

Master Syllabus

AUT 1146 - Automotive Heating Ventilation & Air Conditioning Systems

Division: Science, Mathematics and Engineering

Department: Automotive Technology

Credit Hour Total: 3.0

Lecture Hrs: 1.4 **Lab Hrs:** 4.8

Date Revised: October 2013

Course Description:

Theory and operation of automotive heating and air-conditioning systems. Includes lab activity in diagnosis, service and repair procedures. Basic hand tools required. One classroom, six lab hours per week.

General Education Outcomes:

- Critical Thinking/Problem Solving

Course Outcomes:

Heating/cooling principles and operation

Demonstrate understanding of heating and cooling system operation.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students correctly answer 70% of exam questions.

Assessment Method: Performance appraisals

Performance Criteria: Receive 3 out of 4 on a rubric grading scale.

Heating/Cooling systems

Demonstrate proper use of heating and cooling service equipment.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students correctly answer 70% of exam questions.

Assessment Method: Performance appraisals

Performance Criteria: Receive 3 out of 4 on a rubric grading scale.

A/C systems diagnosis

Diagnose A/C system concerns and determine necessary repairs.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students correctly answer 70% of exam questions.

Assessment Method: Performance appraisals

Performance Criteria: Receive 3 out of 4 on a rubric grading scale.

A/C systems recovery, evacuation, and recharging

Demonstrate proper use of A/C system service equipment.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students correctly answer 70% of exam questions.

Assessment Method: Performance appraisals

Performance Criteria: Receive 3 out of 4 on a rubric grading scale.

Heating systems

Diagnose heating/cooling concerns and determine necessary repairs.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students correctly answer 70% of exam questions.

Assessment Method: Performance appraisals

Performance Criteria: Receive 3 out of 4 on a rubric grading scale.

A/C principles and operation

Demonstrate understanding of air conditioning principles and operation.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students correctly answer 70% of exam questions.

Assessment Method: Performance appraisals

Performance Criteria: Receive 3 out of 4 on a rubric grading scale.

Outline:

A/C principles of operation
A/C system types
A/C control components
Air distribution
A/C service procedures
Automatic climate controls
Heating & cooling principles of operation

