

# COLLISION REPAIR (CLR)

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## CLR 121 Non-Structural A&D Repair 1 (4)

Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will explore the components of safety pertaining to auto collision and repair, explore the parts and construction of vehicles, explore opportunities in the auto collision industry, identify metal straightening techniques, identify the application and use of body fillers, demonstrate proper use, set-up and storage of welding equipment, distinguish between weld able and non-weld able materials, demonstrate fundamental industry standard recommended welds, identify plastics and adhesives used in automotive industry, explain the general purpose of damage, estimation and repair orders; explore the processes required for outer body panel repairs, replacements and adjustments, and demonstrate fundamental cutting procedures.

## CLR 126 Non-Structural A&D Repair 2 (4)

Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will identify trim and hardware to be protected, examine what to consider when working with movable glass, perform outer body panel repairs, perform outer body replacements and adjustments; perform metal straightening techniques, perform body filling techniques, perform metal finishing techniques, use welding procedures in non-structural damage repair, distinguish between mechanical and electrical components, apply safety standards for the collision repair industry, use cutting procedures in non-structural damage repair, and determine procedures necessary for working with plastics and adhesives.

## CLR 131 Structural A&D Repair 1 (2)

Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will identify measuring procedures, analyze the basic structural damage conditions, identify the safety requirements pertaining to structural damage repair, analyze frame repair methods, analyze unibody inspection and measurement, and identify procedures of welding for structural repair.

## CLR 132 Structural A&D Repair 2 (2)

Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will apply safety requirements pertaining to structural damage repair, analyze frame inspection and repair procedures, determine direct and indirect damage for structural repair, analyze unibody inspection, measurement, and repair procedures, perform welding techniques for structural repair, and identify cutting procedures for structural repair.

## CLR 141 Paint & Refinishing 1 (3)

Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will identify safety and personal health hazards according to OSHA guidelines and the "Right to Know" law, determine the different types of substrates and sanding materials relevant to auto body surface preparation, identify the process to clean and prepare a substrate for paint; distinguish between the properties, uses, and manufacturer specifications of metal treatments and primers, distinguish among the various types of spray guns and equipment; explore various paint codes and specifications for use, identify the various paint systems, explore the types of paint defects, distinguish between damage and non-damage related corrosion, and identify final detail procedures.

## CLR 142 Paint & Refinishing 2 (3)

Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will select proper personal protective equipment, perform proper shop operations according to OSHA guidelines, remove paint coatings, apply corrosion resistant coatings, demonstrate proper spray gun operation and cleaning procedures, select proper painting and substrate materials for projects, analyze paint defects, causes and cures, repair paint defects, measure paint mil thickness, and determine final detail procedures for given projects.

## CLR 151 Mechanical & Electrical (3)

Through classroom and/or lab/shop learning and assessment activities, students will determine how to diagnose steering and suspension, diagnose electrical concerns, complete head lamp and fog/driving lamp assemblies and repairs, demonstrate self-grounding procedures for handling electronic components, determine diagnosis, inspection, and service needs for brake system hydraulic components, examine components of heating and air conditioning systems, determine the inspection, service, and repair needs for collision damaged cooling system components, distinguish between the under car components and systems, and determine the diagnosis, inspection, and service requirements of active and passive restraint systems.

## CLR 152 Intro to Est & Diagnostic Scan (2)

Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will: explore the components of analyzing damage pertaining to auto collision and repair; demonstrate basic estimating to identify structural repairs required, part design, construction materials, and manufacturing processes.

## CLR 162 Workplace Skills (1)

This course utilizes KeyTrain Software to assist in reinforcing applied math and reading skills in preparation for the WorkKeys assessment, given prior to exiting the program. Students are encouraged to take the Locating Information WorkKeys exam as well, the third test needed to be eligible to earn a WorkReady Certificate. Students may also be required to attend seminars presented on campus dealing with topics such as interview techniques, developing and preparing a resume, completing job applications, ethics, and teamwork.

