Dakota County Technical College

AUTM 2325: Computer Systems Operation Diagnosis and Repair

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 1

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites:
This course requires the following prerequisite
AUTM 2100 - Basic Automotive Electricity

Corequisites: None

MnTC Goals: None

This covers the operation and servicing techniques required to diagnose and repair ignition system related concerns encountered on modern automobiles.

B. COURSE EFFECTIVE DATES: 06/01/2010 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)

1. Access and use service information to perform step-by-step diagnosis
2. Check for module communication (including CAN/BUS systems) errors using a scan tool
3. Complete work order to include customer information vehicle identifying information, customer concern, related service history, cause and correction
4. Diagnose drivability and emissions problems resulting from malfunctions of interrelated systems (cruise control, security alarms, suspension controls, traction controls, A/C, automatic transmissions, non-OEM-installed accessories, and similar systems): determine necessary action
5. Diagnose emissions or drivability concerns resulting from malfunctions in the computerized engine controls with no stored diagnostic trouble codes: determine necessary action
6. Diagnose the causes of emissions or drivability concerns resulting from malfunctions in the computerized engine control system with stored diagnostic trouble codes
7. Identify and demonstrate industry recognized professionalism and safety procedures
8. Identify and demonstrate proper use of various automotive tools and equipment
9. Inspect and test computerized engine control system sensors, power train control module (PCM), actuators, and circuits using a graphing multimeter (GMM/digital storage oscilloscope (DSO): perform necessary action
10. Locate and interpret vehicle and major component identification numbers (VIN, vehicle certification labels, calibration decals)
11. Obtain and interpret scan tool data
12. Perform active tests of actuators using scan tool: determine necessary action
13. Research applicable vehicle and service information, such as engine management system operation, vehicle service history, service precautions, and technical service bulletins
14. Retrieve and record stored OBD I diagnostic trouble codes; clear codes
15. Retrieve and record stored OBD II diagnostic trouble codes; clear codes, when applicable

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted