Washtenaw Community College Comprehensive Report

WAF 139 Basic Metal Fabrication
Effective Term: Winter 2019

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Welding and Fabrication
Discipline: Welding and Fabrication
Course Number: 139
Org Number: 14600
Full Course Title: Basic Metal Fabrication
Transcript Title: Basic Metal Fabrication
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Pre-requisite, co-requisite, or enrollment restrictions
Objectives/Evaluation
Rationale: Revise prerequisites so that Automotive Services students can enroll in the course.
Proposed Start Semester: Fall 2018
Course Description: In this course, students are introduced to the principles and practices of metal fabrication and the proper and safe use of various pieces of metal fabricating equipment. Students will apply fabrication techniques of drafting and print reading, layout, assembly, tacking and welding to manufacture basic metal projects. This course contains material previously taught in WAF 227.

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

Level 1

Requisites

Prerequisite
WAF 106 minimum grade "C"
and
Prerequisite
WAF 105 minimum grade "C"
or
Prerequisite

WAF 125 minimum grade "C"
and
Prerequisite
WAF 126 minimum grade "C"

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Demonstrate proper safety procedures when using fabrication equipment.
   Assessment 1
   Assessment Tool: Checklist
   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: Skill checklist with rubric
   Standard of success to be used for this assessment: 100% of students must achieve 100% prior to using equipment
   Who will score and analyze the data: Departmental faculty

2. Assemble projects in accordance with blueprints.
   Assessment 1
   Assessment Tool: Fabricated 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 fabricate the project within the blueprint's specifications and tolerances
   Who will score and analyze the data: Departmental faculty

3. Determine the bill of materials needed and cost of a metal 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 achieve 80% or higher
   Who will score and analyze the data: Departmental faculty

Course Objectives

1. Demonstrate proper use of hand and power tools.
2. Demonstrate proper use of metal forming equipment.
3. Cut a variety of metal within tolerances using saws, shears and hand tools.
4. Bend and roll a variety of metals using cold forming techniques.
5. Bend and roll a variety of metals using hot forming techniques.
6. Set up a press-brake, leaf-brake and finger-brake machine in accordance with the operator's manual.
7. Set up a hole punching machine in accordance with the operator's manual.
8. Fabricate a metal project utilizing several hand, power and metal forming tools, processes and equipment in accordance with specified blueprint.

9. Fabricate and weld a project to be pressure tested in accordance with specified blueprint.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Glenn Kay II	*Faculty Preparer*	*Feb 28, 2018*
Department Chair/Area Director:		
Glenn Kay II	*Recommend Approval*	*Feb 28, 2018*
Dean:		
Brandon Tucker	*Recommend Approval*	*Mar 01, 2018*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Aug 01, 2018*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Aug 06, 2018*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Aug 16, 2018*