

## Master Syllabus

### AUT 1108 - Automotive Engine Systems

**Division:** Science, Mathematics and Engineering

**Department:** Automotive Technology

**Credit Hour Total:** 4.0

**Lecture Hrs:** 2.4 **Lab Hrs:** 4.8

**Date Revised:** October 2013

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### Course Description:

Engine operation, nomenclature, measurements and tolerances, including service and overhaul procedures. Cooling, lubrication and valve train systems are discussed. Basic engine machining practices are covered. Basic hand tools are required for the course.

### General Education Outcomes:

- Critical Thinking/Problem Solving Competency
- Computer Literacy Competency
- Information Literacy Competency

### Course Outcomes:

#### **Mechanical engine concern diagnosis**

Determine mechanical engine problems utilizing manufacturer service information.

**Assessment Method:** Behavioral observations

**Performance Criteria:** Score 3 out of 5 on rubric grading system for this exercise.

#### **Engine theory**

Describe the theory of operation of a four cycle engine.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% of students score 70% on written exam

#### **Precision measurement**

Disassemble the engine block and measure the pertinent assemblies using precision measuring instruments.

**Assessment Method:** Behavioral observations

**Performance Criteria:** 3 out of 5 on rubric evaluation sheet.

### Outline:

Four-cycle engine theory  
Engine block design  
Lubrication and cooling system  
Precision instruments practices  
Service information usage  
Diagnosing engine mechanical problems