Washtenaw Community College Comprehensive Report

ATT 119 Introduction to 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: 119
Org Number: 14100
Full Course Title: Introduction to Metal Shaping
Transcript Title: Introduction to 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.
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 be introduced to the working of sheet metals by hand. In addition to skillful handling of tools, students must possess a thorough knowledge of the properties and behavior of materials, to ensure they move in the desired direction when worked. Areas of study will include sheet metal shaping using hand tools over wood forms, anvils, and sand/shot bags. Students will create several handmade parts using a variety of sheet metal materials with varied thickness and hardness. This course was previously ABR 119.

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

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Recognize the principles and processes of shaping sheet metal by hand.
   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: 70% of students will score 70% or higher.
   Who will score and analyze the data: Departmental faculty

2. Identify sheet metal properties and designs related to forming sheet metal by hand.
   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: 70% of students will score 70% or higher.
   Who will score and analyze the data: Departmental faculty

3. Demonstrate the sheet metal shaping process safely.
   Assessment 1
   Assessment Tool: Outcome-related 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: Answer key
   Standard of success to be used for this assessment: 70% of students will score 70% or higher.
   Who will score and analyze the data: Departmental faculty

Course Objectives

1. Apply fundamental principles of the art of sheet metal shaping.
2. Construct templates from wood for metal shaping.
3. Identify and select proper anvil shapes and sizes for shaping applications.
4. Identify and select proper sand/shot bag shapes and sizes for shaping applications.
5. Demonstrate hammer and dolly techniques on a range of sheet metals with varied thickness and hardness.
6. Locate and reduce surface irregularities on a handcrafted sheet metal panel.
7. Demonstrate the ability to create a hand formed classic bowl shape using hand tools only.
8. Recognize and apply safety standards when performing sheet metal shaping skills.
9. Recognize the impact of sheet metal properties on the shaping process.

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 119 The Art of Metal Shaping
Effective Term: Fall 2020

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Transportation Technologies
Discipline: Auto Body Repair (new)
Course Number: 119
Org Number: 14100
Full Course Title: The Art of Metal Shaping
Transcript Title: The Art of Metal Shaping
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.
Total Contact Hours
Outcomes/Assessment
Objectives/Evaluation
Rationale: Upon completion of the assessment, the department is requesting that the contact hours be increased from 45 to 52.5 hours. This will allow the students the time to complete the required work and have a better educational experience. We don't feel it is necessary to update the content of the master syllabus at this time; we will be able to revise the student syllabus to cover the in-lab changes that are needed.
Proposed Start Semester: Winter 2020
Course Description: This course will introduce the student to the working of sheet metals by hand. In addition to skillful handling of tools, it is necessary for the students to possess a thorough knowledge of the properties and behavior of materials in order to ensure that they move in the desired direction when worked. Areas of study will include sheet metal shaping using hand tools over wood forms, anvils, and sand/shot bags. Students will create several handmade parts using a variety of sheet metal materials with varied thickness and hardness.

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

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Recognize the principles and processes of shaping sheet metal by hand.
   Assessment 1
   Assessment Tool: Outcome-related exam questions
   Assessment Date: Winter 2023
   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 students will score 70% or higher
   Who will score and analyze the data: Departmental faculty

2. Identify sheet metal properties and designs related to forming sheet metal by hand.
   Assessment 1
   Assessment Tool: Outcome-related exam questions
   Assessment Date: Winter 2023
   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 students will score 70% or higher
   Who will score and analyze the data: Departmental faculty

3. Demonstrate the sheet metal shaping process safely.
   Assessment 1
   Assessment Tool: Student Achievement Record
   Assessment Date: Winter 2023
   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: 70% of students will score 70% or higher
   Who will score and analyze the data: Departmental faculty

Course Objectives

1. Explore planned classroom activities and demonstrate the ability to apply fundamental principles of the art of sheet metal shaping.
2. Construct templates from wood for metal shaping.
3. Identify and select proper anvil shape and size for shaping application.
4. Identify and select proper sand/shot bag shapes and size for shaping application.
5. Demonstrate hammer and dolly techniques on a range of sheet metals with varied thickness and hardness.
6. Locate and reduce surface irregularities on a handcrafted sheet metal panel.

7. Demonstrate the ability to create a hand formed classic bowl shape using hand tools only.
8. Recognize and apply safety standards when performing sheet metal shaping skills.
9. Recognize the impact of sheet metal properties on the shaping process.

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*	*Aug 06, 2019*
Department Chair/Area Director:		
Justin Morningstar	*Recommend Approval*	*Nov 14, 2019*
Dean:		
Brandon Tucker	*Recommend Approval*	*Dec 10, 2019*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Feb 19, 2020*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Feb 24, 2020*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Feb 25, 2020*

WASHTENAW COMMUNITY COLLEGE

MASTER SYLLABUS

Course Discipline Code & No: ABR 119 **Title:** The Art of Metal Shaping **Effective Term** Fall 07

Division Code: VCT **Department Code:** ABR **Org #:** 14110

Don't publish: ☐ College Catalog ☐ Time Schedule ☐ Web Page

Reason for Submission. Check all that apply.

