

# Minnesota State College Southeast

## ABCT 1310: Auto Body Mechanical

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 1

Lab Hours/Week: 6

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Covered in this course are mechanical areas commonly damaged in a collision or affected during the repair process. Systems included are: Air Conditioning, Engine Cooling, Brakes, Emissions, Drive Train Power Delivery, Steering Columns, Suspension Components, and Systems affecting Drivability. (Prerequisites: ABCT1113 or instructor approval) (4 Credits: 1 lec/3 lab)

**B. COURSE EFFECTIVE DATES:** 04/27/1998 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Collision related mechanical repairs to a vehicle
2. Safe and proper procedures and environmentally correct practices for collision related mechanical repairs
3. Damage analysis and repair plan of the vehicles mechanical systems following a collision event

**D. LEARNING OUTCOMES (General)**

1. Identify mechanical service safety procedures
2. Exhibit professionalism and safety procedures
3. Identify vehicle road testing procedures
4. Maintain mechanical service equipment
5. Identify mechanical component removal and replacement procedures
6. Perform technical manual usage
7. Inspect system fluid levels
8. Perform torquing procedures
9. Perform belt replacement
10. Perform mechanical component removal and replacement procedures
11. Identify brake system service procedures
12. Perform brake line flaring
13. Perform brake system service procedures
14. Test emergency brake system
15. Identify drive axle service procedures
16. Perform drive axle service procedures
17. Perform C.V. boot replacement procedure
18. Identify engine cooling system service procedures
19. Perform engine cooling system service procedures
20. Identify emission system procedures
21. Perform exhaust system removal and replacement procedures
22. Identify drive train and engine cradle removal and replacement procedures
23. Remove drive train
24. Perform drive train mount inspection and replacement procedures
25. Perform engine cradle removal and installation procedures
26. Describe air conditioning principles
27. Identify air conditioning service procedures
28. Discharge air conditioning system
29. Describe air conditioning component replacement procedures
30. Replace air conditioning system components
31. Check compressor oil level
32. Flush air conditioning system components
33. Recharge air conditioning system
34. Test air conditioning system
35. Identify fuel system service procedures
36. Perform fuel system service procedures
37. Identify steering column service procedures
38. Perform steering column service procedures
39. Identify suspension removal and replacement procedures
40. Inspect suspension springs
41. Perform suspension removal and replacement procedures
42. Replace suspension springs
43. Inspect steering gear components
44. Replace steering gear components

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

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted