Outcome-based 18/SU Course Syllabus

Course Rubric Number Section:	ABDR 1419 1001
Lecture-Lab-Credit:	2-6-4
CIP Code:	47.0603
Course Title:	Basic Metal Repair
Course Description:	Covers basic metal principles and working techniques including proper tool usage and product application.
Prerequisites:	
Co-requisites:	
Course Meets:	1TTC 119 LEC F 08:00AM 09:50AM 1ACR 100 LAB F 10:00AM 11:50AM 1ACR 100 LAB F 01:00PM 04:40PM

Instructor:	Tracy Marshall
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Office Fax Number:	254 867-2315
Building & Office Room Number:	1FC1 120
Office Hours:	Monday 2:00pm-5:00pm

Approved by:	Clint Campbell	***Date:***	2018-04-30

Course Outcomes

CO1: Perform basic metal straightening procedures

CO2: Utilize basic body shop hand tools

CO3: Utilize appropriate plastic filler application techniques

CO4: Apply personal and environmental safety practices

TSTC Grading Policy

(Grades for courses must be C or better)

Grade	Percent	Description	Grade Points
A	90-100	Excellent/Superior Performance Level	4
B	80-89	Above Required Performance Level	3
C	70-79	Minimum Required Performance Level	2
D	60-69	Below Required Performance Level	1
F	Below 60	Failure to meet Performance Requirements	0
IP	--	In Progress	
W	--	Withdrawal	0
CR	--	Credit	0
AUD	--	Audit of Course	0

See College Catalog for complete descriptions.

Competencies Rating Scale

Rating Scale Key			
6	90+	Proficient	Student consistently performs the task accurately to industry standards without supervision.
5	80-89	Proficient	Student performs the task to industry standards with no supervision.
4	70-79	Proficient	Student performs the task to industry standards with little supervision. This is the minimum performance rating for STAR skill completion.
3	60-69	Exposed/Not Proficient	Student has been introduced to the task and can perform some of the tasks to industry standards.
2	50-59	Exposed/Not Proficient	Student has been introduced to the task, but cannot perform the task to industry standards.
1	0-49		Student was absent or did not complete assignment.

Campus Standard Policies

The Student Handbook contains valuable information on campus policies and procedures.

- Student Code of Conduct
- Student Drug and Alcohol Testing Policy
- Plagiarism
- Student Grievances and Complaints

Disability Services

Any student who, because of a disability, may require special accommodations in order to meet the course requirements, should contact the Disability Services office, as soon possible, to make necessary arrangements. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Disability Services office has been provided.

Abilene Campus
Susan Hash
Testing and Support Services
Abilene Main Campus Bldg. Rm. 112
325-734-3641

Breckenridge Campus
Lisa Langford
Testing and Advisement located in
The Main Building Rm. 106
254-559-7731

Brownwood Campus
Nicole Whitley
Testing and Advisement
Building 2 Rm. 120
325-641-5955

Fort Bend Campus
Schauna Boynton
Brazos Center Rm. 113
346-239-3394

Harlingen Campus
Corina De La Rosa
Disabilities Services
Student Support Services
Student Services Bldg. Rm. 216
956-364-4521

Marshall Campus
Annette Ellis
Administration and Admissions Rm. 150
909-923-3313

Sweetwater Campus
Misty Walden
Disability Services
Student Support Services
Lance Sears Building Rm. 140
325-236-8292

North Texas Campus
Amanda Warren
Student Services, Room 227
972-617-4724

Waco Campus
Marilyn Harren
Disabilities Services Office
Student Services Center Rm. 198
254-867-3600

Williamson County
Chemese Armstrong
Enrollment Services Rm. B113C
512-759-5907

Tutoring Statement

The Supplemental Instruction & Tutoring Program at TSTC offers free tutoring and academic support services to help you achieve your academic and career goals. You can access the Tutoring Schedule, as well as *MyTSTC Video Tutor Library,* by visiting: https://portal.tstc.edu/student/Student_Learning/Pages/Tutoring.aspx
(shortened link: goo.gl/Z9vJvY). For more information, please contact Norma A. Salazar@ 956-364-4557.

