



### Outcome-based 18/FA Course Syllabus

**Course Rubric Number Section:** ABDR 1349 1001  
**Lecture-Lab-Credit:** 2-3-3  
**CIP Code:** 47.0603  
**Course Title:** Automotive Plastic and Sheet Molded Compound Repair  
**Course Description:** A comprehensive course in repair of interior and exterior plastics including the use of various types of adhesives.  
**Prerequisites:**  
**Co-requisites:**  
**Course Meets:** 1TTC 119 LEC TH 08:00AM 09:50AM 1ACR 100 LAB TH 10:00AM 12:45PM  
**Instructor:** Tracy Marshall  
**Office Phone Number:** 254 867-4854  
**Email Address:** tlmarsall@tstc.edu  
**Office Fax Number:** 254 867-2315  
**Building & Office Room Number:** Fentress Center 120  
**Office Hours:** Monday 8:00am - 12:00pm

<b>Approved by:</b> Clint Campbell	<b>Date:</b> 2018-08-14
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#### Course Outcomes

- CO1:** Identify various types of automotive plastics
- CO2:** Repair various types of automotive plastics using approved product manufacturer's recommendations and use of adhesives

#### 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 as 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

### Fort Bend Campus

Schauna Boynton  
Brazos Center Rm. 113  
346-239-3394

### Sweetwater Campus

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

### Breckenridge Campus

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

### Harlingen Campus

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

### North Texas Campus

Amanda Warren  
Student Services, Room 227  
972-617-4724

### Brownwood Campus

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

### Marshall Campus

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

### 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](https://portal.tstc.edu/student/Student_Learning/Pages/Tutoring.aspx) (shortened link: [goo.gl/Z9vJvY](https://goo.gl/Z9vJvY)). For more information, please contact Norma A. Salazar@ [956-364-4557](tel: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 (Not required)	Alfred M. Thomas, Michael Jund	Delmar	First	9781401889944
2	ABDR 1349 Plastics Repair	Auto Collision & Management	TSTC	Workbook	SKU# 10412299

**Tools, Materials:**

Item	Resource	Quantity
1	Safety Glasses (Clear Lenses)	1 pr
2	Sanding Block ( 2 3/4" x 5")	1
3	Putty Knife (1 1/2" to 2")	1
4	Paint Brush (2") Chip brush style	2
5	Nitrile Gloves	1-Box
6	Solvent Resistant Gloves	1-pr Extra large
7	Mixing Board or Tear-off Sheets	1
8	Shredder (Stanley 298A)	1
9	Plastic Spreaders (3" Wide)	10
10	Particle Mask (Osha approved 2 strap)	1-Box or 12 minimum
11	Long Sanding Board (Clip on style)	1
12	Fiberglass Saturation Roller (3/4" X 3" wide )	1
13	Retractable Measuring Tape ( Combination Standard /Metric)	1 3 ft/1M or longer
14	Tool Box (small, to store listed tools)	1
15	Shop Apron (optional)	1
16	Standard pencil (1 for lecture and 1 for lab use)	2
17	Scissors, General purpose utility	1 pr

Grade Scheme			
Category Description			Category Value
lecture			33.33
Assessment Label:	Assessment Description	Assessment Value	
Test 1: Safety Test:	Test	3.33	
Test 2: Identifying Plastics:	Test	3.33	
Test 4: Repair Replace:	Test	3.33	
Test 6:Fiber Reinforced:	Test	3.33	
Test 3: Plastic Welding:	Test	3.33	
Test 5: Non-Fiber Reinforced Plastic:	Test	3.33	
Test 7: One Sided SMC Repairs:	Test	3.33	
Test 8:Two Sided SMC Repairs:	Test	3.33	
Test 9: Panel Replacement / Sectioning:	Test	3.33	
Test 10: Door Skin Replacement:	Test	3.33	
Category Description			Category Value
lab			33.33
Assessment Label:	Assessment Description	Assessment Value	
Bumper Cover Onesided Repair:	Lab Objective	3.03	
Bumper Cover Two Sided Repair:	Lab Objective	3.03	
Pinning:	Lab Objective	3.03	
Fiberglass Lay-Up:	Lab Objective	3.03	
One Sided Fiberglass Repair:	Lab Objective	3.03	
Two Sided Fiberglass Repair:	Lab Objective	3.03	
SMC Lay-Up:	Lab Objective	3.03	
SMC One Sided Repair:	Lab Objective	3.03	
SMC Two Sided Repair:	Lab Objective	3.03	
SMC Sectioning:	Lab Objective	3.03	
Plastic Welding:	Lab Objective	3.03	
Category Description			Category Value
final			33.34

Assessment Label:	Assessment Description	Assessment Value
Final Exam:	Test	33.34
Total Assessment Points		<b>100.00</b>
Total Category Points		<b>100.00</b>
<b>A = 100-90</b>	<b>B = 89-80</b>	<b>C = 79-70</b>
	<b>D = 69-60</b>	<b>F = 59-0</b>

