Course Title - Automotive Electronics Theory

Course Prefix and Number - AUMT 1249

Department - Automotive Technology     Division - Vocational Science

Course Type: (check one)

☐ Academic General Education Course (from ACGM – but not in WCJC Core)
☐ Academic WCJC Core Course
☒ WECM course (This course is a Special Topics or Unique Needs Course: Y ☐ or N ☒)

Semester Credit Hours # : Lecture hours# : Lab/other hours #    2:2:1

Equated Pay hours for course – 2.5

Course Catalog Description - A course in automotive technology including electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment.

Prerequisites/Co requisites - Certificate in Automotive Technology

Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Prepared by Curtis Cline    Date 9/22/2011

Reviewed by department head Curtis Cline    Date 9/22/2011

Accuracy verified by Division Chair Terry David Lynch    Date 3/26/2012

Approved by Dean of Vocational Instruction or Vice President of Instruction Lac    Date 11-13-12

List Lab/Other Hours
Lab Hours 1
Clinical Hours
Practicum Hours
Other (list)
I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non-lecture instruction):

The instructor will organize the course in such a manner that all areas of the course objectives will be covered in a balanced manner. It is within the prerogative of the instructor to assign exact amounts of time to each of the objectives which are:

Common Components for Computerized Engine Control Systems
Diagnostic Concepts
Diagnostic Equipment
OBD II Self-Diagnostics
Multiplexing Concepts

II. Course Learning Outcomes

<table>
<thead>
<tr>
<th>Course Learning Outcome</th>
<th>Method of Assessment</th>
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<tr>
<td>1. Explain basic electrical principles.</td>
<td>1. Quizzes and assignments. A final exam will be given.</td>
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<tr>
<td>2. Describe semiconductor theory.</td>
<td>2. Quizzes and assignments. A final exam will be given.</td>
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<tr>
<td>3. Explain basic circuit laws; and describe proper use of electrical test equipment</td>
<td>3. Quizzes and assignments. A final exam will be given.</td>
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III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

Computerized Engine Controls, 8th Edition by Steve B. Hatch copyright 2009

IV. Suggested Course Maximum - 25

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

None

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

90% to 100% = A
80% to 89% = B
70% to 79% = C
60% to 69% = D
Below 60% = F

The grade is based on the percentage basis between lecture and lab.
Quizzes and assignments will count 30% of the course grade. At the end of the course a final exam will be given that will count 10% of the course grade. The auto shop lab grade will count 60% of the course grade. Lab work will be evaluated on attendance, percentage of completion of priority 1, 2, and 3 items on the ASE task list, job sheets, having the required tools to perform lab work, cleanliness, and attitude.

VII. Curriculum Checklist

☐ - Academic General Education Course (from ACGM – but not in WCJC Core)
   No additional documentation needed

☐ - Academic WCJC Core Course
   Attach the Core Curriculum Checklist, including the following:
   • Basic Intellectual Competencies
   • Perspectives
   • Exemplary Educational Objectives

☒ - WECM Courses
   If needed, revise the Program SCANS Matrix & Competencies Checklist.