Washtenaw Community College Comprehensive Report

WAF 239 Advanced Metal Fabrication
Effective Term: Fall 2016

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Welding and Fabrication
Discipline: Welding and Fabrication
Course Number: 239
Org Number: 14600
Full Course Title: Advanced Metal Fabrication
Transcript Title: Advanced Metal Fabrication
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 the WAF program so it meets current industry needs.
Proposed Start Semester: Fall 2016
Course Description: In this capstone course, students will utilize various skills they have learned throughout the program. Students will be required to utilize their print reading skills to interpret a blueprint, layout a project, cut material, bend, drill, mill, assemble and weld projects in accordance with specifications on the blueprint. Group and individual projects may be required.

Course Credit Hours

Variable hours: No
Credits: 3
Lecture Hours: Instructor: 15 **Student:** 15
Lab: Instructor: 60 **Student:** 60
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 75 **Student:** 75
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

Level 2

Requisites

Prerequisite
WAF 139 minimum grade "C" and WAF 210 minimum grade "C" and WAF 230 minimum grade "C" and WAF 231 minimum grade "C" and WAF 232 minimum grade "C"

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Determine the materials, cost and labor necessary to complete a given project.
   Assessment 1
   Assessment Tool: Student project
   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

2. Utilize print reading skills to interpret the layout of a given project.
   Assessment 1
   Assessment Tool: Student project
   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. Work as a group to fabricate a metal project within designated tolerances.
   Assessment 1
   Assessment Tool: Welded project
   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 use of all fabrication equipment in the welding lab.
2. Apply the required dimensions on a blueprint to the proper materials.
3. Calculate the bill of materials needed for a project.
4. Layout the required parts on given materials.
5. Use proper cutting processes to cut material as laid out per blueprint dimensions.
6. Use appropriate machinery to bend, drill and mill parts to required specifications.
7. Weld projects together as specified on blueprint.
8. Assemble parts of a project in proper order.
9. Work as a group to complete a welded project.
10. Assemble and organize all documents used to finish the project in a folder.

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*