ATEC 205: ENGINE PERFORMANCE II, ADVANCED FUELS

Continuation of ATEC 200. Emphasis on modern fuel-injection systems. Includes diagnosing fuelrelated drivability; emission testing; computerized inputs and outputs relating to fuel delivery and emission control; and an introduction to alternative fuels.

Course Student Learning Outcomes

1. Describe computer control inputs, outputs and operation as they pertain to fuel delivery and emissions.
2. List automotive fuel injection types, and operation.
3. Describe engine knocks, detonation, pre-ignition, and timing.
4. List and define emissions, testing, and the causes and results thereof.
5. Perform diagnosis and repair of fuel injection components including computerized inputs and outputs.
6. Demonstrate proper use of scan tools and digital storage oscilloscopes while diagnosing sensors and actuators associated with fuel injection systems.
7. Diagnose emission related problems.
8. Demonstrate proper use of a five gas analyzer.
9. Read with understanding in order to perform competently as an Automotive Technician.
10. Convey ideas in writing in order to perform competently as an Automotive Technician.
11. Communicate effectively to perform competently as an Automotive Technician.
12. Use math to solve problems and communicate to fulfill responsibilities of an Automotive Technician.
13. Understand the expectations of the workplace, the responsibilities of an Automotive Technician and the methods of securing employment within the field.
14. Demonstrate the ability to use technology effectively in the workplace.
15. Demonstrate professionalism in workplace appropriate dress and conduct.
16. Demonstrate the ability to work as a productive member of a team.

Credits: 6
Prerequisites: 2.0 or higher in ATEC 200 and ATEC 202.
Program: Automotive Technology