Learning Resource Center

The purpose of the TSTC Learning Resource Center is to serve the TSTC Community and support academic, advanced, specialized and emerging programs, contributing to the educational and economic development of the State of Texas. You can access the Learning Resource Center page at https://portal.tstc.edu/employee/Departments/operations/Pages/Learning%20Resource%20Center.aspx

Resources

Textbooks & Publications:

Item	Title	Author	Publisher	Edition	ISBN
1	Collision Repair and Refinishing(Suggested not Required)	Alfred M. Thomas & Michael Jund	Delmar	First	1401898948
2	Basic Metal Repair	ABDR 1419	Bookstore	Workbook	SKU: 10412565

Tools, Materials:

Item	Resource	Quantity
1	Approved safety glasses (clear lens)	1pair
2	Shredder (Stanley 299/298-B)	2
3	4" Plastic spreader	4
4	Sanding block (3M #5519 or similar)	1
5	Ear plugs	1 pair
6	Particle mask (double strap design)	3
7	Solvent resistant gloves	2 pair
8	17" Sanding board (Hutchins #AF16 or similar)	1
9	Mixing board (non-porous)	1
10	Nitrile gloves	5 pair
11	Tool box (Small)	1
12	3 ring loose leaf notebook	1
13	Spiral or paper for notebook	1
14	2 Pencils (1 for lab)	2
15	Scantrons	1 pkg

Tool Resource Statement

Tools and materials must be acquired by the beginning of the third class week or the student will be dismissed until resources are complete

Grade Scheme

Category Description		Category Value
Written Assessments		1800
Assessment Label:	**Assessment Description**	**Assessment Value**
Safety Test:	Complete Safety Test during lab orientation	100.00
Homework 1:	Safety Handout-complete 15 questions and essay on separate answer sheet	100.00
Test 2:	Tools and Equipment	100.00
Test 3:	Body Filler	100.00
Test 4:	Reading assignment from last week	100.00
Test 5:	Stud gun and Pull rods	100.00
Test 6:	Basic Damage Analysis Part 1	100.00
Test 7:	Basic Damage Analysis part 2	100.00
Test 8:	Basic Damage Analysis part 3	100.00
Test 9:	Shrinking Damaged Sheetmetal	100.00
Test 10:	Advanced Damage Analysis Part 1	100.00
Test 11:	Advanced Damage Analysis Part 2	100.00
Test 12:	Advanced Damage Analysis Part 3	100.00
Test 13:	Analysis of fender damage	100.00
Test 14:	Small Dent Repair	100.00
Test 15 :	Large Dent Repair	100.00
Test 16:	Rust Repair	100.00
Test 17 :	Plastic Body Fillers	100.00
Category Description		**Category Value**

Performance Assessments		1800
Assessment Label:	**Assessment Description**	**Assessment Value**
Lab 1:	Metal work and Filler Panel	180.00
Lab 2:	Crease Dent Panel	180.00
Lab 3:	Fender Project	180.00
Lab 4:	Shrinking Objective Hood	180.00
Lab 5:	Shrinking Objective Fender	180.00
Lab 6:	Styleline Panel	180.00
Lab 7:	Hail Damage Repair	180.00
Lab 8:	Hood Project	180.00
Lab 9:	Kansas Jack Panel	180.00
Lab 10:	Vehicle Damage	180.00
Category Description		**Category Value**
Final Exam		1800
Assessment Label:	**Assessment Description**	**Assessment Value**
Final Exam:	Final Exam	1,800.00

