

# Minnesota State College Southeast

## ABCT 1250: Automotive Plastics & Composite Repairs

### A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: \*.\*

Lab Hours/Week: 4

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Students are introduced to the wide variety of plastics used on today's vehicles, plastic welding methods, adhesive repairs and fiberglass lay-up procedures. Body filler types and their uses, mixing, application, and forming fillers to correct panel contours are covered. Health and safety concerns and refinishing considerations are also presented. Through demonstrations and hands-on application the student will gain critical information to successfully repair and refinish vehicle interior and exterior trim, accessories and parts made of plastics, composites or fiberglass. (Prerequisite: None) (2 Credits: 0 lec/2 lab)

**B. COURSE EFFECTIVE DATES:** 10/15/1998 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Plastic repairs
2. Composites repairs
3. Body fillers
4. Perform assignments
5. Capstone project

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

1. Identify personal health and safety issues
2. Exhibit personal health and safety practices
3. Identify various types of body fillers and their usage
4. Identify body filler mixing, roughout and finishing tools
5. Describe vehicle protection procedures for adjoining panels and attached parts
6. Identify panel preparation for body filler application
7. Identify body filler mixing and application techniques
8. Identify body filler rough out procedures
9. Identify finish contour sanding of body filler
10. Perform filler repairs on assigned panels
11. Identify plastic/composite repair methods
12. Identify plastic/composite repair equipment
13. Identify plastic/composite repair materials
14. Perform plastic precleaning procedures
15. Perform fiberglass/smc identification
16. Perform thermoplastic/thermosetting plastics identification
17. Perform polyolefin/non-polyolefin identifications
18. Perform specific plastic identifications
19. Identify chemical bonding repair system
20. Perform chemical bonding repair
21. Identify airless welding techniques and procedures
22. Perform airless welding assignments
23. Identify hot air welding techniques and procedures
24. Perform hot air welding assignments
25. Identify adhesive repair materials
26. Identify adhesive repair procedures
27. Perform adhesive repair assignments
28. Identify retexturing materials and procedures
29. Perform retexturing assignments
30. Identify preparation for vinyl color refinishing
31. Perform preparation and application of vinyl color
32. Identify fiberglass lay-up procedures
33. Perform fiberglass lay-up assignments
34. Identify SMC repair procedures
35. Perform SMC repair assignments
36. Perform shop/equipment maintenance and clean-up duties
37. Exhibit 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