



El Camino College
COURSE OUTLINE OF RECORD – Official

Course Acronym:	ACRP
Course Number:	4A
Descriptive Title:	Beginning Automotive Collision Repair I
Division:	Industry and Technology
Department:	Automotive Collision Repair/Painting
Course Disciplines:	Automotive Collision Repair
Catalog Description:	This course provides instruction in basic safety, tool identification and use, vehicle construction and parts nomenclature, basic estimating, small dent repair, plastics scratch and dent repair and the mixing and application of primer. This course contains Inter-Industry Conference on Auto Collision Repair (I-CAR) Professional Development Program curriculum.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	2
Hours Laboratory (per week):	7
Outside Study Hours:	4
Total Course Hours:	162
Course Units:	4
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	3/18/2013
Transfer UC:	No
Effective Date:	
General Education: ECC	
Term:	
Other:	
CSU GE:	
Term:	
Other:	

IGETC:	
Term:	
Other:	
Student Learning Outcomes:	SLO #1 Tool Identification & Use Students will be able to properly name tools unique to the collision repair trade and explain how they are used. Students will be able to analyze minor damage and select the correct hand tools to repair the damage. SLO #2 Vehicle Parts & Construction Students will be able to identify and differentiate between unibody and full-frame vehicle designs. Students will be able to identify and properly name major non-structural vehicle parts and panels. SLO #3 Mix, Apply & Shape Plastic Filler Students will be able to mix, apply and shape plastic filler for primer on a repaired automotive panel.
Course Objectives:	1. Complete a comprehensive automotive collision repair/painting safety test with 100% 2. Identify and use hand, pneumatic, electric and hydraulic tools used in industry. 3. Differentiate between a full frame and unitized construction vehicle and be able to identify 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. 7. Set up, operate and clean a primer spray gun.
Major Topics:	I. SAFETY GEAR AND SAFE LAB PRACTICES (4 hours, lecture) A. Shop tour and general safety practices B. Personal safety equipment II. TOOL IDENTIFICATION AND USE (4 hours, lecture) A. Safety practices B. Hand tools C. Pneumatic tools D. Electric tools E. Hydraulic tools III. TOOL IDENTIFICATION AND USE (21 hours, lab) A. Safety practices B. Hand tools C. Pneumatic tools D. Electric tools E. Hydraulic tools

IV. VEHICLE CONSTRUCTION (4 hours, lecture)

- A. Vehicle body styles
- B. Major panels and non-structural parts
- C. Structural parts
- D. Full frame versus unibody vehicle construction

V. VEHICLE CONSTRUCTION (14 hours, lab)

- A. Vehicle body styles
- B. Major panels and non-structural parts
- C. Structural parts
- D. Full frame versus unibody vehicle construction

VI. METAL WORKING AND FINISHING (8 hours, lecture)

- A. Safety practices
- B. Theory of metal finishing, history
- C. Nomenclature of tools
- D. Procedures and techniques - bumping, dinging, hammer-on-dolly, hammer-off-dolly
- E. Hot shrinking - metal expansion/contraction
- F. Stud welder/slide hammer use Pneumatic grinders

- Abrasive materials
- G. [National Automotive Technicians Education Foundation (NATEF) Non-Structural Analysis and Repair tasks: Section C, numbers 1-5]

VII. METAL WORKING AND FINISHING (35 hours, lab)

- A. Safety practices
- B. Theory of metal finishing, history
- C. Nomenclature of tools
- D. Procedures and techniques - bumping, dinging, hammer-on-dolly, hammer-off-dolly
- E. Hot shrinking - metal expansion/contraction
- F. Stud welder/slide hammer use Pneumatic grinders
- Abrasive materials
- G. (NATEF Non-Structural Analysis and Repair tasks: Section C, numbers 1-5)

VIII. PLASTIC BODY FILLER (4 hours, lecture)

- A. Safety practices
- B. Theory, history, composition
- C. Nomenclature of tools/equipment
- D. Surface preparation
- E. Procedures/techniques of application
- F. Finishing techniques
- G. Plastic repairs
- H. (NATEF Non-Structural Analysis and Repair tasks: Section C, numbers 6-8)

	IX. PLASTIC BODY FILLER (28 hours, lab) A. Safety practices B. Theory, history, composition C. Nomenclature of tools/equipment D. Surface preparation E. Procedures/techniques of application F. Finishing techniques G. Plastic repairs H. (NATEF Non-Structural Analysis and Repair tasks: Section C, numbers 6-8) X. PRIMER SPRAY GUNS (4 hours, lecture) A. Safety practices and equipment B. Volatile Organic Compound (VOC) tracking C. Parts and use of a primer spray gun D. Spray booth use and controls E. Primers, sealers and adhesion promoter F. Mixing ratios G. Primer application H. Proper gun cleaning, disassembly and reassembly XI. PRIMER SPRAY GUNS (28 hours, lab) A. Safety practices and equipment B. VOC tracking C. Parts and use of a primer spray gun D. Spray booth use and controls E. Primers, sealers and adhesion promoter F. Mixing ratios G. Primer application H. Proper gun cleaning, disassembly and reassembly XII. ESTIMATING AND REPAIR STANDARDS (4 hours, lecture) A. Using estimating guides B. Calculating totals for labor and materials C. Collision repair ethics and fraud D. Consumer fraud watchdog groups E. (NATEF Non-Structural Analysis and Repair tasks: Section A, number 1) XIII. INDUSTRY CAREERS (4 hours, lecture) A. Collision repair shop hierarchy and career titles B. Job duties and pay rates C. Related careers outside the shop
Total Lecture Hours:	36

Total Laboratory Hours:	126
Total Hours:	162
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Apply primer to an automotive panel using correct panel prep sanding and cleaning techniques, primer mixing ratios, spray gun adjustment and spray pattern techniques. Properly clean the spray gun after use.
Critical Thinking Assignment 1:	Analyze a damaged fender, make a one-page repair plan and carry out the repair using the correct tools.
Critical Thinking Assignment 2:	Given a lightly damaged vehicle, identify by proper name the vehicle's major parts and panels including major structural panels. Analyze which parts can be repaired and which must be replaced. Write a one-page repair estimate based on your observations.
Other Evaluation Methods:	Class Performance, Completion, Embedded Questions, Homework Problems, Multiple Choice, Objective Exam, Performance Exams, Quizzes, Written Homework
Instructional Methods:	Demonstration, Discussion, Group Activities, Guest Speakers, Lab, Lecture
If other:	
Work Outside of Class:	Answer questions, Observation of or participation in an activity related to course content (such as theatre event, museum, concert, debate, meeting), Required reading, Study
If Other:	
Up-To-Date Representative Textbooks:	Joe Baker. <u>Auto Collision Repair and Refinishing</u> . 4th ed. The Goodheart-Willcox Company, Inc., 2025.
Alternative Textbooks:	
Required Supplementary Readings:	
Other Required Materials:	Safety glasses Ear plugs/hearing protection Dust mask Paint respirator Rubber gloves
Requisite:	
Category:	
Requisite course(s): List both prerequisites and corequisites in this box.	
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding	

course objective under each skill(s).	
Requisite Skill:	
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	
Requisite course:	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Patricia Fairchild
Date:	10/23/2012
Original Board Approval Date:	03/18/2013
Last Reviewed and/or Revised by:	Patricia Fairchild
Date:	10/28/2025
Last Board Approval Date:	01/21/2026