

## Washtenaw Community College Comprehensive Report

### ATT 114 Applied Transportation Welding Effective Term: Fall 2025

#### Course Cover

**College:** Advanced Technologies and Public Service Careers

**Division:** Advanced Technologies and Public Service Careers

**Department:** Transportation Technologies

**Discipline:** Automotive & Transportation Tech (new)

**Course Number:** 114

**Org Number:** 14100

**Full Course Title:** Applied Transportation Welding

**Transcript Title:** Applied Transportation 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 discipline code & number**

**Course title**

**Outcomes/Assessment**

**Rationale:** Update the course for the new discipline.

**Proposed Start Semester:** Fall 2024

**Course Description:** In this course, students will develop and apply basic welding and metal inert gas (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 Inter-Industry Conference on Auto Collision Repair (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. This course was previously ABR 114.

#### 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 setup techniques.

### **Assessment 1**

Assessment Tool: Outcome-related practical exams

Assessment Date: Fall 2025

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: 75% of the students will score 80% or higher.

Who will score and analyze the data: Departmental faculty

### **Assessment 2**

Assessment Tool: Outcome-related written exam questions

Assessment Date: Fall 2025

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: 70% of the students will score 70% 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: Outcome-related written exam questions

Assessment Date: Fall 2025

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: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

### **Assessment 2**

Assessment Tool: Outcome-related practical exams

Assessment Date: Fall 2025

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: 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: Outcome-related practical exams

Assessment Date: Fall 2025

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: 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: Outcome-related practical exams

Assessment Date: Fall 2025

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: 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**

Level I classroom

**Reviewer**

**Faculty Preparer:**

*Timothy VanSchoick*

**Action**

*Faculty Preparer*

**Date**

*Mar 27, 2024*

**Department Chair/Area Director:**

<i>Rocky Roberts</i>	<i>Recommend Approval</i>	<i>Mar 27, 2024</i>
<b>Dean:</b>		
<i>Eva Samulski</i>	<i>Recommend Approval</i>	<i>Apr 03, 2024</i>
<b>Curriculum Committee Chair:</b>		
<i>Randy Van Wagnen</i>	<i>Recommend Approval</i>	<i>Mar 20, 2025</i>
<b>Assessment Committee Chair:</b>		
<i>Jessica Hale</i>	<i>Recommend Approval</i>	<i>Mar 20, 2025</i>
<b>Vice President for Instruction:</b>		
<i>Brandon Tucker</i>	<i>Approve</i>	<i>Mar 21, 2025</i>

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