Modesto Junior College
Proposed Course Outline

AUBDY 301

I. OVERVIEW

The following information will appear in the 2009 - 2010 catalog

**AUBDY-301 Automotive Collision Repair 1**  5 Units

*Advisory:* Before enrolling in this course, students are strongly advised to be concurrently enrolled in AUBDY 321

*Mandatory Fee Required*

Introduction to automotive collision repair industry with emphasis on shop safety, careers, vehicle designs, welding techniques, non-structural steel repairs including straightening and replacement procedures. Field trips might be required. Course is applicable to the associate degree.

II. LEARNING CONTEXT

Given the following learning context, the student who satisfactorily completes this course should be able to achieve the goals specified in Section III, Desired Learning:

A. **COURSE CONTENT**

1. **Required Content:**

   A. Introduction to the Auto Body Collision Repair Industry
      1. History
      2. Careers
      3. Operations
      4. Facilities
   
   B. Safety
      1. Overall Shop Safety
      2. Personal Safety
      3. Tools and Machine
      4. Environmental
   
   C. Identifying and Selecting Proper Tool Usage
      1. Hand Tools
      2. Power Tools
      3. Measurements and Service Information
   
   D. Welding and Cutting
      1. Oxygen/Acetylene Heating and Cutting
      2. Metal Inert Gas Welding
   
   E. Vehicle Design (Construction)
      1. Identifying Substrates
      2. Fastening Devices
   
   F. Non Structural Steel Repairs
      1. Damage Analysis
      2. Common Damage Characteristics
      3. Straightening Fundamentals
      4. Body Fillers

2. **Required Lab Content:**

   a. Demonstrate proper safety habits in a shop environment as it relates to
      i. Chemicals
ii. Electrical
iii. Surface Preparation
iv. Vehicle Lifts

b. Demonstrate Proper Tool Usage in lab work

c. Demonstrate appropriate usage of Welding and Cutting Techniques
   i. Metal Inert Gas Welding
   ii. Spot Welding
   iii. Heat Shrinking Processes

d. Perform Non Structural Repairs
   i. Damage analysis
   ii. Common damage characteristics
   iii. Removal and Replacement of Non-Structural Panels

e. Apply Automotive Body Fillers to industry standards

f. Determine Vehicle Design (Construction) as it applies to lab projects
   i. Identifying Substrates
   ii. Fastening Devices

B. ENROLLMENT RESTRICTIONS

1. Advisories

   Before enrolling in this course, students are strongly advised to be concurrently enrolled in AUBDY 321

C. HOURS AND UNITS

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<thead>
<tr>
<th>INST METHOD</th>
<th>TERM HOURS</th>
<th>UNITS</th>
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5 Units

D. METHODS OF INSTRUCTION (TYPICAL)

   Instructors of the course might conduct the course using the following method:

1. Present weekly lectures through the use of power point presentations and DVD presentations.

2. Discuss chapter content and review homework in class to ensure students have knowledge prior to
assigned lab activities correlated to lectures and NATEF standards

3. Modeling trade techniques, during lab as it relates to the application of non structural repairs.

E. ASSIGNMENTS (TYPICAL)

1. EVIDENCE OF APPROPRIATE WORKLOAD FOR COURSE UNITS
   Time spent on coursework in addition to hours of instruction (lecture hours)
   a. Weekly reading assignments
   b. Weekly homework chapter assignments
   c. Weekly NATEF Auto Body Task Sheets
   d. Content Review and Studying for Bi Monthly Quizzes
   e. Content Review for Midterm and Final Exam

2. EVIDENCE OF CRITICAL THINKING
   Assignments require the appropriate level of critical thinking
   a. What can you do to make your shop a safer place in which to work?
   b. What happens to a vehicle during a collision?
   c. How would you determine whether a vehicle is repairable or a total loss?
   d. After shrinking a steel panel, the technician finds a flat area under tension and lower than the rest of the panel. What is wrong?
   e. How and why do you remove paint before using body filler?

F. TEXTS AND OTHER READINGS (TYPICAL)


III. DESIRED LEARNING

A. COURSE GOAL
   As a result of satisfactory completion of this course, the student should be prepared to:
   Describe fundamental terms used in the collision repair industry, analyze, evaluate, and manipulate the repair or replacement of non structural steel panels.

B. STUDENT LEARNING GOALS
   Mastery of the following learning goals will enable the student to achieve the overall course goal.

1. Required Learning Goals
   Upon satisfactory completion of this course, the student will be able to:
   a. Select and operate the basic metal repair techniques with damage characteristics to make the appropriate repairs.
b. Identify and distinguish different body construction types verbally and in a lab setting.

c. Identify and demonstrate industry safety standards pertaining to the use of chemicals and equipment in a shop environment.

d. Perform the various types of sheet metal welding methods to the appropriate application

2. **Lab Learning Goals**

   *Upon satisfactory completion of the lab portion of this course, the student will be able to:*

   a. Demonstrate the ability to comply with industry safety and environmental issues.

   b. Analyze, diagnose and perform minor repairs on non-structural steel panels

IV. **METHODS OF ASSESSMENT (TYPICAL)**

A. **FORMATIVE ASSESSMENT**

   1. Bi Monthly Quizzes
   
   2. NATEF Task Sheets
   
   3. Instructor Observation

B. **SUMMATIVE ASSESSMENT**

   1. Mid Term Exam
   
   2. Final Exam