# Washtenaw Community College Comprehensive Report

# ATT 123 Technical Auto Body Repair
# 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:** 123
**Org Number:** 14100
**Full Course Title:** Technical Auto Body Repair
**Transcript Title:** Technical Auto Body Repair
**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 description**
**Rationale:** Update the course for the new discipline.
**Proposed Start Semester:** Fall 2024
**Course Description:** In this course, students will explore all aspects of body panel modification including fender sectioning, door skinning and outer panel replacement. In addition, students will use specialty equipment such as a hydraulic ram to demonstrate basic "bumping" techniques. Students will also learn sheet metal welding and cutting processes as well as how to correctly set up and use a frame straightening machine. Emphasis is placed on quality, craftsmanship and excellent work habits. This course was previously ABR 123.

## Course Credit Hours

**Variable hours:** No
**Credits:** 4
**Lecture Hours: Instructor:** 60 **Student:** 60
**Lab: Instructor:** 45 **Student:** 45
**Clinical: Instructor:** 0 **Student:** 0

**Total Contact Hours: Instructor:** 105 **Student:** 105
**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

No Level Required

## Requisites

**Prerequisite**

ATT 111 minimum grade C

## General Education

## Request Course Transfer

**Proposed For:**

## Student Learning Outcomes

1. Determine structural tolerances and repair techniques based on a vehicle damage analysis.
   **Assessment 1**
   Assessment Tool: Outcome-related test questions
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of students will score 85% or higher.
   Who will score and analyze the data: Departmental faculty

2. Determine needed repair procedures and techniques based on a body panel damage evaluation.
   **Assessment 1**
   Assessment Tool: Outcome-related test questions
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of students will score 85% or higher.
   Who will score and analyze the data: Departmental faculty

3. Identify and demonstrate principles of welding and cutting in accordance with I-CAR standards.
   **Assessment 1**
   Assessment Tool: Outcome-related skills checklist
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 80% of students will score 85% or higher.
   Who will score and analyze the data: Departmental faculty

4. Demonstrate ability to restore damaged panels to factory specifications.
   **Assessment 1**
   Assessment Tool: Outcome-related skills checklist
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 80% of students will score 85% or higher.
   Who will score and analyze the data: Departmental faculty

## Course Objectives

1. Understand a variety of different methods for taking vehicle measurements.
2. Demonstrate the ability to apply fundamental principles of collision damage repair.
3. Diagnose and measure unibody vehicles using a universal measuring system (mechanical, electronic, and laser).
4. Diagnose and measure structural damage using tram and self-centering gauges.
5. Determine the correct GMAW (MIG) welder type, electrode, wire type, diameter, and gas to be used in a specific welding situation.
6. Identify cutting processes for different materials and locations and perform cutting operations.
7. Straighten and rough-out contours of damaged panels to a suitable condition for body filling or metal finishing using power tools, hand tools, and weld-on pull attachments.
8. Replace door skin, restore corrosion protection and perform panel bonding.
9. Identify structural tolerances related to specific vehicle manufacturers.
10. Analyze outer body panel damage and determine repair or replace procedures.
11. Develop a vehicle repair plan and a cost estimate.
12. Demonstrate all I-CAR vehicle-specific welds in the flat, vertical, and overhead positions.
13. Demonstrate the ability to utilize hydraulic rams in a structural straightening procedure.

## New Resources for Course

## Course Textbooks/Resources

Textbooks

Thomas/Jund. *Collision Repair and Refinishing: A Foundation Course for Technicians*, 3rd ed. New York: Delmar, 2018, ISBN: 9781305949942.

Manuals

Periodicals

Software

## Equipment/Facilities

Level III classroom

| Reviewer | Action | Date |
|---|---|---|
| **Faculty Preparer:** | | |
| *Shawn Deron* | *Faculty Preparer* | *Mar 27, 2024* |
| **Department Chair/Area Director:** | | |
| *Rocky Roberts* | *Recommend Approval* | *Mar 27, 2024* |
| **Dean:** | | |
| *Eva Samulski* | *Recommend Approval* | *Apr 03, 2024* |
| **Curriculum Committee Chair:** | | |
| *Randy Van Wagnen* | *Recommend Approval* | *Mar 20, 2025* |
| **Assessment Committee Chair:** | | |
| *Jessica Hale* | *Recommend Approval* | *Mar 20, 2025* |
| **Vice President for Instruction:** | | |
| *Brandon Tucker* | *Approve* | *Mar 21, 2025* |