<b>Description of Graded Elements of the Course</b>			
Assessment Label	Assessment Description/Course outcomes met	Assessment Value in Points	% of Final Grade
Test 1: Safety Test	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
Test 2: Identifying Plastics	Test <b>Course outcomes met:</b> CO1	3.33	3.33%
Bumper Cover Onesided Repair	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Test 3: Plastic Welding	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
Bumper Cover Two Sided Repair	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Test 4: Repair Replace	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
Pinning	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Test 5: Non-Fiber Reinforced Plastic	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
Fiberglass Lay-Up	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Test 6:Fiber Reinforced	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
One Sided Fiberglass Repair	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Test 7: One Sided SMC Repairs	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
Two Sided Fiberglass Repair	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Test 8:Two Sided SMC Repairs	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
SMC Lay-Up	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Test 9: Panel Replacement / Sectioning	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
SMC One Sided Repair	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Test 10: Door Skin Replacement	Test <b>Course outcomes met:</b> CO1, CO2	3.33	3.33%
SMC Two Sided Repair	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
SMC Sectioning	Lab Objective <b>Course outcomes met:</b> CO1, CO2	3.03	3.03%
Plastic Welding	Lab Objective <b>Course outcomes met:</b> CO2, CO1	3.03	3.03%
Final Exam	Test <b>Course outcomes met:</b> CO1, CO2	33.34	33.34%
		<b>100.00</b>	<b>100.00%</b>

**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	Course Orientation, Overview & Syllabus Introduction.		
	<ul style="list-style-type: none"> <li>• Course introduction and overview, with an emphasis on Program Policies, and Lab Safety Issues.</li> </ul>	<i>Course Orientation: Review program and class polices. Lesson: Introduction to Plastic Repair</i> <b>Test 1: Safety Test:</b> Test <i>Identify and Explain Safety Standards-Lab</i> <i>Homework: Read Identifying Plastic Parts; Chapter 1 in assigned work book for next week</i>	1st Lab
2	Identify Different Types of Plastic by their Characteristics.		
	<ul style="list-style-type: none"> <li>• Explain and Demonstrate different methods of Plastics Identification.</li> </ul>	<i>Read: Types of Plastic Repair, from assigned work book.</i> <i>Lab - Issue Parts to be Repaired.</i> <i>Homework: Read Identifying Plastics Work Sheet (Continued) for next week.</i>	
3	Determine Level of Identification Needed.		
	<ul style="list-style-type: none"> <li>• Explain and demonstrate the level of identification for a particular repair product or procedure.</li> </ul>	<i>Read: Plastic Memory, from assigned work book.</i> <b>Test 2: Identifying Plastics:</b> Test  <i>Start Repair Objectives in Lab</i> <i>Homework: Review Plastic Welding, from assigned work book for next week.</i> <b>Bumper Cover Onesided Repair:</b> Lab Objective	To be completed prior to next class period..        To be completed prior to start of next repair objective.
4	Plastic Welding		
	<ul style="list-style-type: none"> <li>• Explain and demonstrate various types of Plastic welding Equipment, and the different types of welds that may be performed on different types of automotive plastics.</li> </ul>	<i>Read: Adhesive Repair, from assigned work book.</i> <b>Test 3: Plastic Welding:</b> Test  <i>Continue Repair Objectives: Fiberglass Lay-Up in Lab.</i> <i>Homework: Read Repair Materials, from assigned work book, Repair Replace Work Sheet for next week.</i> <b>Bumper Cover Two Sided Repair:</b> Lab Objective	To be completed prior to next class period.        To be completed prior to start of next repair .
5	Repair vs. Replace		
	<ul style="list-style-type: none"> <li>• Identify and explain the factors involved in determining whether to repair or replace a plastic part.</li> </ul>	<i>Read: Flexible Plastic Repair from assigned work book</i> <b>Test 4: Repair Replace:</b> Test	To be completed prior to next class period.