Total Assessment Points **5,400.00**

Total Category Points **5,400.00**

A = 5,400-4,860 **B = 4,859-4,320** **C = 4,319-3,780** **D = 3,779-3,240** **F = 3,239-0**

Description of Graded Elements of the Course

Assessment Label	Assessment Description/Course outcomes met	Assessment Value in Points	% of Final Grade
Safety Test	Complete Safety Test during lab orientation **Course outcomes met:** CO4	100.00	1.85%
Lab 1	Metal work and Filler Panel **Course outcomes met:** CO4, CO1, CO2, CO3	180.00	3.33%
Homework 1	Safety Handout-complete 15 questions and essay on separate answer sheet **Course outcomes met:** CO4, CO1	100.00	1.85%
Test 2	Tools and Equipment **Course outcomes met:** CO1, CO4, CO3, CO2	100.00	1.85%
Test 3	Body Filler **Course outcomes met:** CO2, CO3, CO4, CO1	100.00	1.85%
Test 4	Reading assignment from last week **Course outcomes met:** CO4, CO3, CO2	100.00	1.85%
Lab 2	Crease Dent Panel **Course outcomes met:** CO2, CO3, CO4, CO1	180.00	3.33%
Test 5	Stud gun and Pull rods **Course outcomes met:** CO1, CO4, CO3, CO2	100.00	1.85%
Test 6	Basic Damage Analysis Part 1 **Course outcomes met:** CO2, CO3	100.00	1.85%
Lab 3	Fender Project **Course outcomes met:** CO2, CO4, CO1, CO3	180.00	3.33%
Test 7	Basic Damage Analysis part 2 **Course outcomes met:** CO3, CO2	100.00	1.85%
Test 8	Basic Damage Analysis part 3 **Course outcomes met:** CO2, CO3	100.00	1.85%
Lab 4	Shrinking Objective Hood **Course outcomes met:** CO3, CO2, CO1, CO4	180.00	3.33%
Test 9	Shrinking Damaged Sheetmetal **Course outcomes met:** CO4, CO1, CO2, CO3	100.00	1.85%
Lab 5	Shrinking Objective Fender **Course outcomes met:** CO3, CO2, CO1, CO4	180.00	3.33%
Test 10	Advanced Damage Analysis Part 1 **Course outcomes met:** CO2, CO3	100.00	1.85%

Lab 6	Styleline Panel **Course outcomes met:** CO3, CO2, CO4, CO1	180.00	3.33%
Test 11	Advanced Damage Analysis Part 2 **Course outcomes met:** CO2, CO3	100.00	1.85%
Test 12	Advanced Damage Analysis Part 3 **Course outcomes met:** CO3, CO2	100.00	1.85%
Test 13	Analysis of fender damage **Course outcomes met:** CO2, CO3	100.00	1.85%
Lab 7	Hail Damage Repair **Course outcomes met:** CO2, CO3, CO1, CO4	180.00	3.33%
Test 14	Small Dent Repair **Course outcomes met:** CO4, CO3, CO2, CO1	100.00	1.85%
Lab 8	Hood Project **Course outcomes met:** CO1, CO2, CO3, CO4	180.00	3.33%
Test 16	Rust Repair **Course outcomes met:** CO4, CO3, CO1, CO2	100.00	1.85%
Lab 9	Kansas Jack Panel **Course outcomes met:** CO2, CO1, CO3, CO4	180.00	3.33%
Test 15	Large Dent Repair **Course outcomes met:** CO3, CO2, CO4, CO1	100.00	1.85%
Lab 10	Vehicle Damage **Course outcomes met:** CO1, CO4, CO2, CO3	180.00	3.33%
Test 17	Plastic Body Fillers **Course outcomes met:** CO3, CO2, CO4	100.00	1.85%
Final Exam	Final Exam **Course outcomes met:** CO4, CO1, CO2, CO3	1,800.00	33.33%
		5,400.00	**100.00%**

Description of Graded Elements of the Course

Student test assessments will be graded on the ability to choose the correct answer in regard to multiple choice test questions or provide the correct answer to test questions that require a missing word or brief statement.