- ☒ New course approval
- ☐ Three-year syllabus review/Assessment report
- ☐ Course change
- ☐ Reactivation of inactive course
- ☐ Inactivation (Submit this page only.)

Change information: Note all changes that are being made. Form applies only to changes noted.

- ☐ Consultation with all departments affected by this course is required.
- ☐ Course discipline code & number (was _____)*
  *Must submit inactivation form for previous course.
- ☐ Course title (was _____)
- ☐ Course description
- ☐ Course objectives (minor changes)
- ☐ Credit hours (credits were: _____)
- ☐ Total Contact Hours (total contact hours were: _____)
- ☐ Distribution of contact hours (contact hours were: lecture: _____ lab _____ clinical _____ other _____)
- ☐ Pre-requisite, co-requisite, or enrollment restrictions
- ☐ Change in Grading Method
- ☐ Outcomes/Assessment
- ☐ Objectives/Evaluation
- ☐ Other _____

Rationale for course or course change. Attach course assessment report for existing courses that are being changed.

Providing training for the most highly skilled form of craftsmenship, working sheet metals by hand. Essentially, panel-beating is a hand method of producing hollow forms by means of hammering. Together with forging it is probably the most ancient of the metal-working crafts. Completers of program will develop skills associated with prototype fabrication and collision repair.

Approvals Department and divisional signatures indicate that all departments affected by the course have been consulted.

Department Review by Chairperson ☐ New resources needed ☐ All relevant departments consulted

Print: W. Gary Sobbry, Jr. Faculty/Preparer Signature W. Gary Sobbry, Jr. Date: 1-22-08

Print: W. Gary Sobbry, Jr. Department Chair Signature W. Gary Sobbry, Jr. Date: 1-22-08

Division Review by Dean

☐ Request for conditional approval

Recommendation ☒ Yes ☐ No _____ Dean's/Administrator's Signature 1-22-08 Date

Curriculum Committee Review

Recommendation _____

☐ Tabled ☒ Yes ☐ No _____ Curriculum Committee Chair's Signature 3/6/08 Date

Vice President for Instruction Approval

_____ Vice President's Signature 3/11/08 Date

Approval ☒ Yes ☐ No ☐ Conditional

Do not write in shaded area.

Log File 1/23/08 sj Ecopy ☐ Banner 3/19 C&A Database 3/19 C&A Log File 3/19 fn Basic skills ☐ Contact fee ☑

20080

Please return completed form to the Office of Curriculum & Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

Office of Curriculum & Assessment

Approved by Assessment Committee 10/06

http://www.wccnet.edu/departments/curriculum/

RWG '08

***Complete ALL sections which apply to the course, even if changes are not being made.**

Course:	**Course title:**
ABR 119	The Art of Metal Shaping

Credit hours: 2

If variable credit, give range:

_____ to _____ credits

Contact hours per semester:

	Student	Instructor
Lecture:	30	30
Lab:	15	15
Clinical:	___	___
Practicum:	___	___
Other:	___	___
Totals:	45	45

Are lectures, labs, or clinicals offered as separate sections?

☐ Yes - lectures, labs, or clinicals are offered in separate sections

☒ No - lectures, labs, or clinicals are offered in the same section

Grading options:

☐ P/NP (limited to clinical & practica)

☐ S/U (for courses numbered below 100)

☒ Letter grades

Prerequisites. Select one:

☒ College-level Reading & Writing

☐ Reduced Reading/Writing Scores
(Add information at Level I prerequisite)

☐ No Basic Skills Prerequisite
(College-level Reading and Writing is not required.)

In addition to Basic Skills in Reading/Writing:

Level I (enforced in Banner)

	Course	Grade	Test	Min. Score	Concurrent Enrollment (Can be taken together)	Corequisites (Must be enrolled in this class also during the same semester)
					☐	
☐ and ☐ or					☐	
☐ and ☐ or					☐	
☐ and ☐ or					☐	

Level II (enforced by instructor on first day of class)

	Course	Grade	Test	Min. Score
☐ and ☐ or				
☐ and ☐ or				

Enrollment restrictions (In addition to prerequisites, if applicable.)

☐ and ☐ or Consent required

☐ and ☐ or Admission to program required
Program: _____

☐ and ☐ or Other (please specify):
_____

Please send syllabus for transfer evaluation to:

Conditionally approved courses are not sent for evaluation.
Insert course number and title you wish the course to transfer as.

