

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
- 70% 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 student certification test on engine performance or the final exam

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

*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.