UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Collision Repair Technology
FY2027 / 34 Credits (1020 Clock-Hours)

Foundational Courses

TECR 1010 Introduction to Collision Repair and Safety — 1 Credit / 30 Clock-Hours

In the Introduction to Collision Repair and Safety course, students learn about the safety requirements and tools located within the shop and how to use safe practices when they enter the field. Students learn industry related safety training, and they must complete it before entering the shop area to work. Students go through a stringent safety program. In this course they learn the safety procedures as they apply within the lab areas working with shop tools as well as hazardous materials.

Objectives:
- Wear appropriate personal protective equipment in the lab including safety glasses and the proper uniform.
- Complete the safety course training with a passing score.
- Demonstrate proper use of hand tools used in the Collision Repair Technology program.
- Explain proper handling of hazardous materials.
- Complete the relevant online curriculum.

TECR 1020 Collision Basic Structural Repair — 4 Credits / 120 Clock-Hours

In the Collision Basic Structural Repair course, students learn the basic skills of how to be a steel structural technician. Students restore vehicle dimensions and structural integrity to collision-damaged vehicles. They use three -dimensional measuring and straightening equipment to diagnose and return damaged frame or unibody parts to manufacturer's specifications. Hand tools and power tools are used to remove or repair damaged parts, weld as needed, and properly install new parts. Students also work with a variety of metals and repair corrosion. Students learn the structural technician's duties perform them.

Objectives:
- Practice personal collision repair safety daily in all collision repair processes.
- Use hand and power tools used in the collision repair program.
- Effectively diagnose structural damage using a computerized measuring system.
- Determine if a part needs to be repaired or replaced and which is most cost effective.
- Decipher computerized body openings measurements.
- Demonstrate the set up and use of a tram (Bar) gauge.

TECR 1030 Collision Basic Non-Structural Repair — 4 Credits / 120 Clock-Hours

In the Collision Basic Non-Structural Repair course, students learn the basic skills of a non-structural technician. A Non-Structural Technician restores damaged exterior panels to their original integrity, function, and appearance. Therefore, students use hand tools and power tools to remove or repair damaged parts, weld as needed, and properly install new parts. Students work with a variety of metals and plastics, as well as glass, electrical, and mechanical parts. Students understand the non-structural technician's duties and are able to perform them.

Objectives:
- Practice personal collision repair safety daily in all collision repair processes.
- Identify and show the uses of all hand and power tools used in the collision repair program.
- Effectively repair cosmetic damage on numerous vehicle substrates.
- Determine if a part needs to be repaired or replaced, and which is more cost effective.
- Define trim and bolted parts terminology.
- Remove and install bolted-on panels.

TECR 1040 Collision Surface Preparation I — 4 Credits / 120 Clock-Hours

The Collision Surface Preparation I course provides students with an overview of auto collision surface preparation. Students learn how to properly prepare surfaces on vehicles for repair and refinishing. The class covers proper sanding as well as tools and materials used in the process. Through demonstrations and hands-on practice, students develop the skills necessary to achieve professional results.

Objectives:
- Identify and describe the necessary tools and materials used in surface preparation.
- Follow safety procedures relevant to surface preparation.
- Demonstrate trim, stripe, and vinyl removal and masking techniques.
- Perform the appropriate preparation techniques for a variety of surface substrates.
- Use the appropriate cleaning products for a variety of substrates.
- Demonstrate techniques for removing or preparing existing finishes.
- Evaluate the quality of existing finishes.
- Demonstrate proper body filler applications.

TECR 1050 Collision Basic Refinishing — 4 Credits / 120 Clock-Hours

In the Collision Basic Refinishing course, students learn methods of basic panel preparation and refinishing. Students practice different types of undercoating including sealers and primers, their use, limitations, and application. Students learn skills with refinish products, use and maintain shop paint spray equipment, along with prevention of refinishing processing defects.

Objectives:
- Practice refinishing safety and implement those skills.
- Safely operate the paint mixing system and manage its features.
- Address problems when painting vehicle substrates.
- Practice skills of priming and painting techniques using numerous primers, sealers, and ground coats affect refinishing.
- Identify and explain the different types of finishes and the correct procedures to prepare them for refinishing.
- Apply seam sealers to various areas on a vehicle.
- Apply undercoating and protectants to areas on a vehicle.