☐ E.M.U. as _____

☐ U of M as _____

☐ _____ as _____

☐ _____ as _____

☐ _____ as _____

☐ _____ as _____

Course	Course title
ABR 119	The Art of Metal Shaping

Course description State the purpose and content of the course. Please limit to 500 characters.	This course will introduce the student to "the working of sheet metals by hand." In addition to skillful handling of tools, it is necessary for the students to possess a thorough knowledge of the properties and behavior of materials in order to insure that they move in the desired direction when worked. Areas of study will include: Sheet metal shaping with hand tools over handcrafted wood forms, over anvils, and over sand/shot bags and fabricating hand-made parts using a range of sheet metal materials with varied thickness and hardness.

Course outcomes List skills and knowledge students will have after taking the course. **Assessment method** Indicate how student achievement in each outcome will be assessed to determine student achievement for purposes of course improvement.	**Outcomes** (applicable in all sections)	**Assessment** Methods for determining course effectiveness
	1. Identify and demonstrate principles of sheet metal shaping by hand.	Mid Term and Final Exam, Student Achievement Record
	2. Analyze sheet metal properties and shapes in addition to shaping process	Student Achievement Record, Mid Term and Final exams.
	3. Perform sheet metal shaping process in accordance w/safety standards as instructed.	Student Achievement Record.

Course Objectives Indicate the objectives that support the course outcomes given above. **Course Evaluations** Indicate how instructors will determine the degree to which each objective is met for each student.	**Objectives** (applicable in all sections)	**Evaluation** Methods for determining level of student performance of objectives
	1. Explore planned classroom activities and demonstrate the ability to apply fundamental principles of the art of sheet metal shaping.	Student Achievement Record, Chapter test, Mid term and Final exams.
	2. Construct templates from wood for metal shaping.	Student Achievement Record
	3. Identify and select proper anvil shape and size for shaping application.	Chapter test and Student Achievement Record
	4. Identify and select proper sand/shot bag shapes and size for shaping application.	Chapter test and Student Achievement Record
	5. Demonstrate hammer and dolly techniques on a range of sheet metals with varied thickness and hardness.	Student Achievement Record
	6. Locate and reduce surface irregularities on a hand crafted sheet metal panel.	Student Achievement Record
	7. Demonstrate the ability to create a hand formed classic bowl shape by using hand tools only.	Student Achievement Record and Final Exam

List all new resources needed for course, including library materials. Small hand tools: Hammers, dollies, files, shot bags, clamps, hammer forming materials and small sheet metal break 12 to 14 inches.

Student Materials:

List examples of types		Estimated costs
Texts Supplemental reading Supplies Uniforms Equipment Tools Software		$ 0

Equipment/Facilities: Check all that apply. (All classrooms have overhead projectors and permanent screens.)

Check level only if the specified equipment is needed for all sections of a course.

☐ Level I classroom
Permanent screen & overhead projector

☐ Level II classroom
Level I equipment plus TV/VCR

☒ Level III classroom
Level II equipment plus data projector, computer, faculty workstation

☐ Off-Campus Sites
☐ Testing Center
☐ Computer workstations/lab
☐ ITV
☐ TV/VCR
☐ Data projector/computer
☒ Other Room equipped with metal shaping tools/equipment_____

Assessment plan:

Learning outcomes to be assessed (list from Page 3)	Assessment tool	When assessment will take place (semester & year)	Course section(s)/other population	Number students to be assessed
1. Identify and demonstrait principles of sheet metal shaping by hand.	Mid Term and Final Exam, Student Achievement record	Winter/09 & every 3 yrs.	All sections	All students
2.Analyze sheet metal properties and shapes and determine shaping procedures.	Student Achievement Record, Mid Term and Final exams.	Winter/09 & every 3 yrs.	All sections	All students
3. Perform sheet metal shaping process in accordance w/safety standards as instructed	Student Achievement Record.	Winter/09 & every 3 yrs.	All sections	All students

Scoring and analysis of assessment:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric/scoring guide.

   Chapter test, mid-term and final exams will be scored against the answer sheet. Points will be assigned to each question with the results compared to the scoring guide.

   Practical application of the task will be evaluated using the Student Achievement Record. Each task is worth 5 points and will be evaluated by the instructor based on the rubric below.

   5 points = Excellent work done with no flaws and without help from instructor, follows safety requirements.
   4 points= Above average work done with little to no flaws with some help from instructor. Follows all safety requirements.
   3 points = Average work done with few flaws and some help from instructor. Follows most safety requirements.
   2 points = Either below average work or Average work done with substantial help from instructor. Meets minimal safety requirements.
   1 point = Failed to complete task or finished product not to code or student doesn't follow safety requirements.

2. Indicate the standard of success to be used for this assessment.

   The standard of sucess of student performance and retention will be: 80% of the students will score 85% or higher on the mid-term, final exam and student achievement record. ((Mid term + Final + Achievement Record)/ 3 = 85% or higher).

3. Indicate who will score and analyze the data (data must be blind-scored).

   Department chair and instructors will blind-score the data. We will review results to identify if there are areas of weakness or needed changes.

4. Explain the process for using assessment data to improve the course.

   Assessment and update the course content. Analysis will also be done to evaluate the type of instruction used and if we identify areas of consistent weakness.