

COURSE OUTLINE

Non-Structural Analysis and Damage Repair III

Course Description

AB 232. Non-Structural Analysis and Damage Repair III. 3 hours credit. Prerequisites: AB 122 with a C or better. This course will enable the student to analyze whether to replace non-stationary glass and repair and/or replace welded and non-structural components while applying safety practices.

Course Relevance

The principles learned in this course will allow the student to perform the essential tasks of analyzing, preparing, and performing damage repair and adjustments of non-structural parts. These tasks are essential to those aspiring to work in the auto body repair profession. This course and subsequent courses will be taught according to NATEF (National Automotive Technicians Education Foundation)/ASE (Automotive Service Excellence) standards.

Required Materials

Duffey, J., (2004). *Auto body repair technology* (4th ed.). Albany, NY: Delmar Publishing

Learning Outcomes

The intention is for the student to be able to

1. Analyze whether to replace or repair non-structural auto body components
2. Remove and replace outer panels
3. Remove and replace door skins
4. Remove and replace movable glass
5. Remove and replace interior parts
6. Apply personal and environmental safety practices

Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course

Through the student's involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:

1. Field-Related Technology
 - Through "in shop" exercises, the student will be able to prepare and repair outer body panels

Secondary skills (developed but not documented):

Health Management
Reading

Major Summative Assessment Task(s)

These learning outcomes and the primary Learning PACT skills will be demonstrated by

1. Completing a designated project that demonstrates the ability to recognize and utilize the correct techniques and equipment to repair non-structural panels while following all safety practices.

Course Content

- I. Themes – Key recurring concepts that run throughout this course:
 - A. Safety
 - B. Quality
- II. Issues- Key areas of conflict that must be understood in order to achieve the intended outcomes:
 - A. Determining whether to repair or replace
 - B. Repair damaged area without damaging the surrounding area
 - C. Misplacing removed parts
- III. Concepts – Key concepts that must be understood to address the issues:
 - A. Assessment regarding whether the damaged part can be repaired
 - B. Proper precision of repairing damaged area without damaging a surrounding area
 - C. Proper storage of removed parts
- IV. Skills/Competencies – Actions that are essential to achieve the course outcomes:
 - A. Restore sound deadeners and foam materials. High Priority-General (HP-G)
 - B. Replace door skins according to manufacturer's procedures. (HP-G)
 - C. Restore corrosion protection. High Priority-1 (HP-1)
 - D. Diagnose and repair water leaks, dust leaks, and wind noise. (HP-G)

Learning Units

- I. Removing and installing non-structural components
 - A. Proper installation of electrical lighting systems
 - B. Proper removal and repair of sheet metal
 - C. Proper removal and repair of plastic components
- II. Removal and replacement of adhesive mounted and/or welded non-structural panels
 - A. Proper removal of door skins
 - B. Proper procedure of door disassembly (glass, hardware)
 - C. Proper procedure for installing door skin
 - D. Follow proper safety techniques
 - E. Proper techniques for installing exterior trim

Learning Activities

Learning activities will include lectures, demonstration, and performance. Classroom lecture is designed to enable the student to understand the key principles in auto body repair.

Grade Determination

The student will be graded on completion of assessment tasks (learning activities), and written assignment and examinations.