

# Minnesota State College Southeast

## ABCT 1325: Auto Body Welding 2

### A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: \*.\*

Lab Hours/Week: 4

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

The second welding course in the auto body program delivers information and hands-on practice of advanced welding methods for collision repairs. The MIG welding procedures will focus on structural parts and full frame welding procedures. Resistance spot welding techniques for late model collision repair are covered as well as silicon bronze welding using wire feed welders. Plasma arc cutting and induction heating procedures are included in the course. (Prerequisites: ABCT1115, ABCT1125, ABCT1165 (Prerequisite or concurrent: ABCT1345) (2 credits: 0 lecture/2 lab)

**B. COURSE EFFECTIVE DATES:** 02/23/2015 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Perform aluminum welding procedures
2. Perform silicon bronze welding procedures
3. Perform resistance spot welding procedures
4. Perform MIG welding for structural repairs
5. Utilize plasma cutting equipment
6. Utilize induction heating procedures

#### **D. LEARNING OUTCOMES (General)**

1. Identify and demonstrate safe welding and cutting practices
2. Perform vehicle protection procedures during welding and cutting
3. Identify correct welding procedures for substrate type and vehicle recommendation
4. Maintain welding equipment
5. Perform proper weld sight fit-up and metal preparation
6. Set-up equipment and perform M.I.G. welds on structural steel
7. Set-up equipment and perform M.I.G. welds on aluminum
8. Set-up and perform squeeze type resistance spot welds on structural parts
9. Set-up and perform silicon bronze welds on structural parts
10. Perform full frame vehicle frame welding procedures
11. Trim and cut structural parts using a plasma arc cutter
12. Demonstrate the use of an induction heater on structural metal
13. Perform weld bonding procedures
14. Destruction test various welds
15. Trouble shoot weld defects and equipment problems
16. Complete required class paperwork, quizzes, and exams
17. Demonstrate professionalism

#### **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

#### **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

#### **G. SPECIAL INFORMATION**

None noted