AUTOMOTIVE COLLISION PLASTIC COMPONENT 
REPAIR AND REPLACEMENT 
Course Syllabus

Course Number: NSRT-0344        OHLAP Credit: No
OCAS Code: None
Course Length: 60 Hours
Career Cluster: Transportation, Distribution, and Logistics
Career Pathway: Automotive Collision Repair
Career Major(s): Collision Repair Technician

Pre-requisite(s): In this course the student will learn to identify different types of plastic used in the construction of vehicles. Students will learn to make repair/replace decisions on plastic parts. Students will learn to prepare for both single and two-sided repairs on plastic parts. The course includes both adhesive type repairs and plastic welding. Sheet Molded Compound (SMC) identification along with one-sided and two-sided repairs will be covered.


Course Objectives: A. Identify Plastic Parts and Make Repair Decisions
1. Review personal and environmental safety practices.
2. Identify types of plastics to be repaired; clean and prepare the surface of plastic parts in accordance with industry guidelines.
3. Identify types of plastics repair procedures and materials needed.
4. Discuss proper texture and finish requirements for the repair.
5. Identify the types of rigid, semi-rigid or flexible plastic parts to be refinished; determine the materials, preparation and refinishing procedures. (HP-I) 1

B. Repair Rigid Parts
1. Repair rigid plastic parts with airless welding.
2. Repair rigid plastic parts with urethane or epoxy adhesives.
3. Repair rigid plastic parts with rigid or epoxy adhesives and fiberglass reinforcements.
4. Repair holes and cuts in rigid plastic parts using backing materials and adhesives.
5. Remove damaged area from exterior sheet molded compound (SMC) and bulk molded compound (BMC) panels; repair with partial panel installation.
6. Refinish rigid, semi-rigid, and flexible plastic parts. (HP-G) 1
7. Prepare repaired areas for refinishing.

C. Coat Rigid Parts
1. Prepare and refinish polypropylene plastic parts.
2. Select proper paint system for the plastic parts to be refinished.
3. Prepare and refinish rigid or hard ABS plastic parts.
4. Prepare and refinish (SMC) sheet molded compound parts.  
5. Apply finish coat to rigid plastic parts.  

D. Repair Flexible Parts  
1. Repair flexible plastic parts with airless welding.  
2. Repair flexible plastic parts with urethane or epoxy adhesives.  
3. Repair flexible plastic parts with urethane or epoxy adhesives and fiberglass reinforcements.  
4. Repair holes and cuts in flexible plastic parts using backing materials and adhesives.  
5. Reshape and shrink flexible exterior plastic parts.  

E. Coat Flexible Parts  
1. Retexture plastic parts.  
2. Identify the characteristics of elastomeric paint finish.  
3. Select the correct paint system for the plastic parts to be refinished.  
4. Prepare and refinish flexible plastic parts.  
5. Apply finish coat to flexible plastic parts.  

¹ASE objective  
All unmarked objectives are TTC instructor developed.  

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.  

Grading Procedures:  
1. Students are graded on theory and shop practice and performance.  
2. Each course must be passed with seventy (70%) percent or better.  
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.  

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.  

Available Certifications/ College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.  

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.