



ENGINE PERFORMANCE 2 — AUTM 2324

A. Course Description

- **Credits:** 3.00
- **Lecture Hours/Week:** 1.00
- **Lab Hours/Week:** 2.00
- **OJT Hours/Week:** 0
- **Prerequisites:** None
- **Corequisites:** None
- **MnTC Goals:** None

This course covers the operation and servicing techniques required to diagnose and repair automotive computer system related concerns encountered on modern automobiles Pre-requisites: AUTM 1003, 1013, and 2314

B. Course Effective Dates: 8/21/17 – Present

C. Outline of Major Content Areas

As noted on course syllabus

D. Learning Outcomes

1. Access and use service information to perform step-by-step (troubleshooting) diagnosis.
2. Complete work order to include customer information vehicle identifying information, customer concern, related service history, cause and correction
3. Describe the importance of running all OBDII monitors for repair verification
4. Describe the operation of various computer inputs/outputs
5. Diagnose driveability 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, or similar systems); determine necessary action.
6. Diagnose emissions or drivability concerns without stored diagnostic trouble codes; determine necessary action.
7. Diagnose the causes of emissions or drivability concerns with stored or active diagnostic trouble codes; obtain, graph, and interpret scan tool data.
8. Diagnose/repair computer system faults on customer vehicles
9. Identify and demonstrate industry recognized professionalism and safety procedures

10. Identify and demonstrate proper use of various automotive tools and equipment
11. Inspect and test computerized engine control system sensors, powertrain/engine control module (PCM/ECM), actuators, and circuits using a digital multimeter (DMM)/digital storage oscilloscope (DSO); perform necessary action.
12. Perform active tests of actuators using a scan tool; determine necessary action.
13. Retrieve and record diagnostic trouble codes, OBD monitor status, and freeze frame data; clear codes when applicable.

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

F. Learner Outcomes Assessment

As noted on course syllabus

G. Special Information

None noted