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San Bernardino Valley College

Course Outline for AUTOIN 011X3  
BASIC CUSTOM AUTO INTERIORS LABORATORY

I. CATALOG DESCRIPTION:

Department: Automotive

AUTOIN 011X3: Basic Custom Auto Interiors Laboratory

3 hours laboratory = 1 unit

**Catalog Description:** Basic practical experience in design, creation and installation of complete custom and hot rod automotive interiors. Includes instruction in safe work practices, using trimmers, hand and power tools, common covering materials. Cut, sew and fit techniques are stressed.

**Schedule Description:** Basic practical experience in creating custom automotive interiors. Safe work practices and the use of tools to develop cut, sew and fit skills are emphasized.

Prerequisite(s): AUTOIN 010

Corequisite(s): None

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: Three

III. EXPECTED OUTCOMES FOR STUDENTS:

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

- A. Identify and notify the instructor of potential safety hazards in the shop areas.
- B. Identify, explain, and demonstrate the proper use of the typical upholsters sewing machine.
- C. Prepare a bill of materials, time estimate and labor cost for a typical custom interior replacement job.
- D. Identify and describe the use of twenty different interior fasteners.
- E. Perform disassembly operations on a typical seat restoration project to industry standards.
- F. Perform disassembly operations on a typical door panel restoration project to industry standards.
- G. Prepare seat cushions and backs for recovering using current methods and materials.
- H. Cut, sew and fit the covering materials for a minimum of one seat and one door panel.
- I. Apply cover materials to a minimum of one seat and one door panel.
- J. Identify common chemical adhesive materials and discuss their safe use and storage.

IV. CONTENT:

- A. Interior Designs
  1. Original equipment

- a. Materials
    - b. Production methods
    - c. Costs
  - 2. Custom
    - a. Overview of complete project
    - b. Preparation and planning
    - c. Written estimate
    - d. Meticulous work
- B. Designing and Planning a Custom Interior
  - 1. Ideas, drawings and patterns
    - a. Review of award winners
    - b. Visualizing completed project
    - c. Pattern making
    - d. Chipboard method
  - 2. Materials
    - a. Choices
    - b. Sources
    - c. Cost
    - d. Purchase
- C. Basic Fabrication
  - 1. Overall plan
    - a. Approved design
    - b. Completion schedule
  - 2. Insulation
    - a. Floor
    - b. Side panel
    - c. Headliner
  - 3. Wood work
    - a. Types of wood
    - b. Hardware and fasteners
  - 4. Metal work
    - a. Cutting tools and methods
    - b. Shaping tools and techniques
  - 5. Working with basic covering materials
    - a. Fabric
    - b. Vinyl
  - 6. Small panels, rests and pulls
    - a. Arm rests
    - b. Door pulls
    - c. Stereo panels
    - d. Modesty panels
  - 7. Basic door panels
    - a. Base materials
    - b. Padding
    - c. Cut, fit and sew
    - d. Install

8. Basic seats
  - a. Existing framework
  - b. Support and padding materials
  - c. Cut, fit and sew
  - d. Install
9. Bow type headliner
  - a. Measurements
  - b. Cut, fit and sew
  - c. Install
10. Miscellaneous coverings
  - a. Reveal moldings
  - b. Window frames
  - c. Visors
11. Basic carpet making
  - a. Pattern, measurements
  - b. Cut, fit, sew
  - c. Padding
  - d. Install

V. METHODS OF INSTRUCTION:

Methods of instruction will vary from instructor to instructor but may include:

- A. Laboratory demonstration by the instructor.
- B. Guided laboratory practice by the student.
- C. Presentations and demonstrations by field experts.

VI. TYPICAL ASSIGNMENTS:

Typical assignments will vary from instructor to instructor but may include:

- A. Prepare a detailed job estimate for a complete interior replacement on a typical 1940's vehicle to current Bureau of Automotive Repair standards.
- B. Prepare one flat pattern, cut and apply the material, then install the panel in an instructor-selected vehicle.
- C. Apply vinyl material with adhesive to an interior panel with compound curves to acceptable trade level competence.
- D. Adjust stitch length and depth as necessary to sew a double thickness project using scrap materials.

VII. EVALUATION(S):

- A. Methods of evaluation will vary from instructor to instructor but may include:
  1. Oral and written tests;
  2. Demonstrate manipulative skills according to industry standards in the performance task;
  3. Active participation in discussion periods;
  4. A comprehensive written final exam.

Typical Questions:

- a. List three common types of insulation.
- b. Compare and contrast vinyl and leather covering materials.

- c. What tool is most often used to sculpture foam?
- B. Frequency of evaluation will vary from instructor to instructor but may include:
  - 1. Weekly assignments
  - 2. One midterm exam
  - 3. One final exam

VIII. TYPICAL TEXT(S):

Don Taylor, Ron Mangus, Custom Auto Interiors, Fisher Books 1998

Don Taylor, Automotive Upholstery Handbook, Fisher Books 1993

IX. OTHER SUPPLIES REQUIRED OF STUDENTS:

Safety glasses, notebook