

Washtenaw Community College Comprehensive Report

ABR 114 Applied Auto Body Welding Effective Term: Winter 2020

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Transportation Technologies
Discipline: Auto Body Repair (new)
Course Number: 114
Org Number: 14100
Full Course Title: Applied Auto Body Welding
Transcript Title: Applied Auto Body Welding
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:

Consultation with all departments affected by this course is required.

Course description

Pre-requisite, co-requisite, or enrollment restrictions

Outcomes/Assessment

Objectives/Evaluation

Rationale: We are removing the prerequisite for this course. Students are more successful if they complete this course either before or at the same time they take ABR 111. Assessment data is being collected in Winter 2019 and the assessment report will be completed in the summer. We ask that the prerequisite change be made now, knowing that additional changes may be needed pending the assessment results.

Proposed Start Semester: Fall 2019

Course Description: In this course, students will develop and apply basic welding and MIG brazing skills associated with crash damaged panel replacement as related to the collision repair industry. Areas of study will include proper equipment selection and set up, fitment of panels to be welded, and plasma cutting procedures. Emphasis will be placed on producing I-CAR acceptable MIG welding of steel and aluminum butt, lap, and plug welds completed in various welding positions. Students will also be introduced to MIG brazing using various grades of steel.

Course Credit Hours

Variable hours: No

Credits: 2

Lecture Hours: Instructor: 30 **Student:** 30

The following Lab fields are not divisible by 15: Student Min, Instructor Min

Lab: Instructor: 22.5 **Student:** 22.5

Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 52.5 **Student:** 52.5

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

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Identify MIG welding equipment and demonstrate set-up techniques.

Assessment 1

Assessment Tool: Written and practical exams

Assessment Date: Winter 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Scored using an answer key and a departmentally-developed rubric

Standard of success to be used for this assessment: 75% of the students will score 80% or higher

Who will score and analyze the data: Departmental faculty

2. Recognize and apply principles of I-Car welding that meet destructive testing standards.

Assessment 1

Assessment Tool: Written and practical exams

Assessment Date: Winter 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Scored using an answer key and a departmentally-developed rubric

Standard of success to be used for this assessment: 75% of the students will score 80% or higher.

Who will score and analyze the data: Departmental faculty

3. Weld various types of steel using MIG brazing techniques.

Assessment 1

Assessment Tool: Written and practical exams

Assessment Date: Winter 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Scored using an answer key and a departmentally-developed rubric

Standard of success to be used for this assessment: 75% of the students will score 80% or higher

Who will score and analyze the data: Departmental faculty

4. Demonstrate plasma cutting procedures on various materials.

Assessment 1

Assessment Tool: Written and practical exams

Assessment Date: Winter 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Scored using an answer key and a departmentally-developed rubric

Standard of success to be used for this assessment: 75% of the students will score 80% or higher.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Determine the correct MIG welder type, electrode, wire type, diameter, and gas to be used in a specific welding situation.
2. Perform MIG welds in various positions.
3. Perform continuous, stitch, tack and plug welds.
4. Perform fillet welds and butt welds with and without backing.
5. Perform MIG welds that meet I-CAR standards through destructive testing.
6. Identify plasma cutting processes for different materials and locations.
7. Perform cutting operations.
8. Determine the correct manufacturer recommendations for using MIG brazing.
9. Demonstrate MIG brazing techniques that meet I-CAR standards.
10. Recognize various grades of steel and the appropriate repair techniques.
11. Demonstrate the safe use of welding tools and techniques.
12. Perform resistance spot welding that meet I-CAR standards.

New Resources for Course

Course Textbooks/Resources

Textbooks

Manuals

Periodicals

Software

Equipment/Facilities

| <u>Reviewer</u> | <u>Action</u> | <u>Date</u> |
|---|---------------------------|---------------------|
| Faculty Preparer: <i>Timothy VanSchoick</i> | <i>Faculty Preparer</i> | <i>Oct 24, 2019</i> |
| Department Chair/Area Director: <i>Justin Morningstar</i> | <i>Recommend Approval</i> | <i>Oct 24, 2019</i> |
| Dean: <i>Brandon Tucker</i> | <i>Recommend Approval</i> | <i>Oct 24, 2019</i> |
| Curriculum Committee Chair: <i>Lisa Veasey</i> | <i>Recommend Approval</i> | <i>Oct 24, 2019</i> |
| Assessment Committee Chair: <i>Shawn Deron</i> | <i>Recommend Approval</i> | <i>Oct 24, 2019</i> |
| Vice President for Instruction: <i>Kimberly Hurns</i> | <i>Approve</i> | <i>Oct 24, 2019</i> |