## CLR 221 Non-Structural A&D Repair 3 (4)

Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will remove and install trim and hardware, determine process and procedures necessary for movable glass repair, repair outer body panel, replace and adjust outer body panels, remove and install mechanical and electrical components, demonstrate safety protocol appropriate for the auto repair setting, perform intermediate welding skills on non-structural damage repairs, and perform plastic and adhesive repairs.

## CLR 226 Non-Structural A&D Repair 4 (5)

Through a variety of classroom and lab/shop learning and assessment activities, students in this course will apply safety requirements pertaining to structural damage repair, perform advanced welding and cutting techniques for structural repair, perform inspection and measurement of unibody for structural repair, repair unibody direct and indirect damage, perform frame inspection and measurement procedures, repair frame to industry standards, and remove and install fixed glass.

**CLR 241 Adv. Estimating & Blueprinting (2)**

Through a variety of classroom and/or shop/lab learning and assessment activities, students in this course will expand their knowledge and performance to explore the advanced components of analyzing damage pertaining to auto collision and repair; demonstrate a complete estimate to identify structural repairs required, part design, construction materials, and manufacturing processes. Prerequisite: CLR152: Intro to Estimating and Diagnostic Scanning.

**CLR 242 Advanced Cutting & Welding (2)**

In this course, students will analyze and prepare the vehicle for appropriate cutting and welding procedures, identify the appropriate safety concerns; determine and use the appropriate tools and materials to perform the cutting and welding procedures, and inspect the final product for quality.

**CLR 246 Paint & Refinishing 3 (3)**

Through a variety of learning and/or lab/shop learning and assessment activities, students in this course will identify safety and personal health hazards according to OSHA guidelines and the "Right to Know" law, determine the different types of substrates and sanding materials relevant to auto body surface preparation, identify the process to clean and prepare a substrate for paint, distinguish between the properties, uses and manufacturer specifications of metal treatments and primers, distinguish among the various types of spray guns and equipment, explore various paint codes and specifications for use, identify the various paint systems, explore the types of paint defects, distinguish between damage and non-damage related corrosion, and identify final detail procedures.

**CLR 248 Paint & Refinishing 4 (4)**

Through a variety of classroom and/or lab/shop learning and assessment activities, students in this course will apply exemplary safety procedures in all areas of auto body painting and refinishing, perform proper cleaning procedures for a refinish, prepare adjacent panels for blending, prepare plastic panels for refinishing, protect all non-finished areas of vehicle, operate high and low volume/pressure spray gun operations for painting and refinishing, perform all paint system applications on an automobile, apply appropriate paint color matching and mixing procedures, tint color using formula to achieve a blendable match, explore the causes, effects and correction of buffing related imperfections, explore the causes, effects and correction of pigment flotation, measure mil thickness, apply decals, transfers, tape, wood grain, and pinstripe to an automobile, apply buffing and polishing techniques to remove defects, apply cleaning techniques to automobile interior, exterior, glass and body openings, and remove over spray.

**CLR 253 Mechanical & Electrical 2 (3)**

Through classroom and/or lab/shop learning and assessment activities, students will advance knowledge and skills to determine how to diagnose steering and suspension, diagnose electrical concerns, complete head lamp and fog/driving lamp assemblies and repairs, demonstrate self-grounding procedures for handling electronic components, determine diagnosis, inspection and service needs for brake system hydraulic components, examine components of heating and air conditioning systems, determine the inspection, service and repair needs for collision damaged cooling system components, distinguish between the under car components and systems, and determine the diagnosis, inspection and service requirements of active and passive restraint systems. Prerequisite: CLR151 Mechanical & Electrical.

**CLR 256 Pulse Technology Welding (2)**

In this course, students will identify different methods of attaching structural components (squeeze type resistance spot welding (STRSW), riveting, structural adhesive, MIG bronze, etc)

**CLR 262 Plastic Repair Technology (2)**

In this course, students will learn about and perform procedures for various types of plastic repair.