



El Camino College
COURSE OUTLINE OF RECORD – Official

Subject:	ACRP
Course Number:	11L
Descriptive Title:	Skill Building Lab Experience 2
Division:	Industry and Technology
Department:	Automotive Collision Repair/Painting
Course Disciplines:	Automotive Collision Repair/Painting
Catalog Description:	This lab-only course provides additional time and training for second-semester auto collision students to master collision repair skills including removing and repairing damaged steel panels, electric welding steel using metal inert gas (MIG) welders, removing and replacing mechanical vehicle parts, and mixing and applying primer with a spray gun.
Prerequisite:	ACRP 4A
Co-requisite:	ACRP 4B
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	0
Hours Laboratory (per week):	6
Outside Study Hours:	0
Total Course Hours:	108
Course Units:	2
Grading Method:	Letter Grade and Pass/No Pass
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	fall 2026
Transfer UC:	No
Effective Date:	
General Education ECC:	
Term:	
Other:	
CSU GE:	
Term:	
Other:	
IGETC:	
Term:	
Other:	

Student Learning Outcomes:	1. Students will be able to remove damaged automotive steel panels, repair minor damage, reinstall, and align the panels to the vehicle. 2. Students will be able to set up and operate a MIG welder to make visually and structurally acceptable lap, butt, and plug welds according to Inter-Industry Conference on Automotive Collision Repair (I-CAR) specifications for steel. 3. Students will be able to mix two-component primer accurately, and adjust and use a spray gun to apply the primer to a panel.
Course Objectives:	1. Remove damaged metal panels and replace with new panels. 2. Adjust and verify panels for fit and flush alignment. 3. Analyze and repair damage to metal panels. 4. Demonstrate and perform MIG weld steel techniques. 5. Analyze and identify by name mechanical parts for replacement. 6. Select and mix multi-component primer in the correct ratio. 7. Adjust and use a pneumatic spray gun. 8. Execute the application of primer with a spray gun.
Major Topics:	I. Remove damaged metal panels and replace with new panels (8 hours, lab) a. Bag and tag small parts b. Bolt-on panels c. Welded panels II. Adjust panels for fit and flush alignment (12 hours, lab) a. Repair standards for panel fitment b. Correcting panel misalignment III. Repair damage to metal panels (28 hours, lab) a. Hammer and dolly techniques b. Single-side access repair techniques c. Door skins IV. MIG weld steel (20 hours, lab) a. Personal and vehicle safety b. Machine settings and I-CAR specifications c. Butt weld d. Lap weld e. Plug weld V. Remove and replace mechanical parts (14 hours, lab) a. Cooling system b. Air conditioning system and environmental hazards c. Airbag system d. Electric and hybrid vehicle high-voltage components VI. Mix multi-component primer in the correct ratio (4 hours, lab) a. Primer safety data sheets (SDS) b. Mixing ratios and mixing cups c. Recording of volatile organic compounds (VOCs) VII. Adjust and use a pneumatic spray gun (8 hours, lab) a. Air pressure b. Material control c. Fan adjustment d. Material viscosity VIII. Apply primer with a spray gun (14 hours, lab) a. Spray technique

	b. Gun cleaning and maintenance
Total Lecture Hours:	0
Total Laboratory Hours:	108
Total Hours:	108
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Given access to primer, hardener, and a safety data sheet, mix 6 ounces of primer using the correct ratio and spray the primer onto a prepared panel using 50% overlap. Record VOC data using the tablet form.
Critical Thinking Assignment 1:	Make a series of test welds using different but precise welder settings. Be sure to make each weld otherwise the same (gun angle, work angle, travel speed) and let the test plate cool between each weld. Label, compare, and contrast the resulting welds, and explain to the instructor why each one looks the way it does.
Critical Thinking Assignment 2:	When repairing a vehicle with damage to metal panels, a technician has the option to repair or replace the panel. In groups of three to four, discuss and come up with a list of four reasons when and why a technician might choose each option. Consider damage severity, vehicle value, availability of parts, technician productivity, and customer expectations.
Other Evaluation Methods:	Journal kept throughout course
If Other:	
Instructional Methods:	Demonstration, Discussion, Group Activities, Lab
If other:	
Work Outside of Class:	Course is lab only - minimum required hours satisfied by scheduled lab time
If Other:	
Up-To-Date Representative Texts:	No textbook required.
Alternative Texts:	
Required Supplementary Readings:	
Other Required Materials:	
Requisite	Prerequisite
Category	sequential
Requisite course:	ACRP 4A
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	ACRP 4A Objectives: 1. Complete a comprehensive automotive collision repair/painting safety test with 100% accuracy. 2. Identify and use hand, pneumatic, electric and hydraulic tools used in industry. 4. Metal finish a damaged steel body panel back to its original condition using only hand tools and no fillers. 5. Grind a body panel surface for preparation for plastic filler. 6. Mix, apply and shape plastic filler.

Requisite Skill:	
Requisite Skill and Matching skill(s): Bold the requisite skill(s). if applicable	
Requisite course:	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Pati Fairchild
Date:	09/29/2024
Original Board Approval Date:	11/18/2025
Effective Term:	Fall 2026