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