# Washtenaw Community College Comprehensive Report

# ABR 123 Technical Auto Body Repair
# Effective Term: Winter 2022

## Course Cover

**College:** Advanced Technologies and Public Service Careers
**Division:** Advanced Technologies and Public Service Careers
**Department:** Transportation Technologies
**Discipline:** Auto Body Repair (new)
**Course Number:** 123
**Org Number:** 14100
**Full Course Title:** Technical Auto Body Repair
**Transcript Title:** Technical Auto Body Repair
**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:**
**Consultation with all departments affected by this course is required.**
**Course description**
**Outcomes/Assessment**
**Objectives/Evaluation**
**Rationale:** Three Year Review/ Assessment Report
**Proposed Start Semester:** Fall 2021
**Course Description:** In this course, students will explore all aspects of body panel modification including fender sectioning, door skinning and outer panel replacement. In addition, students will use specialty equipment such as a hydraulic ram to demonstrate basic bumping techniques. Students will learn sheet metal welding and cutting processes as well as how to correctly set up and use a frame straightening machine. Emphasis is placed on quality, craftsmanship and excellent work habits.

## Course Credit Hours

**Variable hours:** No
**Credits:** 4
**Lecture Hours: Instructor:** 60 **Student:** 60
**Lab: Instructor:** 45 **Student:** 45
**Clinical: Instructor:** 0 **Student:** 0

**Total Contact Hours: Instructor:** 105 **Student:** 105
**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

No Level Required

## Requisites

**Prerequisite**
ABR 111 minimum grade "C"

## General Education

## Request Course Transfer

**Proposed For:**

## Student Learning Outcomes

1. Analyze vehicle damage and determine structural tolerances and repair techniques.
   **Assessment 1**
   Assessment Tool: Outcome-related test questions
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of students will score 85% or higher.
   Who will score and analyze the data: Departmental faculty

2. Evaluate body panel damage and determine needed repair procedures and techniques.
   **Assessment 1**
   Assessment Tool: Outcome-related test questions
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 80% of students will score 85% or higher.
   Who will score and analyze the data: Departmental faculty

3. Identify and demonstrate principles of welding and cutting in accordance with I-CAR standards.
   **Assessment 1**
   Assessment Tool: Outcome-related skills checklist
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Departmental rubric
   Standard of success to be used for this assessment: 80% of students will score 85% or higher.
   Who will score and analyze the data: Departmental faculty

4. Demonstrate ability to restore damaged panels to factory specifications.
   **Assessment 1**
   Assessment Tool: Outcome-related skills checklist
   Assessment Date: Fall 2024
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Departmental rubric
   Standard of success to be used for this assessment: 80% of students will score 85% or higher.
   Who will score and analyze the data: Departmental faculty

## Course Objectives

1. Explore vehicle measurement activities.
2. Demonstrate the ability to apply fundamental principles of collision damage repair.
3. Diagnose and measure unibody vehicles using a universal measuring system (mechanical, electronic, and laser).
4. Diagnose and measure structural damage using tram and self-centering gauges.
5. Determine the correct GMAW (MIG) welder type, electrode, wire type, diameter, and gas to be used in a specific welding situation.
6. Identify cutting processes for different materials and locations and perform cutting operations.
7. Straighten and rough-out contours of damaged panels to a suitable condition for body filling or metal finishing using power tools, hand tools, and weld-on pull attachments.
8. Replace door skin, restore corrosion protection and perform panel bonding.
9. Identify structural tolerances related to specific vehicle manufacturers.
10. Analyze outer body panel damage and determine repair or replace procedures.
11. Develop a vehicle repair plan and a cost estimate.
12. Demonstrate all I-CAR vehicle-specific welds in the flat, vertical, and overhead positions.
13. Demonstrate the ability to utilize hydraulic rams in a structural straightening procedure.

## New Resources for Course

## Course Textbooks/Resources

Textbooks

Thomas/Jund. *Collision Repair and Refinishing: A Foundation Course for Technicians*, 3rd ed. New York: Delmar, 2018, ISBN: 9781305949942.

Manuals

Periodicals

Software

## Equipment/Facilities

Level III classroom

| Reviewer | Action | Date |
|---|---|---|
| **Faculty Preparer:** | | |
| *Robert Lowing* | *Faculty Preparer* | *Aug 03, 2021* |
| **Department Chair/Area Director:** | | |
| *Rocky Roberts* | *Recommend Approval* | *Aug 09, 2021* |
| **Dean:** | | |
| *Jimmie Baber* | *Recommend Approval* | *Aug 19, 2021* |
| **Curriculum Committee Chair:** | | |
| *Randy Van Wagnen* | *Recommend Approval* | *Oct 27, 2021* |
| **Assessment Committee Chair:** | | |
| *Shawn Deron* | *Recommend Approval* | *Oct 28, 2021* |
| **Vice President for Instruction:** | | |
| *Kimberly Hurns* | *Approve* | *Oct 29, 2021* |