Course Prefix and Number: AUT 293  Credits: 3

Course Title: Studies in Automotive: Automotive Electronic Guidance Control Systems

Course Description: Introduces advanced automotive electronic systems, including GPS navigation, communication, and guidance control systems. Covers the theory, function, operation, diagnostic procedures, and maintenance of each system. Emphasizes safety. Prerequisite: AUT 193. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.

General Course Purpose: Course will be required for the Hybrid and Electric Vehicle Technology CSC and may be used with program head approval as an elective for the Automotive Technology AAS degree, replacing a cooperative education course.

Course Prerequisites and Co-requisites:
Prerequisite: AUT 193

Course Objectives:
Upon completing the course, the student will be able to
a. Demonstrate the use of appropriate safety procedures in all areas of electronic guidance control system maintenance;
b. Diagnose and repair electronic guidance control system faults;
c. Identify the various electronic guidance control components and their relationship to electronic guidance control operation; and

Major Topics to Be Included:

a. Introduction to electronic guidance control systems
   1. History
   2. Introduction to GPS and GIS
   3. Introduction to satellite communications
   4. Types of vehicles manufactured with guidance control systems

b. GPS navigation systems
   1. System operation
   2. System components
   3. System diagnostics and repair

c. Radio and satellite communications
   1. System operation
   2. System components
   3. System diagnostics and repair

d. Guidance control systems
   1. System operation
   2. System components
   3. System diagnostics and repair

Effective Date of Course Content Summary: January 16, 2015