

# Minnesota State College Southeast

## **AUTO 1204: Suspension & Steering 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 instructs the student in steering component diagnosis and component replacement/adjustment. Emphasis is placed on all components of automotive steering and suspension. (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. Steering Component and Suspension
3. Diagnosis, Replacement, and Adjustment

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

1. Explain safety procedures
2. Define steering terms
3. Define Pascals Law
4. Describe manual rack and pinion function
5. Describe hydraulic steering systems
6. Describe coil spring installation procedure
7. Describe leaf spring installation procedures
8. Explain static wheel balance
9. Explain dynamic wheel balance
10. Describe tire and wheel balance
11. Describe off car wheel balance
12. Describe defective tire symptoms
13. Complete mid-course exam
14. Identify steering gear types and components
15. Analyze power steering pump
16. Describe power steering recirculation ball operation
17. Analyze power rack and pinion steering gear
18. Explain linkage type power steering unit
19. Analyze steering column
20. Analyze steering column components
21. Describe steering column problems
22. Analyze conventional tie-rod ends
23. Explain steering angles
24. Analyze steering angles
25. Analyze different types of wheel alignment
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