Course Information Form (CIF)

Course Code: ACR 137

Course Title: Vehicle Prep/Top Coat Application

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 47.0603
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 2-2-3
Credit Hour Distribution:

Lecture: 2	Lab: 2	Clinical: 0	**Total: 3**

General Course Information

Catalog Description

Collision repair paint systems, refinishing materials, blending techniques, surface preparation, safety practices, painting equipment, applying finish, and paint application problems.

General Course Objectives

Students will learn entry level aspects of finish coat preparation and application.

Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 059

Prerequisites

Credit in ACR 110

Methods of Evaluation

Students will be given 3 written exams, 3 graded homework assignments, 8 lab assignments, and 8 hands-on lab exercises.

Instructional Materials and Additional Supplies

Auto Collision Repair and Refinishing, Michael Crandell

Course Content

General Learning Outcomes (GLOs)

- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Safety and Environmental Concerns	1. Comply with Environmental Protection Agency (EPA), state, and local environment laws and regulations. 2. Comply with personal health and safety hazards requirements according to Occupational Safety and Health Administration (OSHA) guidelines and Right to Know Act. 3. Select, inspect, and use approved personal safety equipment and clothing. 4. Apply knowledge of low volatile organic compounds (VOC) regulations and refinish technology.	4	0	0
Typical Automotive Industry Top Coat Finishes	1. Identify and differentiate between original equipment manufacturer (OEM) finish systems. 2. Select and understand the use of repair finish systems and system components.	10	5	0
Surface Preparation	1. Determine type and color of paint on vehicle and plan refinish system. 2. Clean surface and apply metal treatment. 3. Plan to apply sealer, primer, and primer-surfacer. 4. Plan to block sand to level surface. 5. Plan to prepare adjacent panels for blending. 6. Identify caulking and seam sealers. 7. Identify stone chip-resistant coatings. 8. Identify masking vehicle for refinishing techniques.	5	8	0
Painting Equipment	1. Select and understand how to use refinishing equipment. 2. Prepare the spray area. 3. Plan to mix refinish materials. 4. Set up, test, and adjust spray gun techniques. 5. Prepare test panels.	4	7	0
Applying the Finish	1. Prepare the surface for topcoat system. 2. Plan to apply primer sealer. 3. Plan to apply single stage finish. 4. Plan to apply base coat/clear coat finish. 5. Demonstrate single stage finish techniques. 6. Apply base coat/clear coat finish technology. 7. Apply tri-coat finishes.	4	8	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Solving Painting Problems	1. Identify poor adhesion, determine the cause, and correct. 2. Identify paint cracking, determine the cause, and correct. 3. Identify rust spots, determine the cause, and correct. 4. Identify blistering, determine the cause, and correct. 5. Identify water spotting, determine the cause, and correct. 6. Identify environmental damage to finish and correct. 7. Identify die-back conditions and correct. 8. Identify paint film oxidation and correct. 9. Identify body filler bleed-through and correct.	3	2	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	30	0