# Southwestern Illinois College
# Automotive Collision Repair Technology Program

## Mission Statement:

The mission of the Automotive Collision Repair Technology Program is to enable the student to acquire the knowledge and skill necessary to enter, compete, and succeed in today's high-skill, high performance of automotive collision repair industry and to ensure student success in the workplace through a systematic assessment of their learning with respect to stated industry standards.

## Educational Goal:

Upon completion of the Automotive Collision Repair Technology program, the student will be able to:

- ✓ Demonstrate how to safely use shop equipment associated with body preparation and filler application.
- ✓ Identify five types of collision damage.
- ✓ Identify new damage and previous damage.
- ✓ Interpret damage report information to plan a repair sequence.
- ✓ Identify the procedures for safely assessing and measuring vehicular damages.
- ✓ Interpret manufacturers' instructions/specifications.
- ✓ Select various types of measuring systems used in the industry.
- ✓ Use metal shrinking and straightening principles and demonstrate respective techniques.
- ✓ Select and properly use metal straightening tools.
- ✓ Properly straighten doorframes to manufacturers' specifications.
- ✓ Interpret Low-voc regulations and the principles of refinishing technology.
- ✓ Choose proper protective equipment and clothing as required by EPA and OSHA with respect to refinish work and materials; welding and/or cutting procedures.
- ✓ Select and properly use body filler materials.
- ✓ Demonstrate the proper setup and adjustment of a MIG welder.

- ✓ Demonstrate how to properly prevent vehicle damage when welding or cutting.
- ✓ Describe how to visually inspect and use destructive testing on welded lap joints according to the industry standards.
- ✓ Diagnose and service adjustable suspension, rear suspension, strut type suspension, and short/long arm suspension systems.
- ✓ Identify and describe the principles of various steering systems; i.e. power steering, parallelogram steering, rack and pinion steering.
- ✓ Demonstrate how to remove, replace, and align bolted frame and cradle assemblies.
- ✓ Demonstrate how to remove and replace door skins; i.e. bonded and welded.
- ✓ Diagnose steering column damage.
- ✓ Identify and describe tire construction, tire wear conditions and causes.
- ✓ Conduct a wheel alignment.
- ✓ Properly remove dirt, wax, and corrosion from the area of vehicle to be repaired.
- ✓ Determine the color of paint on a vehicle.
- ✓ Prepare a painting environment; setup, test, and adjust spray guns.
- ✓ Demonstrate how to properly apply decals and stripes.
- ✓ Demonstrate proper detailing procedures.
- ✓ Diagnose problems with braking systems and restraint systems and apply the required procedures to safely inspect, remove, replace, and/or defective components.
- ✓ Select and demonstrate the use of panel replacement procedures and alignment tools.
- ✓ Identify adhesives for specific job applications.
- ✓ Describe the properties of sheet-molded compounds (SMC) and their applications.
- ✓ Diagnose problems with air conditioning systems and drive trains and apply the required procedures to safely inspect, remove, replace, repair, and/or adjust defective components and/or systems.

*Submitted by: Jim Moore*
*Division: Allied Health, Public Services & Industrial Technology*
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ACRT Mission Statement and Goals