Performance assessments are designed to enhance the student's level of competency based on the course outcomes and expectations of the industry

Course Schedule

Unit/ Week	Unit Description/Objectives	Assessment Label:Description	Due Date
1	A. Course Orientation and Policies B. Lesson on Tools and Equipment for Small Dent Repair		
	• Tour lab and discuss safety and proper use of equipment • Assemble panel jigs as demonstrated by instructor • Perform hammer and dolly exercises on panel to enhance skill level	**Safety Test:** Complete Safety Test during lab orientation **Lab 1:** Metal work and Filler Panel *Daily Lab: Skill use of hammer, dolly, and slapper file* **Homework 1:** Safety Handout-complete 15 questions and essay on separate answer sheet	Week 1 Week 2 Week 2
2	Working with Body Filler		
	• Identify types of filler and describe the proper method of application • Perform hammer and dolly exercises on panel to enhance skill level • Mix and apply body filler to panel • Shape body filler with a shredder	*Read Ch. 8 "Fillers", pages 198-217 for test next class period* **Test 2:** Tools and Equipment *Daily Lab:* ■ *Complete side one of metal work panel* ■ *Remove damage on side two* ■ *Apply filler and shred level on practice area*	 Week 2
3	External Pulling Tools, Stud gun, and Pull Rods		
	• Identify application and various types of external pulling equipment • Mix, apply, and shred body filler to panel	*Review lesson handouts prior to next class period* **Test 3:** Body Filler	 Week 3

	• Mix, apply, and shred body filler to panel • Using basic hand tools repair damage to side one of crease dent panel • Apply filler to crease dent area, shred and sand to proper shape	**Test 4:** Reading assignment from last week Week 3 *Daily Lab:■ Stud gun and pull rod demo* *■ Apply filler and shred level on side two of panel* *■ Crease panel side one* **Lab 2:** Crease Dent Panel Week 4
4	Basic Damage Analysis 1: Historical look at sheet metal and and sheet metal properties	
	• ● Define the properties of sheet metal and terms described in the lesson • ● Using a stud gun and pull rod repair damage to side two of crease dent panel • Apply filler to crease dent area, shred and sand to proper shape	*Review lesson handouts prior to next class period* **Test 5:** Stud gun and Pull rods Week 4 *Daily Lab: Crease panel side two*
5	: Basic Damage Analysis 2 & 3: Shapes and Their Reaction to Damage	
	• ● Identify basic shapes of vehicle construction • Explain how shapes react when damaged • Repair assigned dents on a vehicle fender using established tools. • Apply filler to repair area, shred and sand to proper shape	*Review lesson handouts prior to next class period* **Test 6:** Basic Damage Analysis Part 1 Week 5 **Lab 3:** Fender Project Week 8 *Daily Lab: Repair of small dents on a vehicle fender*
6	Shrinking: Sheetmetal shrinking with heat and mechanical methods	
	• Explain different methods of shrinking sheetmetal • Demonstrate torch method of metal shrinking • Repair assigned dents on a vehicle fender using established tools • Apply filler to repair area, shred and sand to proper shape	*Review lesson handouts prior to next class period* **Test 7:** Basic Damage Analysis part 2 Week 6 **Test 8:** Basic Damage Analysis part 3 Week 6 **Lab 4:** Shrinking Objective Hood Week 7 *Daily Lab:■ Demonstration with stud gun, torch, and shrinking hammer* *■ Repair of small dents on a vehicle fender*
7	Advanced Damage Analysis 1: Identify types of damage to sheetmetal	
	• Repair a gouge on fender using shrinking hammer, dolly, and stud gun to level surface • Repair assigned dents on a vehicle fender using established tools • Apply filler to repair area, shred and sand to proper shape	*Review lesson handouts prior to next class period* **Test 9:** Shrinking Damaged Sheetmetal Week 7 *Daily Lab: Repair of small dents on a vehicle fender* *Repair a gouge on a fender* **Lab 5:** Shrinking Objective Fender Week 8
8	Advanced Damage Analysis 2 & 3 Collision Variables and Correction of Damaged Sheetmetal	
	• Explain common variables and concepts of advanced repair methods to damaged sheetmetal shapes • Apply body filler to damaged styleline panel after proper metal work is achieved utilizing tools with access to rear of panel	*Review lesson handouts prior to next class period* **Test 10:** Advanced Damage Analysis Part 1 Week 8 **Lab 6:** Styleline Panel Week 10 *Daily Lab: Repair damage on a styleline panel with access*
9	Small Dent Repair Repair of hail damage and similar small dents. Discussion of PDR methods	
	• Discuss various small dent repair methods within the context of the lesson • Using an oxy/acetelyne torch and body file practice removal of hail damage on a sheetmetal hood to enhance skill level • Apply body filler to damaged styleline panel after proper metal work is achieved utilizing tools without access to rear of panel	*Review lesson handouts prior to next class period* **Test 11:** Advanced Damage Analysis Part 2 Week 8 **Test 12:** Advanced Damage Analysis Part 3 Week 8 **Test 13:** Analysis of fender damage Week 8 **Lab 7:** Hail Damage Repair Week 9 *Daily Lab: Demonstration over the proper use of torch and file to repair hail damage* *■ Repair damage on a styleline panel without access*
10	Rust Repair Discussion of repairs to rusted sheetmetal at various levels of corrosion.	
	• Identify stages of corrosion and explain methods of surface and rustout repair • Sandblast an area of corroded sheetmetal using 1 of 3 types of blasters demonstrated • Apply body filler to assigned ½ and full length hood sections. Shred and sand to match hood contour	*Review lesson handouts prior to next class period* **Test 14:** Small Dent Repair Week 10 **Lab 8:** Hood Project Week 11 *Daily Lab: ■Demonstration of sandblasting methods and equipment* *■Hood Repair- 1/2 and Full*

