

**SOUTHEAST COMMUNITY COLLEGE
TRANSPORTATION OCCUPATIONS
AUTO COLLISION REPAIR TECHNOLOGY
COURSE SYLLABUS
January 11, 2024**

I. CATALOG DESCRIPTION

Course Number: AUTB2452
Course Title: Collision Repair & Refinish Lab IV
Prerequisite(s): AUTB 1254, AUTB 1256

Catalog Description: Practice in major structural repair operations including body, frame, unitized construction, major panel replacement, mechanical repairs, electrical repairs, paint refinishing, suspension alignment, all of which is based on a production basis following damage reports as used in the collision repair industry. Repairs to vehicles including analysis, through all processes including detailing prior to delivery of the vehicle and will also include delivery to the customer.

Credit Hour: 6.0
Classroom Hours: 15
Lab Hours: 225
Total Contact Hours: 240

II. COURSE OBJECTIVES: *Course will:*

- A. Cover the removal and installation of windshields, and back glass in various vehicles including removal and installation of moldings.
- B. Cover installing, adjusting and aligning door glass and other moveable glass projects will be assigned as available.
- C. Cover the hands-on process with the proper usage of structural measuring systems and their place in the repair process.
- D. Cover structural repair equipment that they will be utilizing during a typical repair.
- E. Cover identifying and repair all damages according to factory recommendations using various types of equipment.
- F. Cover structural sectioning procedures that they will be utilizing during the repair process in accordance to manufacturers recommendations.
- G. Cover the cosmetic repair procedures that they will be utilizing during the repair process in accordance to manufacturers recommendations.
- H. Cover plastic and composite repair procedures that they will be utilizing during the repair process.
- I. Cover the inspection of suspension systems for damage and wear and repair or replace as needed, in accordance to manufacturers recommendations.
- J. Cover the inspection of steering systems for damage and wear and repair or replace components as needed, perform alignments, balance tire and wheel assemblies to factory specifications.
- K. Cover the mechanical repair procedures that they will be utilizing during the repair process in accordance to manufacturers recommendations. Examples: (radiator, engine mounts, brakes)
- L. Cover the electrical repair procedures that they will be utilizing during the repair process in accordance to manufacturers recommendations. Examples: (headlamp aiming, steering column repairs, dash panel replacement)
- M. Cover refinishing collision damaged vehicles including, choosing type and amount of material needed for project completion.

- N. Cover safety consciousness in each individual through the students understanding of the equipment.
- O. Cover preparing vehicles for delivery following the repair process including, choosing type of material needed for project completion.
- P. Cover restraint system diagnosis.
- Q. Cover restraint system parts replacement.
- R. Cover repair blueprinting.
- S. Cover vehicle parts management (disassemble, inventory, and store parts).
- T. Cover the cycle time process.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A. STUDENT LEARNING OUTCOMES: *The student will be able to:*

1. Remove and install windshields, and back glass in various vehicles including removal and installation of moldings.
2. Install, adjust and align door glass and other moveable glass projects will be assigned as available.
3. Estimate projects; all projects selected so student will meet basic industry standards.
4. Instruct the individual through hands on process with the proper usage of structural measuring systems and their place in the repair process.
5. Instruct the individual with the proper use of the structural repair equipment that they will be utilizing during a typical repair.
6. Identify and repair all damages according to factory recommendations using various types of equipment.
7. Instruct with the proper structural sectioning procedures that they will be utilizing during the repair process in accordance to manufacturers recommendations.
8. Determine the proper cosmetic repair procedures that they will be utilizing during the repair process in accordance to manufacturers recommendations.
9. Determine the proper plastic and composite repair procedures that they will be utilizing during the repair process.
10. Determine inspection of suspension systems for damage and wear and repair or replace as needed, in accordance to manufacturers recommendations.
11. Determine inspection of steering systems for damage and wear and repair or replace components as need, perform alignments, balance tire and wheel assemblies to factory specifications.
12. Determine the proper mechanical repair procedures that they will be utilizing during the repair process in accordance to manufacturers recommendations. Examples: (radiator, engine mounts, brakes)
13. Determine the proper electrical repair procedures that they will be utilizing during the repair process in accordance to manufacturers recommendations. Examples: (headlamp aiming, steering column repairs, dash panel replacement)
14. Refinish collision damaged vehicles including, choosing type and amount of material needed for project completion.
15. Develop safety consciousness in each individual through the students understanding of the equipment.
16. Clean and prepare vehicles for delivery following the repair process including, choosing type of material needed for project completion.
17. Work with other classmates to keep the shop in an organized manner and return tools and equipment to their proper places. This is to prepare the student for a typical workday.

B. GENERAL EDUCATION LEARNING OUTCOMES:

GELO #3: Critical Thinking & Problem Solving

Outcomes:

1. Collect, identify, interpret and analyze data.
4. Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.

IV. CONTENT/TOPICAL OUTLINE

A. Course introduction

B. Repair procedures (Hands-on)

V. INSTRUCTIONAL MATERIALS

Service Manuals:

Estimating guides
Structural dimension guides
Electrical component locator
Restraint system repair manuals
Computerized service manuals
OEM service manuals

Equipment:

Computerized measuring system
Structural repair machines
4-wheel alignment machines
Paint mixing systems
All paint booths available
Headlamp aimers
Wiring & terminal repair kits
Miscellaneous hand & power tools

Student Required Material:

Notebook
Pen or pencil
Required tools (tool list, see Program Chair)

Outside Reading/Research Required:

Chapters will be assigned according to the class schedule.
Research on state-of-the-art equipment or procedures as assigned by the Instructor.

VI. METHODS OF PRESENTATION / INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Small and large group discussion
3. Video presentation
4. Transparencies
5. Demonstrations
6. Project boards
7. Flip charts
8. Handouts
9. Observations
10. Assigned lab projects
11. Field trips

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of the following:

1. Notebook (if required)
2. Quizzes
3. Tests

4. Lab grades
5. Attendance/class conduct

Letter grades will be based on the SCC Standard Grade Scale Policy. **Note:** See course information document for specific details on how the course grades will be calculated.

VIII. SPECIFIC COURSE REQUIREMENTS

A. Student must:

1. Complete all tests, projects, assignments, and notebook (if required).
2. Earn a final grade of 60% or higher.

B. Attendance:

1. Students must follow the Attendance Policy as stated in the college student handbook and the Auto Collision Repair Technology Attendance Policy.

C. Program shop safety rules will be followed.

D. Please see the course Information document for any additional safety rules established by the instructor.