

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

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