11	Large Dent Repair Discussion of repairs to large areas and use of related equipment	
	• Identify the stages of repairing a large dent • Explain the use of tension equipment and application of various tools used in the repair of a large dent • Remove damage to lab panel using the Kansas Jack and various sheetmetal tools to achieve a surface level for minimum body filler	*Review lesson handouts and create a list of problems associated with lab projects for discussion prior to next class period.* **Test 16:** Rust Repair Week 11 **Lab 9:** Kansas Jack Panel Week 12 *Daily Lab: Demonstration of removing damage on a high crown panel using tension equipment*
12	Open discussion: Related problems to metal repair and working with body filler	
	• Participate in discussion of related problems with body filler and metalwork techniques • Apply body filler to assigned dents on vehicle after proper metal work is achieved. Shred and sand surface to match contour of vehicle panel	**Test 15 :** Large Dent Repair Week 12 **Lab 10:** Vehicle Damage Week 15 *Daily Lab: Skill enhancement in the proper use of tools, body filler, and safety equipment during repair of assigned dents on vehicle*
13	Plastic Body Filler Review of types, proper techniques and tips to use filler more effectively	
	• Identify the various types of filler • Describe applications to vehicle repair • List problems and solutions in using filler • Apply body filler to assigned dents on vehicle after proper metal work is achieved. Shred and sand surface to match contour of vehicle panel	*Review lesson handouts prior to next class period* *Daily Lab: Skill enhancement in the proper use of tools, body filler, and safety equipment during repair of assigned dents on vehicle*
14	Final Review Review of concepts in preparation for Final Exam	
	• Review for final exam. Evaluate past handouts and information to prepare for final • Apply body filler to assigned dents on vehicle after proper metal work is achieved. Shred and sand surface to match contour of vehicle panel	*Review course handouts and material in preparation for Final Exam next class period* **Test 17 :** Plastic Body Fillers Week 14 *Daily Lab: Skill enhancement in the proper use of tools, body filler, and safety equipment during repair of assigned dents on vehicle*
15	Final Exam and Completion of Lab Objectives	
	• Complete a comprehensive written final exam with at least 70% accuracy • Complete any outstanding lab objectives	**Final Exam:** Final Exam Week 15 *Daily Lab: Skill enhancement in the proper use of tools, body filler, and safety equipment during repair of assigned dents on vehicle*

The Auto Collision Department or acting Instructor reserves the right to substitute or rearrange lecture topics, lab projects, homework, tests, or assignments based on the needs of the class or requirements to meet course outcomes and objectives.

