INTRODUCTION TO COLLISION REPAIR TECHNOLOGY
Course Syllabus

Course Number: ACR-0751
OCAS Code: None
Course Length: 45 Hours
Career Cluster: Transportation, Distribution, & Logistics
Career Pathway: Automotive Collision Repair
Career Major(s): Collision Repair Technician

Pre-requisite(s): 

Course Description: In this course the student will cover tools and equipment, safety, hazardous material handling and storage. The student will be taught to identify safety and hazardous warning information for products used in the collision repair industry and the Right-To-Know Act. Students will also study the collision repair industry and the preparation of the vehicle for entering the repair facility.


Course Objectives: A. Complete Introduction to Collision Repair
1. Complete forms pertaining to enrollment.
2. Demonstrate knowledge necessary to receive Completion/ Competency Certificates.
3. Discuss district, school, and class policies and procedures.
4. Discuss grading criteria.
5. Discuss the purpose of a CTSO organization.
6. Form a CTSO club.
7. Participate in CTSO meetings.
8. List characteristics and responsibilities of leaders and effective group members.
9. Participate in CTSO activities.
10. Discuss the history of the industry.
11. Identify some of the present and future trends in the industry.
12. Identify job opportunities available in the industry.
13. Discuss additional training available.
14. Discuss what interested you in this industry.
15. Discuss State/National certification requirements.
16. Discuss the value of trade journals and magazines.
17. Review and use related math skills.
18. Review and use related technical reading skills.

B. Practice General Safety
1. Discuss the role of OSHA and EPA.
2. Identify parts and terms of a MSDS sheet.
3. Locate MSDS sheets in the classroom and job site.
4. Discuss types and locations of fire extinguisher.
5. Match types of fire extinguisher with description of fire.
6. Demonstrate proper lifting methods.
7. Explain the need for proper clothing and eye protection for a safe working environment.
8. Select and use proper personal safety equipment for surface preparation, spray gun and related equipment operation, paint mixing, matching and application, paint defects, and detailing (gloves, suits, hoods, eye and ear protection, etc.). (HP-I)¹
9. Explain the proper steps in reporting an accident.
10. List personal safety rules.
11. Discuss accident prevention.
12. Identify and take necessary precautions with hazardous operations and materials according to federal, state, and local regulations. (HP-I)¹
13. Discuss handling precautions for urethane and urethane additives.
14. List first aid measures for urethane and urethane additive accidents.
15. Select proper spray mask:
   a. inspect for proper fit
   b. perform an operational check
   c. inspect mask filters
   d. inspect general condition of mask
16. Identify safety and personal health hazards according to OSHA guidelines and the “Right-to-Know Law.”. (HP-I)¹
17. Complete a safety pledge form.
18. Inspect spray environment to ensure compliance with federal, state and local regulations. (HP-I)¹
19. Pass safety test with 100% accuracy before working in shop.

C. Review Shop Manuals and Reference Materials
   1. Find specific information in service (shop) manuals and service bulletins.
   2. Use a Collision Estimating Manual to determine the time and cost of repairs.
   4. Write customer repair (work) orders.
   6. Make a computer estimate for parts and repairs.

D. Use Hand Tools
   1. Label hand tools commonly used in the automotive trade.
   2. Demonstrate the safe use of common hand tools.
   3. Match the specialty tools with the type of jobs they are designed to do.
   4. Discuss the importance of using the right tool for the right job.

E. Use Power Tools
   1. Identify power tools found in an automotive shop.
   2. List safety rules pertaining to shop power tools.
   3. Demonstrate the safe use of compressed air.
   4. Demonstrate safe usage of power tools.
   5. Demonstrate safe use of jacks, lifts, (hoists), and jack stands.

F. Use Air Supply Systems
   1. Review OSHA regulations regarding use of air compressors.
   2. Inspect, clean, and determine condition of air hoses, regulator, airlines, and compressor.
   3. Perform preventative and routine maintenance in compressor and air hoses, when needed.
   4. Determine the best position for airline layout for a paint shop.
5. Calculate air pressure drop per foot of airline.

### G. Use Automotive Refinishing Specialty Tools

1. Identify and use specialty hand tools used in automotive paint shop.
2. Discuss rules for safe use of disc sander, grinders and polishers.
3. Identify and use masking equipment.
4. Select and use the NIOSH approved (Fresh Air Make-Up System) personal painting/refinishing respirator system. Perform proper maintenance in accordance with OSHA Regulation 1910.134 & applicable state/local regulation. (HP-I)¹
5. Select and use the NIOSH approved personal sanding respirator. Inspect condition and ensure fit and operation. Perform proper maintenance in accordance with OSHA Regulation 1910.134 & applicable state/local regulation. (HP-I)¹
6. Select and use the proper personal safety equipment for surface preparation, spray gun and related equipment operation, paint mixing, matching and application, paint defects, and detailing (gloves, suits, hoods, eye and ear protection, etc.). (HP-1)¹

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.