AUT 126 Revised: Fall 2020

# Virginia Western Community College AUT 126 Auto Fuel and Ignition Systems

## **Prerequisites**

**AUT 241** 

## **Course Description**

Studies automobile ignition and fuel systems, their functions in operation of engine. Includes carburetors, fuel pumps, ignition systems, troubleshooting, engine test and adjustment, tune-up.

Semester Credits: 5 Lecture Hours: 2 Lab/Clinical/Internship Hours: 6

## **Required Materials**

#### Textbook:

Fundamentals of Automotive Technology, Principles, and Practice, 2nd Edition, ISBN: 978-1-284-10995-5

#### Other Required Materials:

- Safety Glasses
- Closed-toe shoes
- CDX Automotive Interactive CD
- Publisher's online material
- ASE Online Prep Tests

#### **Course Outcomes**

At the completion of this course, the student should be able to:

- Explain, diagnose, and replace and/or repair the components within the automotive ignition systems.
- Identify and demonstrate the operation of a fuel injection system
- Test and adjust evaporative emission control systems
- Explain engine performance troubleshooting techniques and repair on computer controlled electronics.
- Test fuel and ignition systems using various scan tools for repair of onboard computer systems
- 71% of students completing AUT 126 will demonstrate how to diagnose, repair, and/or replace the
  components within the automotive ignition system by receiving a score of 70% or higher on the ASE
  entry-level certification test on engine performance or the final exam

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# **Topical Description**

<u>Week</u>	<u>Chapter</u>	<u>Title</u>
1	Ch. 69	Ignition System Components
2	Ch. 70	Ignition System Repair and Diagnosis
3 & 4	Ch. 71	Computer Fundamentals
5	Ch. 77	Fuel Pumps, Lines, and Filters
6 & 7	Ch. 78	Fuel Injection Components and Operation
8	Ch. 80	Electronic Throttle Control Systems
9 & 10	Ch. 81	Fuel Injection Diagnosis and Repair
11 & 12	Ch. 87	Onboard Diagnosis
13 & 14	Ch. 88	Scan Tools and Engine Performance Diagnosis
15		ASE test preparation & study guide review
16		Final Exam

<sup>\*</sup>Each week 30 minutes will be devoted to supervise on line interactive study in associated topics.

# **Notes to Instructors**

- Practical exam is given on week 16.
- If schedule allows, ASE test preparation quiz is helpful to students in determining future certification options.