		<p><i>Continue Repair objectives, SMC Lay-Up in Lab.</i></p> <p><i>Homework: Read Non-Fiber Reinforced Plastic Repair, from assigned work book for next week.</i></p> <p><b>Pinning:</b> Lab Objective</p>	To be completed prior to start of next repair.
6	Non-Fiber Reinforced Plastic Repair	<ul style="list-style-type: none"> <li>Explain and demonstrate the proper procedures required to make repairs on Non-Fiber Reinforced plastic parts.</li> </ul>	<p><i>Read: Fiberglass Hand Out.</i></p> <p><b>Test 5: Non-Fiber Reinforced Plastic:</b> Test</p> <p>To be completed prior to next class period.</p> <p><i>Continue Repair Objectives in Lab.</i></p> <p><i>Homework: Read SMC Hand Out, for next week.</i></p> <p><b>Fiberglass Lay-Up:</b> Lab Objective</p> <p>To be completed prior to start of next repair.</p>
7	Fiberglass	<ul style="list-style-type: none"> <li>Explain and demonstrate the process for fabricating Fiberglass repair parts, Explain and demonstrate the proper repair procedures for repairing fiberglass parts.</li> </ul>	<p><i>Read: Fiberglass Handout; "Bruce Myers"</i></p> <p><b>Test 6:Fiber Reinforced:</b> Test</p> <p>To be completed prior to next class period.</p> <p><i>Continue Repair Objectives, in Lab.</i></p> <p><i>Homework: Read SMC Handout, One Sided Repairs for next week.</i></p> <p><b>One Sided Fiberglass Repair:</b> Lab Objective</p> <p>To be completed prior to start of next repair.</p>
8	SMC One Sided Repairs	<ul style="list-style-type: none"> <li>Explain and demonstrate the proper procedures for effectively making one sided repairs on Sheet Molded Compound Panels.</li> </ul>	<p><i>Continue to Read SMC Hand Out.</i></p> <p><b>Test 7: One Sided SMC Repairs:</b> Test</p> <p>To be completed prior to next class period.</p> <p><i>Continue Repair Objectives, in Lab.</i></p> <p><i>Homework: Read SMC Hand Out, Two Sided Repairs for next week.</i></p> <p><b>Two Sided Fiberglass Repair:</b> Lab Objective</p> <p>To be completed prior to start of next repair.</p>
9	SMC Two Sided Repairs	<ul style="list-style-type: none"> <li>Explain and demonstrate the proper procedures for effectively making two sided repairs on Sheet Molded Compound Panels.</li> </ul>	<p><i>Read SMC Handout, Panel Replacement</i></p> <p><b>Test 8:Two Sided SMC Repairs:</b> Test</p> <p>To be completed prior to next class period.</p> <p><i>Continue Repair Objectives, in Lab.</i></p> <p><i>Homework: Read SMC Handout, Panel Replacement for next week.</i></p> <p><b>SMC Lay-Up:</b> Lab Objective</p> <p>To be</p>

		<b>SMC Lay-Up:</b> Lab Objective	To be completed prior to start of next repair.
10	SMC Panel Replacement		
	<ul style="list-style-type: none"> <li>Explain and demonstrate the proper for replacing Sheet Molded Compound Panels as well as sectioning rules and procedures available for partial panel replacemt or repair.</li> </ul>	<p><i>Read SMC Handout, Sectioning.</i></p> <p><b>Test 9: Panel Replacement / Sectioning:</b> Test</p> <p><i>Continue Repair Objectives, in Lab.</i></p> <p><i>Homework: Read SMC Handout, Door Skin Replacement for next week.</i></p> <p><b>SMC One Sided Repair:</b> Lab Objective</p>	<p>To be completed prior to next class period.</p> <p>To Be completed prior to start of next repair.</p>
11	SMC Door Skin Repacement		
		<p><i>Explain and Demonstrate the proper procedures for replacing Sheet Molded Compound Door Skins.</i></p> <p><i>Read: Summary in Assigned work book</i></p> <p><b>Test 10: Door Skin Replacement:</b> Test</p> <p><i>Continue Repair Objectives, in Lab.</i></p> <p><i>Homework: Review work book objectives and handouts</i></p> <p><b>SMC Two Sided Repair:</b> Lab Objective</p>	<p>To be completed prior to next class period</p> <p>To be completed prir to start of next repair.</p>
12	Reinforcement Training		
	<ul style="list-style-type: none"> <li>Re-Emphasis key points on all phases of plastics repair, to include Identification, Cleaning, Prepping, and proper repair procedures and repair materials selection.</li> </ul>	<p><i>Read: Review All Notes and handouts. Practice/ Sample-Final Exam, in class (Not Graded).</i></p> <p><i>Continue Repair Objectives, in Lab</i></p> <p><i>Homework: Review Notes and Handouts.</i></p> <p><b>SMC Sectioning:</b> Lab Objective</p>	<p>To be completed prior to start of next repair.</p>
13	Review for Final Exam		
	<ul style="list-style-type: none"> <li>Review all previous course notes and handouts, in preparation for end of course Final Exam.</li> </ul>	<b>Plastic Welding:</b> Lab Objective	To be completed prior to end of the semester.
14	Final Course Exam		
	<ul style="list-style-type: none"> <li>Administer end of course Final Exam</li> </ul>	<p><b>Final Exam:</b> Test</p> <p><i>Finalize Repair Objectives</i></p> <p><i>Meet with advisor, register for next semester classes.</i></p>	To be completed prior to end of semester.
15	Lab Clean Up		
	<ul style="list-style-type: none"> <li>Brief all assigned students on Lab clean-up procedures and policies, with an emphasis on</li> </ul>	<i>Clean up Lab in Preparation for Next Semester.</i>	

**Participation Policy**

Students are expected to present **Repair Samples** to the Instructor during each Lab period for evaluation.

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 that misses more than 10% ( 3.0 hours) of the lecture or 10% ( 5.0 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 absent for that period of instruction.

**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.

**Acceptable Attire**

- NIOSH approved with 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 Behavior**

- 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 makeup. The missed test must be made up before the next scheduled period of instruction.

An excused absence only allows for makeup 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 who prior contacted the instructor 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.

Students' final exam grade is dependent upon their participation at these functions. One half ( $\frac{1}{2}$ ) of the final exam grade for the course is participation. One half ( $\frac{1}{2}$ ) of the final exam grade is completing the final exam for the course.

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.