

Common Course Outline
AUCR 102
STRUCTURAL ANALYSIS & DAMAGE REPAIR I
5 Semester Hour

The Community College of Baltimore County

Description

AUCR 102- 5 credits- STRUCTURAL ANALYSIS & DAMAGE REPAIR I

provides a theoretical study of structural collision damage, its analysis and repair. The course will emphasize the proper procedures for measuring; analyzing and developing correct repair procedures for unibody and body-over-frame vehicles. Student technicians will develop repair plans and discuss their implementation. The courses will also emphasize the restoring of vehicles to their pre-accident condition using manufacturers' and industry recommendations.

5 Credits: 3 Lecture hours per week; 6 Laboratory hours per week

Prerequisite(s): AUCR 100

Overall Course Objectives

Upon completion of this course the student will be able to:

1. Comply with personal and environmental safety practices associated with clothing, eye protection, and use of chemicals, hand tools and power equipment;
2. Diagnose and measure structural damage using tram, centering and datum gauges according to industry specifications;
3. Attach frame-anchoring devices;
4. Straighten and align mash (collapse) damage;
5. Straighten and align sag damage;
6. Remove and replace damage frame horns, side rails, cross members and front or rear sections;
7. Straighten and align sideways damage;
8. Straighten and align diamond frame damage;
9. Straighten and align twist damage;
10. Straighten and align cowl assembly;
11. Straighten and align roof rails (headers) and roof panels;
12. Straighten and align hinge and lock pillars;
13. Straighten and align body openings floor pans and rocker panels and
14. Straighten and align quarter panels, wheelhouse assemblies and rear body sections (including rails, suspension and power train mounting points).

Major Topics

- I. Proper procedures for measuring unibody and body-over-frame vehicles
- II. Proper procedures for analyzing and developing correct repair procedures for unibody and body-over-frame vehicles
- III. Procedures for structural analysis of unibody and body-over-frame vehicles
- IV. Procedures for damage repair of unibody and body-over-frame vehicles

Course Requirements:

Grading/exams: Grading procedures will be determined by the individual faculty member and will be provided on the first day of class. A student can expect a minimum of eight grades from the following categories:

- 1. Quizzes
- 2. Lab projects
- 3. Written paper
- 4. Homework assignments
- 5. Midterm exam
- 6. Class participation
- 7. Comprehensive final

Writing: The individual faculty member will determine specific writing assignments.

Other Course Information

This course is a Collision repair core course.

This course is taught in a computerized environment.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

(8) Date Revised: 04/11/05