Sinclair Community College
444 E. Third St.
Dayton, OH 45402

Master Syllabus

AUT 2224 - High Performance Fuel Induction Systems

Division: Science, Mathematics and Engineering

Department: Automotive Technology

Credit Hour Total: 5.0 **Lecture Hrs:** 3.0 **Lab Hrs:** 6.0

Prerequisite(s): AUT 1115

Date Revised: October 2013

Course Description:

Performance rebuilding and tuning of carburetors. Operation and performance application of electronic fuel injection. Introduction to superchargers, turbochargers and nitrous oxide. Engine performance evaluation and tuning utilizing engine and chassis dynamometers. Basic handtools required. Three classroom, six lab hours per week.

General Education Outcomes:

- Critical Thinking/Problem Solving
- Computer Literacy

Course Outcomes:

Fuel Injection Tuning
Demonstrate the ability to improve engine performance using tuning software.

Assessment Method: Locally developed exams
Performance Criteria: 70% of the students pass with a minimum of 70% correct

Assessment Method: Performance appraisals
Performance Criteria: Score 2 on a 0-4 rubric

Flowbench
Measure carburetor CFM and venturi signal using a Superflow flowbench.

Assessment Method: Locally developed exams
Performance Criteria: 70% of students pass with a minimum of 70% correct

Assessment Method: Performance appraisals
Performance Criteria: Score 2 on a 0-4 rubric

Carburetor rebuilding
Demonstrate the ability to rebuild and tune a Holley 4 barrel carburetor.

Assessment Method: Locally developed exams
Performance Criteria: 70% of the students pass with a minimum of 70% correct

Assessment Method: Performance appraisals
Performance Criteria: Score 2 on a 0-4 rubric

Chassis/Engine Dynamometer Testing
Measure wide-open throttle horsepower and torque curves using engine and chassis dynos.

Assessment Method: Locally developed exams
Performance Criteria: 70% of the students pass with a minimum of 70% correct

Assessment Method: Performance appraisals
Performance Criteria: Score 2 on a 0-4 rubric

Outline:

Carburetion
Flow bench, chassis and engine dynamometers
Electronic fuel injection
Supercharging
Turbocharging
Nitrous oxide