Instructor Participation Policy:

A student is expected to attend and participate during the scheduled period of instruction (lecture and lab). This begins with the first scheduled class day of the term. A student deemed a non-participant for more than 10% (**3.0** hours) of the lecture or 10% (**9.0** hours) of the lab periods, regardless of grades earned on assignments, will have to repeat the course.

A student is considered tardy up to 15 minutes into the scheduled lecture or lab, and thereafter will be considered a non-participant for that period of instruction.

Course Policies:

Safety Procedures

Students are required to participate in a safety lecture prior to performing in the laboratory portion of the course. A written test will be given to each participating student covering the presented safety materials. Students must complete the safety test with 100% accuracy prior to receiving lab assignments.

All lecture and laboratory safety rules and regulations will be followed in every detail. Failure to comply with this policy will result in

dismissal from class until further notice.

Acceptance Attire

- NIOSH approved clear safety glasses will be worn at all times
- Full-toed shoes (no slippers, sandals, flip-flops, or bare feet)
- Full length pants (must extend past ankles)
- Pants must fit around waist within 3 inches of belly button

- Shirts (no sleeveless or tank tops)
- Shirts with and without buttons can be worn with instructor approval on neck opening exposure
- Clothing must be reasonably snug fitting (not excessively loose, baggy, torn)
- An inappropriate slogan on clothing is not acceptable.
- Jogging clothes, sweats, or warm-ups are not acceptable.
- Acceptable headgear: ball caps or bump caps (**No** do-rags, bandanas or shower caps)
- The Instructor has the final authority concerning matters of dress

Classroom and Lab Behaviors

- Smoking in classrooms, laboratories and shops are prohibited
- Smoking is permitted only in designated areas
- Smoking is prohibited within 20 feet of a building, when permitted
- Smoking is prohibited within the fenced area surrounding the ACM and CAT Labs.
- The consumption of drinks, candy and other food items is restricted to lounge areas
- Eating or drinking in laboratories are hazardous because of the toxic nature of lab materials being handled
- No horseplay at any time
- Be responsible – Be a professional

Late Work/Test Policies

All students are required to be present for class. However, unexpected circumstances will occur. If a student has an excused absence, death or illness in the immediate family, the student must notify the instructor of record immediately. If a test is missed, the instructor has to give permission for make up. The missed test must be made up before the next scheduled period of instruction.

An excused absence only allows for make up of missed assignments or test. The absence is recorded.

Assignments are due at the beginning of class of the set due date. Late assignments will not be accepted and a grade of “zero” will be earned for said assignment. Students that have notified the instructor prior to the absence may be considered excused.

Pop tests

Can be given at any time by the instructor and are not make up items.

Exemptions

Students can be exempted from a final exam if:

A. Lecture average is 90 or above
B. Attendance is perfect
C. Assignments are completed and turned in
D. Projects are complete

Cell Phone Policy

Cell phones may not be brought into the classroom or lab as they are unsafe and disruptive to the environment.

Anyone failing to adhere to this policy will be dismissed from class and issued a non-participation grade (absence) for that period of instruction.

Departmental Awards Ceremony/Cleanup Policy

Each student is expected to participate in the awards ceremony and cleanup activities once the date has been identified.

Each student is expected to participate in the awards ceremony and cleanup activities once the date has been identified.

Students with unexpected circumstances can be excused by the department chair only.

TSTC school calendar identifies the end of the semester. Student break begins the day after.