



CRT 2320

Division: Career and Technical Education

Department: Collision Repair and Refinishing Technology

Course: CRT 2320

Title: Structural Damage Analysis

Catalog Description:

This course teaches visual inspection, gauging, measuring, and procedures needed to correctly evaluate primary and secondary structural damage. It includes lecture, demonstrations, lab; and it uses Inter-Industry Conference on Auto Collision Repair (I-CAR) curriculum. When successfully completed, students will be prepared for Automotive Service Excellence (ASE) certification.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 4; Lecture: 1; Lab: 7

Clock/Hour Requirements: 128

Offered for Non-Credit: No

Prerequisites: CRT 1110

Corequisites: None

Justification:

The I-CAR curriculum is recognized as the leader in collision repair training. It also provides the necessary information to pass the ASE task lists and tests required for certification. This course was approved by the advisory committee and similar courses are taught at Utah Valley State College (CRT 2320) and Salt Lake Community College (ACR 1200).

Student Learning Outcomes:

Upon successful completion, students will be able to:

- identify government and environmental influences
- identify visual clues to damage
- identify common vehicle platforms and parts
- identify and use common measuring tools
- identify and use self centering gauges
- use metric system to measure vehicles.

Content:

Course objectives will be accomplished by providing students with learning experiences in the following subject areas:

- hazard management, course requirements, and objectives
- vehicle frame to unibody evaluation
- government and environmental influences
- structural component nomenclature
- self centering gauge system equipment
- tram line system
- introduction to optional systems
- analysis philosophy and terms
- visual inspection
- primary damage analysis
- secondary damage analysis
- types of damage
- gauging and fundamentals
- installation of centering gauges
- reading center, datum determination
- measuring critical areas and evaluations
- tram gauge and metric system.

General Education Outcomes:

6) Apply computational skills to a variety of contexts.

Students will be required to measure body components before and after repair work is completed to ensure that proper tolerances and allowances are achieved. These measurements are taken often and repeatedly throughout the repair process to ensure progress toward the repair. These measurements are provided by laser, tram, and steel tape in metric and U.S. standard measurements.

Key Performance Indicators:

In class:

- Student progress will be evaluated on skill levels demonstrated in lab (70%), quiz scores (10%), and a final comprehensive exam (20%).

Following class:

- Upon completion of the course, safety and competency will be demonstrated in subsequent courses and on custom projects.
- Students will apply the techniques acquired on the job and pass national ASE certification tests.

Representative Text and/or Supplies:

- James E. Duffy, *I-CAR student textbooks and modules*, current editions, Delmar Publishers.

Optimum Class Size: 10

Maximum Class Size: 20

Signatures:

I hereby submit this course syllabus:

Andy Morgan, ,

I hereby find this course consistent with the goals and resources of the Collision Repair and Refinishing Technology Department:

Andy Morgan, , , Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)