TECR 1060 Collision Repair Shop Operations and Career Success — 1 Credit / 30 Clock-Hours

In the Collision Repair Shop Operations and Career Success course, students participate in class instruction, lecture, discussion, and self-paced online coursework. This course teaches students the skills employers demand to help increase job retention, improve employee relations, and make their business stand out from the crowd.

Objectives:
- Display responsible and professional behaviors for a work environment.
- Demonstrate the ability to work effectively with others.
- Maintain open lines of communication with others and communicate effectively.
- Plan and prioritize work to manage time effectively and accomplish assigned tasks.
- Demonstrate the ability to apply critical-thinking skills to solve problems by generating, evaluating, and implementing solutions.
- Display the capability to adapt to new, different, or changing requirements.

TECR 1070 Collision Surface Preparation II **4 Credits / 120 Clock-Hours**

The Collision Surface Preparation II course builds on the techniques taught in Collision Surface Preparation I. Students learn to properly and safely prepare surfaces prior to painting. Students will practice setup, operation techniques, materials selection, and safety considerations for painting surfaces. Upon completion of the course, students have a solid foundation in auto collision surface preparation.

Objectives:
- Demonstrate safe handling, proper application technique, and calibration of a paint gun.
- Demonstrate proper procedures for masking and taping, including window and trim protection.
- Select proper grit for repair and blend adhesion.
- Determine whether masking or part removal is appropriate.
- Identify types of finishes for various applications.
- Prepare a variety of surfaces for paint application.

TECR 1080 Collision Advanced Refinishing **4 Credits / 120 Clock-Hours**

In this Collision Advanced Refinishing course, students train on the advanced methods of painting. Students also learn how to do advanced painting techniques and utilize problem-solving techniques when encountering painting problems.

Objectives:
- Fully disassemble, reassemble, and adjust all spray guns and equipment.
- Implement storage and disposal of all hazardous waste in lab area.
- Practice refinish safety when entering the lab area and refinishing.
- Explain how surface preparation affects refinishing.
- Detail the inside and outside of a vehicle.
- Cut, de nib, and polish vehicle panels.
- Demonstrate color blending techniques.

TECR 1090 Collision Plastic Welding and Adhesives **4 Credits / 120 Clock-Hours**

In this Collision Plastic Welding and Adhesives course, students learn how to identify different types/kinds of plastics and proceed through the plastic welding processes. Students identify and use adhesives. Students also learn the different application processes.

Objectives:
- Explain how various plastic vehicle parts are made.
- Discuss why plastics are used in vehicle construction.
- Demonstrate how to set up the plastic welding equipment.
- Operate the machine(s) used in plastic welding.
- Demonstrate repairing damaged automotive plastics using heat.
- Identify different types of adhesives and their applications.
- Demonstrate how to prepare areas for adhesive uses.
- Demonstrate how to apply the adhesives to various areas of the vehicle.
- Explain how and why seam adhesives are used on vehicles.
- Apply seam sealers to various areas on a vehicle.

TECR 1100 Collision Repair Estimating, Damage Analysis, and Electronics **4 Credits / 120 Clock-Hours**

In the Collision Repair, Estimating, Damage Analysis, and Electronics course students learn how to correctly, effectively analyze damage to a vehicle and write computerized estimates. Students train on a visual evaluation of the primary, secondary, and previous damages on a vehicle. Students formulate a computerized estimate for a damaged vehicle. Students learn the estimator's, technician's, and refinisher's roles and expectations. Parts resourcing, insurance company roles, and customer relations are also integrated in this course.

Objectives:
- Identify visual damage to a vehicle.
- Analyze damage to a vehicle.
- Discuss collision repair estimating and vehicle terminology.
- Write a handwritten and a computerized estimate for a damaged vehicle.
- Locate and read a vehicle's vin plate/trim tag as it pertains to estimating.
- Explain affected areas of damage to panels on a vehicle.
- Demonstrate how to book out a vehicle for its actual cash value (ACV).