Course Number: Automotive Body Panel Adjustment and Alignment

Instructor: Jeff Owen

OCAS Code: Course Syllabus

Phone Number: 580.327.0344

Course Length: 45 hours

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Career Cluster: Transportation, Distribution, & Logistics

Campus: Alva

Career Pathway: Automotive Collision Repair

Program: Collision Technology

Career Major: Combination Collision Repair Technician, Non-Structural Repair Technician

Pre-requisite: None

Course Description: In this course the students will learn to remove, install and align bolted body parts. Some of the parts covered in this course will be fenders, hoods, doors, decklids, bumpers and bumper covers. This course will also cover wind noise and water leak detection related to panel alignment.

Instructional Philosophy: The instructor will provide not only technical training in the Auto Collision Technology area but also soft-skills training in an effort to provide training and services needed for students to succeed in the workplace.

Course Goals: Upon successful completion of this course, the student will be able to:

- Determine the extent of direct and indirect damage and direction of impact; develop repair plan.
- Inspect, remove and replace bolted, bonded, and welded steel panel or panel assemblies.
- Determine the extent of damage to aluminum body panels; repair, weld or replace in accordance with manufacturer’s specifications.
- Inspect, remove, replace, and align hood, hood hinges, and hood latch.
- Inspect, remove, replace, and align deck lid, lid hinges, and lid latch.
- Inspect, remove, replace, and align doors, tailgates, hatches, lift gates, latches, hinges, and related hardware.
- Inspect, remove, replace, and align bumper bars, covers, reinforcement guards, isolators, and mounting hardware.
- Inspect, remove, replace and align front fenders, headers, and other panels.
- Straighten and rough-out contours of damaged panel to a surface condition for body filling or metal finishing using power tools, hand tools, and weld-on pull attachments.
- Weld cracked or torn steel body panels; repair broken welds.
- Restore corrosion protection.
- Cut out damaged sections of sheet steel body panels and weld in replacements according to manufacturer/industry specifications.
- Replace door skins according to manufacturer’s procedures.
- Replace or repair rigid, semi-rigid, and flexible plastic panels according to manufacturer's/industry specifications.
- Restore sealers, sound deadeners, and foam fillers.
- Perform panel bonding.
- Diagnose and repair water leaks, dust leaks, and wind noise.
Major Course Projects: Students are allowed to work on their own projects as well as live-work projects as approved by instructor.

Students will compile a portfolio which includes classroom theory and activities as well as a summary of hands-on work in the shop. Students will include photographs of projects and live work projects with descriptions for each photo.

Project Outline: Students may begin working on projects as their skill level allows. All projects must be completed by the first of May. These projects will reinforce classroom theory instruction and will require the student to consult industry service information during the course of task performance.

Instructional Delivery Plan: The instruction for this course will utilize various methods in an effort to promote and accommodate different learning styles including classroom lecture, classroom demonstrations, shop demonstrations, hands-on learning activities, classroom discussion, interactive media, textbook, computer based learning activities, research projects, guest speakers, and student presentations. Students will be required to work independently as well as in teams. Assignments will require students to use academic skills in math, science, and language arts.

Assessment Plan: Pass Safety Test with 100% accuracy.

Assessment Plan:
50% Performance of technical skills
45% Tests and written assignments
5% Academic Career Center (ACC)

Grading Scale:
A 90-100 Exceeds expectations
B 80-89 Meets industry standards and expectations
C 70-79 Passing grade, but does not meet some standards
D 60-69 Passing, but only meets the minimum standards
F Below 60 Failing, does not meet minimum standards

Alliance Credit Offered: OSU-IT

Industry Alignments: ICAR

End of Instruction Industry Assessment: Students will have to pass Safety Test at 100% accuracy and demonstrate safety practices.

Industry Assessment:
Auto Body: Non-Structural Analysis & Damage Repair Technician - CTTC
http://www.okcareertech.org/testing/PDF_Docs/FY08pdf/32002_NonStructAnalysisRepairTech.pdf

ASE: Collision Repair and Refinish Series – Non-Structural Analysis and Damage Repair

ASE: Collision Repair and Refinish Series – Structural Analysis & Damage Repair

NOCTI: Collision Repair Technology -
http://www.nocti.org/PDFs/JobReady/3006_Collision_Repair.pdf

Resources:
I-CAR Worker Protection Curriculum
SP/2 – http://www.sp2.org

Transportation, Distribution, & Logistics Career Cluster Resources -
http://www.careerclusters.org/resources/ClusterDocuments/tlddocuments/TDLFinal.pdf

Attachments: Student curriculum is available at www.nwtech.edu/owen/