

**SOUTHEAST COMMUNITY COLLEGE
TRANSPORTATION OCCUPATIONS
AUTO COLLISION REPAIR TECHNOLOGY
COURSE SYLLABUS
July 1, 2019**

I. CATALOG DESCRIPTION

Course Number: AUTB1151
Course Title: Tools & Equipment/Collision Repair Welding
Prerequisite(s): None

Catalog Description: Proper identification, selection, usage, maintenance, and cost of tools and equipment used in the collision repair and maintenance program. Study of welding processes used in the auto collision repair industry. Safety factors and equipment selection, application of the processes used in the collision repair field. Emphasis on the modern automobile utilizing processes and techniques used in collision repair field following I-CAR (Inter- Industry Conference on Auto Collision Repair) welding qualification standards.

Credit Hour: 3.0
Classroom Hours: 30
Lab Hours: 45
Total Contact Hours: 75

II. COURSE OBJECTIVES: *Course will:*

- A. Cover common hand tools and power tools used in auto collision repair.
- B. Cover the importance of having a wide range of hand tools and power tools.
- C. Cover selecting the correct tool for the job.
- D. Cover the various types of welds and welding procedures.
- E. Cover the selection and operation various pieces of welding equipment and the proper weld types procedures used on various automotive vehicle panels. Information requirements to complete the I-CAR Welding Certification Test.
- F. Cover the proper use and care of each tool in a safe manner.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

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

- 1. Identify hand/power tools used in the collision repair industry and determine the proper tool usage.
- 2. Identification of current weld equipment and processes used in the collision repair industry.
- 3. Select a of weld equipment for the type of materials and processes called out in the body repair manuals
- 4. Identification of various types of welds and welding procedures to industry standards including setup, maintain, and use various pieces of welding equipment.
- 5. Completion of the hands-on welding qualification to I-CAR (Inter-Industry Conference on Auto Collision Repair) standards.
- 6. Determine safe usage of tools used in the collision repair industry.

B. GENERAL EDUCATION LEARNING OUTCOMES:

GELO #3: Critical Thinking & Problem Solving

Outcomes:

1. Collect, identify, interpret and analyze data.
2. Synthesize information to arrive at reasoned solutions to problems.
3. Evaluate ideas presented in writing, medial, speech, or artistic presentations.
4. Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.
5. Acquire and integrate knowledge and construct relationships across disciplines.

IV. CONTENT/TOPICAL OUTLINE

- A. Course Introduction
- B. Hand Tools/Power Tools
- C. General Shop Safety
- D. Setup and use of a welding equipment.
- E. The basic welding techniques employed current welding equipment. Select and complete various types of welds and welding procedures to industry standards.
- F. Information required for preparation and completion of the I-CAR Welding Certification Test and to I-CAR (Inter-Industry Conference on Auto Collision Repair) standards.

V. INSTRUCTIONAL MATERIALS

Required Text(s):

Auto Body Repair Technology 6th Edition Text.
Copyright 2015 ISBN-13: 978-1133702856, ISBN-10:
1133702856

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. Covered in the Homework
Assignments listed in the homework section listed below.

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. Quizzes
2. Tests
3. Lab grades
4. 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 (as assigned).
2. Must 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/College shop safety rules will be followed.

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