Washtenaw Community College Comprehensive Report

ATT 209 Advanced Metal Shaping
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: 209
Org Number: 14100
Full Course Title: Advanced Metal Shaping
Transcript Title: Advanced Metal Shaping
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.
Outcomes/Assessment
Rationale: Update the course for the new discipline.
Proposed Start Semester: Fall 2024
Course Description: In this course, students will work individually and as a team to complete projects made from various types of metal. Areas of study will include: sheet metal shaping with hand and power tools over wooden "bucks," and layout of multi-piece projects through the use of cardboard templates, then transferred to metal. Procedures used in this class will consist of riveting, bell flanging, welding, English wheel and many others. This course was previously ABR 209.

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

No Level Required

Requisites

Prerequisite

ATT 119 minimum grade B-

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Identify sheet metal grades and properties used for component shaping and forming.
   Assessment 1
   Assessment Tool: Outcome-related 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: 75% of the students will score 75% or higher.
   Who will score and analyze the data: Departmental faculty

2. Perform sheet metal forming and shaping in accordance with safety standards set by the department.
   Assessment 1
   Assessment Tool: Outcome-related skills checklist
   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 an average of 3.5 of 5 (70%) or higher.
   Who will score and analyze the data: Departmental faculty

3. Construct and assemble multiple-piece metal projects.
   Assessment 1
   Assessment Tool: Outcome-related skills checklist
   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 an average of 3.5 of 5 (70%) or higher.
   Who will score and analyze the data: Departmental faculty

Course Objectives

1. Identify proper sheet metal thickness and grade.
2. Demonstrate the ability to apply fundamental principles of sheet metal shaping and forming
3. Construct templates from wood and cardboard for metal shaping.
4. Transfer templates to metal.
5. Demonstrate the ability to measure and layout complicated forming "bucks" for sheet metal construction.

6. Cut and shape metal according to template.
7. Locate and reduce surface irregularities on handcrafted metal panels.
8. Identify and apply proper welding equipment and consumables for joining sheet metal projects.
9. Fit and adjust multiple-piece sheet metal projects.
10. Assemble a finished project according to the plan.

New Resources for Course

Course Textbooks/Resources

Textbooks
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 209 Advanced Metal Shaping
Effective Term: Fall 2017

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Automotive Body
Discipline: Auto Body Repair
Course Number: 209
Org Number: 14110
Full Course Title: Advanced Metal Shaping
Transcript Title: Advanced Metal Shaping
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: New Course
Change Information:
Rationale: new course based upon student demand
Proposed Start Semester: Fall 2017
Course Description: In this course, students will work individually and as a team to complete projects made from various types of metal. Areas of study will include: sheet metal shaping with hand and power tools over wooden "bucks," and layout of multi-piece projects through the use of cardboard templates, then transferred to metal. Procedures used in this class will consist of riveting, bell flanging, welding, English wheel and many others.

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

No Level Required

Requisites

Prerequisite
ABR 119 minimum grade "B-"

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Analyze sheet metal grades and properties used in shaping and forming.
   Assessment 1
   Assessment Tool: Final exam.
   Assessment Date: Winter 2020
   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: Final Exams will be scored against the answer sheet.
   Standard of success to be used for this assessment: 75% of the students will score 75% or higher.
   Who will score and analyze the data: Department chair and instructors.

2. Perform sheet metal forming and shaping in accordance w/safety standards set by the department.
   Assessment 1
   Assessment Tool: Student Achievement Record.
   Assessment Date: Winter 2020
   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: Student achievement record will be scored using a departmentally-developed rubric.
   Standard of success to be used for this assessment: 75% of the students will score an average of 3.5 of 5 (70%) or higher.
   Who will score and analyze the data: Department chair and instructors.

3. Construct and assemble multiple piece metal projects.
   Assessment 1
   Assessment Tool: Student Achievement Record.
   Assessment Date: Winter 2020
   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: Student achievement record will be scored using a departmentally-developed rubric.
   Standard of success to be used for this assessment: 75% of the students will score an average of 3.5 of 5 (70%) or higher.
   Who will score and analyze the data: Department chair and instructors.

Course Objectives

1. Identify proper sheet metal thickness and grade.
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6. Cut and shape metal according to template.
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10. Assemble a finished project according to the plan.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Timothy VanSchoick	*Faculty Preparer*	*Feb 22, 2017*
Department Chair/Area Director:		
Gary Sobbry	*Recommend Approval*	*Feb 22, 2017*
Dean:		
Brandon Tucker	*Recommend Approval*	*Mar 01, 2017*
Curriculum Committee Chair:		
David Wooten	*Recommend Approval*	*Mar 26, 2017*
Assessment Committee Chair:		
Ruth Walsh	*Recommend Approval*	*Mar 26, 2017*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Mar 27, 2017*