area Director:		
Glenn Kay II	*Recommend Approval*	*Aug 30, 2015*
Dean:		
Brandon Tucker	*Recommend Approval*	*Oct 06, 2015*
Curriculum Committee Chair:		
Kelley Gottschang	*Recommend Approval*	*Nov 30, 2015*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Dec 07, 2015*
Vice President for Instruction:		
Michael Nealon	*Approve*	*Dec 14, 2015*