Minnesota State College Southeast

AUTO 1205: Brake Systems Theory

A. COURSE DESCRIPTION

Credits: 2
Lecture Hours/Week: 2
Lab Hours/Week: *.*
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

This course includes principles of hydraulic systems, disc and drum brakes, parking brakes, and power assist units. Emphasis on anti-lock operation, diagnosis, and repair of various types of braking systems. (Prerequisites: AUTO1105, AUTO1106, or instructor approval) (2 Credits: 2 lecture/0 lab)

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

C. OUTLINE OF MAJOR CONTENT AREAS

1. Safety Procedures
2. Principles of Hydraulic Systems, Disc and Drum Brakes, Parking Brakes, and Power Assist Units
3. Diagnosis and Repair of Various Types of Braking Systems
D. LEARNING OUTCOMES (General)
   1. Explain safety procedures
   2. Explain brake terms
   3. Identify brake related health hazards
   4. Identify brake tools
   5. Identify braking material
   6. Identify required fluid types
   7. Identify brake components
   8. Explain drum brake parts functions
   9. Describe automatic adjuster operation
  10. Explain disc brake parts functions
  11. Describe 4 wheel disc operations
  12. Describe automatic adjuster operation
  13. Explain disc brake internal parking brake operation
  14. Explain hydraulic operation
  15. Describe master cylinder operation
  16. Complete mid-course exam
  17. Describe automatic release park brake system
  18. Describe metering valve operation
  19. Describe proportioning valve operation
  20. Explain diagonal brake system
  21. Identify directional and laminated rotor assemblies
  22. Describe car rotor resurfacing operation
  23. Identify brake fluid loss
  24. Explain vacuum and power assist unit operation
  25. Describe anti-skid systems operation
  26. Exhibit professionalism
  27. Complete final exam

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted