

Washtenaw Community College Comprehensive Report

WAF 227 Basic Fabrication

Effective Term: Fall 2012

Course Cover

Division: Vocational Technologies

Department: Welding and Fabrication

Discipline: Welding and Fabrication

Course Number: 227

Org Number: 14610

Full Course Title: Basic Fabrication

Transcript Title: Basic Fabrication

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Three Year Review / Assessment Report

Change Information:

Course description

Pre-requisite, co-requisite, or enrollment restrictions

Outcomes/Assessment

Objectives/Evaluation

Rationale: Regular three year review

Proposed Start Semester: Fall 2012

Course Description:

This class is designed for the welding student who is searching for the skills necessary to design, cut and fit pieces to be welded. It blends knowledge of welding and layout theory to build a variety of projects which include assigned projects as well as individually chosen projects. The individual project will be completed from a student created blueprint. Students will learn how to safely and properly use modern fabrication equipment for bending, punching, cutting and shaping metal.

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

Academic Reading and Writing Levels of 6

and

Prerequisite

WAF 105 minimum grade "C"

and

Prerequisite

WAF 106 minimum grade "C"

and

Prerequisite

WAF 200 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 2012

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: In accordance with the operator's manual.

Standard of success to be used for this assessment: 80% of students will follow the manual's step-by-step procedures.

Who will score and analyze the data: Departmental faculty

2. Draw and interpret a fabrication blueprint.

Assessment 1

Assessment Tool: Blueprint

Assessment Date: Fall 2012

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Blueprints will be evaluated in accordance with AWS 2.4:2007 standards.

Standard of success to be used for this assessment: 80% of students will draw a blueprint within AWS 2.4:2007 standards.

Who will score and analyze the data: Departmental faculty

3. Assemble a project in accordance with a fabrication blueprint.

Assessment 1

Assessment Tool: Fabricated project

Assessment Date: Fall 2012

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: The project will be measured to be in accordance with the student's blueprint tolerance range.

Standard of success to be used for this assessment: 80% of students will fabricate projects within the blueprint's specified tolerances.

Who will score and analyze the data: Departmental faculty

4. Identify needed materials for a project and estimate project cost.

Assessment 1

Assessment Tool: Material identification and cost list

Assessment Date: Fall 2012

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: The list of materials will be compared to the blueprint for that project.

Standard of success to be used for this assessment: 80% of students will write a complete list of materials in accordance with a blueprint.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Demonstrate proper use of hand tools.

Matched Outcomes

2. Demonstrate proper use of metal forming equipment.

Matched Outcomes

3. Fabricate a hand tool box from a supplied blueprint within specified tolerances.

Matched Outcomes

4. Draw a blueprint for a self-chosen project.

Matched Outcomes

5. Fabricate a project in accordance with the self-created blueprint.

Matched Outcomes

6. Fabricate a Pittsburgh seam on 20 GA mild steel.

Matched Outcomes

7. Rivet handle on hand tool box.

Matched Outcomes

8. Cut a variety of metal within tolerances using saws, shears and hand tools.

Matched Outcomes

9. Bend a variety of metals using cold forming and hot forming techniques.

Matched Outcomes

10. Setup a pressbrake, leafbreak, finger brake and hole punching machine in accordance with the operator's manual.

Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer

Action

Date

Faculty Preparer:

Amanda Scheffler

Faculty Preparer

Aug 25, 2011

Department Chair/Area Director:

Glenn Kay II

Recommend Approval

Oct 05, 2011

Dean:

Ross Gordon

Recommend Approval

Oct 18, 2011

Vice President for Instruction:

Stuart Blacklaw

Approve

Nov 15, 2011