



### Outcome-based 18/SU Course Syllabus

*Course Rubric Number Section:* ABDR 1442 2001  
*Lecture-Lab-Credit:* 2-6-4  
*CIP Code:* 47.0603  
*Course Title:* Structural Analysis and Damage Repair II  
*Course Description:* Continuation of general repair and replacement procedures for damaged structural parts and collision damage.  
*Prerequisites:* Take ABDR-1323(28) ABDR-1419(64) ABDR-1311(5024) or ABDR-2435; Minimum grade C,CR;  
*Co-requisites:*  
*Course Meets:* 200F 109 LEC F 08:00AM 10:30AM 200F 112 LAB TH 08:00AM 12:00PM 200F 112 LAB TH 01:00PM 04:00PM  
  
*Instructor:* Jose Vasquez  
*Office Phone Number:* (956)364-4824  
*Email Address:* jrvasquez@tstc.edu  
*Office Fax Number:* (956)364-5159  
*Building & Office Room Number:* Building F Office# 105  
*Office Hours:* Friday 11am-4pm

<b>Approved by:</b> Clint Campbell	<b>Date:</b> 2018-04-30
------------------------------------	-------------------------

#### Course Outcomes

- CO1:** Apply vehicle dimension measuring procedures to collision damage
- CO2:** Use measuring equipment
- CO3:** Repair and replace damaged structural parts
- CO4:** Return to pre-damaged dimensions and locations

#### 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

### 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](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

## Resources

### Textbooks & Publications:

Item	Title	Author	Publisher	Edition	ISBN
1	Collision Repair & Refinishing	Alfred M. Thomas	Cengage Learning	Third Edition	978-1-305-94994-2

### Tools, Materials:

Item	Resource	Quantity
1	Shredder	5
2	Plastic spreader, 3" wide	5
3	Sanding Block	1
4	Protective goggles	1
5	Putty knife	1
6	Brush, 1-1/2" or 2"	2
7	Ear plugs	1
8	3M particle masks	3
9	12" retractable tape	1
10	Solvent resistant gloves	1pair
11	Mixing board	1
12	Leather gloves	1pair
13	Welding gloves	1pair
14	3M Automotive welding fume respirator	1
15	Welding cap	1
16	Wrench and Socket Set	1
17	Sanding board	1
18	Cotton weld jacket	1

Grade Scheme		
Category Description		Category Value
Lab		40%
Assessment Label:	Assessment Description	Assessment Value
Lab 1:	Lab: The Labs for this class are performing repairs to vehicle. Students will meet their course objective having vehicle to pre-accident condition.	4.00%
Lab 2:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Lab 3:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Lab 4:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Lab 6:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Lab 7:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Lab 8:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Lab 9:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Lab 10:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Lab 11:	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	4.00%
Category Description		Category Value
Test		40%
Assessment	Assessment Description	Assessment

Label:	Assessment Description	Value
Safety Test:	Safety Test	8.00%
GLA 02 :	Movable and Stationary Glass Program 2	8.00%
SPS 06:	Full Frame Replacement	8.00%
FOM 01:	Automotive Foams	8.00%
DAM 05:	Aluminum Panels and Structures Damage Analysis	8.00%
Category Description		Category Value
Final Exam		20%
Assessment Label:	Assessment Description	Assessment Value
Final Exam :	Final Exam	20.00%
Total Assessment Percent		<b>100.00%</b>
Total Category Percent		<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>

Description of Graded Elements of the Course			
Assessment Label	Assessment Description/Course outcomes met	Assessment Value in Percent	% of Final Grade
Lab 1	Lab: The Labs for this class are performing repairs to vehicle. Students will meet their course objective having vehicle to pre-accident condition. <b>Course outcomes met: CO2</b>	4.00	4.00%
Safety Test	Safety Test <b>Course outcomes met: CO1, CO2, CO3, CO4</b>	8.00	8.00%
Lab 2	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO1</b>	4.00	4.00%
GLA 02	Movable and Stationary Glass Program 2 <b>Course outcomes met: CO3, CO4</b>	8.00	8.00%
Lab 3	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO1</b>	4.00	4.00%
Lab 4	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO1</b>	4.00	4.00%
Lab 6	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO3, CO4</b>	4.00	4.00%
SPS 06	Full Frame Replacement <b>Course outcomes met: CO3, CO4</b>	8.00	8.00%
Lab 7	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO3</b>	4.00	4.00%
Lab 8	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO2</b>	4.00	4.00%
FOM 01	Automotive Foams <b>Course outcomes met: CO3, CO4</b>	8.00	8.00%
Lab 9	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO4</b>	4.00	4.00%
Lab 10	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO2</b>	4.00	4.00%
DAM 05	Aluminum Panels and Structures Damage Analysis <b>Course outcomes met: CO2, CO4</b>	8.00	8.00%
Lab 11	Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition. <b>Course outcomes met: CO3, CO4</b>	4.00	4.00%

	<b>Course outcomes met:</b> CO3, CO4		
Final Exam	Final Exam <b>Course outcomes met:</b> CO1, CO2, CO3, CO4	20.00	20.00%
		<b>100.00</b>	<b>100.00%</b>

