

# Minnesota State College Southeast

## **AUTO 1201: Gas and Diesel Engine Repair Theory**

### **A. COURSE DESCRIPTION**

Credits: 1

Lecture Hours/Week: 1

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers basic engine theory, parts identification of block and cylinder heads, inspection, and measurement of critical wear points. The complete disassembly, rebuilding, and assembly are discussed along with engine removal and installation techniques. (Prerequisites: AUTO1105, AUTO1106, or instructor approval) (1 Credit: 1 lecture/0 lab)

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

### **C. OUTLINE OF MAJOR CONTENT AREAS**

1. Safety Procedures
2. Basic Engine Theory
3. Block and Cylinder Heads Parts Identification, Inspection, and Measurement of Critical Wear Points
4. Disassembly, Rebuilding, and Assembly
5. Engine Removal and Installation Techniques

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

1. Identify safety procedures
2. Explain engine theory
3. Identify engine components
4. Analyze various engine cylinder arrangements
5. Explain engine rebuild procedures
6. Explain engine parts labeling and marking
7. Analyze engine removal procedures
8. Explain engine cleaning procedures
9. Analyze engine disassembly
10. Explain lubrication system
11. Compete mid-semester exam
12. Explain engine measurements
13. Identify engine machining
14. Identify component inspection
15. Identify engine reassembly procedures
16. Analyze engine installation procedures
17. Explain final inspection
18. Identify break-in procedures
19. Complete final

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

None

#### **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

#### **G. SPECIAL INFORMATION**

None noted