<b>Course Schedule</b>			
<b>Unit/Week</b>	<b>Unit Description/Objectives</b>	<b>Assessment Label:Description</b>	<b>Due Date</b>
1	Week 1 : Introduction of course Syllabus and Requirements GLA 02 Movable and Stationary Glass Program 2		
	<ul style="list-style-type: none"> <li>Discuss Components of syllabus; discuss policies and guidelines.</li> <li>Start GLA 02 Movable and Stationary Glass Program 2</li> <li>Recognizing how stationary glass reinforces a vehicle structure</li> <li>Safety standards to stationary glass installation</li> <li>Properties of urethane adhesive.</li> </ul>	<i>Read: Chapter 8 Aluminum Repair and Panel Replacement Pages: 218-247</i>  <b>Lab 1:</b> Lab: The Labs for this class are performing repairs to vehicle. Students will meet their course objective having vehicle to pre-accident condition.  <b>Safety Test:</b> Safety Test	End of Class   End of Class
2	Week 2: GLA 02 Movable and Stationary Glass Program 2		
	<ul style="list-style-type: none"> <li>Continue GLA 02 Movable and Stationary Glass Program 2</li> <li>Preparing the vehicle for replacement, trim removal, glass removal, and installation.</li> </ul>	<i>GLA 02 Test Next Week</i>  <b>Lab 2:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	End of Class
3	Week 3: GLA 02 Movable and Stationary Glass Program 2		
	<ul style="list-style-type: none"> <li>Continue GLA 02 Movable and Stationary Glass Program 2</li> <li>Repairing minor glass defects</li> <li>Repairing defogger grids</li> <li>Replacing gasket set installations, replacing side glass and backlites.</li> </ul>	<b>GLA 02 :</b> Movable and Stationary Glass Program 2  <b>Lab 3:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	End Of Class  End of Class
4	Week 4: SPS 06 Full Frame Replacement		
	<ul style="list-style-type: none"> <li>Start SPS 06 Full Frame Replacement</li> <li>Identify non-repairable damage</li> <li>Develop a repair plan</li> <li>Identify attachment points of frame to body</li> </ul>	<i>Read: Chapter 17 Pages Structural Parts Replacement Pages: 500-532</i>  <b>Lab 4:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	End of Class
5	Week 5: SPS 06 Full Frame Replacement		
	<ul style="list-style-type: none"> <li>Continue SPS 06 Full Frame Replacement</li> <li>Recognizing the legal issues of full-frame replacement</li> <li>Body Removal and Installation.</li> </ul>		
6	Week 6: SPS 06 Full Frame Replacement		
	<ul style="list-style-type: none"> <li>Continue SPS 06 Full Frame Replacement</li> <li>Transfer of parts from old frame to new frame</li> </ul>	<i>SPS 06 Test Next Week</i>  <b>Lab 6:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	End of Class
7	Week 7: FOM 01 Automotive Foams		
	<ul style="list-style-type: none"> <li>Start FOM 01 Automotive Foams</li> <li>Explain why foam is used in a vehicle</li> <li>Identify where foam is used</li> </ul>	<b>SPS 06:</b> Full Frame Replacement  <b>Lab 7:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course	End Of Class  End of Class

	Identify the types of foam used Explain the uses of each type of foam	objective has they return the vehicle to pre-accident condition.	
8	Week 8: Automotive Foams FOM 01		
	<ul style="list-style-type: none"> <li>Continue FOM 01 Automotive Foams</li> <li>Explain the function of structural foam</li> <li>Explain the safety considerations when working with or around foam</li> <li>Preparing new part for foam installation.</li> </ul>	<i>FOM 01 Test Next Week</i> <b>Lab 8:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	Class
9	Week 9: DAM 05 Aluminum Panels and Structures Damage Analysis		
	<ul style="list-style-type: none"> <li>Start DAM 05 Aluminum Panels and Structures Damage Analysis</li> </ul> <p>Identify aluminum vehicle part design Identify the physical properties of aluminum Describe the characteristics of aluminum exterior panels</p>	<b>FOM 01:</b> Automotive Foams <b>Lab 9:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	End Of Class
10	Week 10: DAM 05 Aluminum Panels and Structures Damage Analysis		
	<ul style="list-style-type: none"> <li>Continue DAM 05 Aluminum Panels and Structures Damage Analysis</li> </ul> <p>Describe damage analysis considerations Discuss repair and replace practices for aluminum exterior panels Discuss the equipment that is needed by an aluminum repair facility Identify aluminum repair training programs</p>	<i>DAM 05 Next Week</i> <b>Lab 10:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	End of Class
11	Week 11: Review		
	<ul style="list-style-type: none"> <li>REVIEW FOR FINAL EXAM</li> </ul>	<b>DAM 05:</b> Aluminum Panels and Structures Damage Analysis <b>Lab 11:</b> Lab: The labs for this class are performing repairs to a damaged vehicle. Students will meet their course objective has they return the vehicle to pre-accident condition.	End Of Class
12	Week 12: Final Exam		
	<ul style="list-style-type: none"> <li>FINAL EXAM and CLEAN UP</li> </ul>	<b>Final Exam :</b> Final Exam	End Of Class

#### 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 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 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 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.

### **Instructor's 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% (4.5 hours) of the lecture 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.