AUT 126

Auto Fuel and Ignition Systems

**Faculty Name: Tim Wray/Steve Hoback**

**Program Head: Danny Thomas**

**Dean’s Review:**

**Dean’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date Reviewed: \_\_\_/\_\_\_/\_\_\_\_\_\_**

**Revised: Fall 2015**

AUT126

**Auto Fuel and Ignition Systems**

**COURSE OUTLINE**

**Prerequisites:**

AUT 241 Automotive Electricity

**Course Description:**

[Auto Fuel and Ignition Systems](http://courses.vccs.edu/courses/AUT126-AutoFuelandIgnitionSystems) 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/Recitation Hours: 6**

**AUT 126 Auto Fuel and Ignition Systems**

**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 Test A8**

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Required Materials:

Safety glasses Sturdy closed shoes CDX Automotive Interactive CD

Textbook:

Automotive Technology principles, diagnosis and service – Pearson Publishers - Halderman 4th edition ISBN 978-0-13-254261-6

The following supplementary materials are available:

1. Publisher’s online material
2. ASE online prep tests

**AUT 126 Auto Fuel and Ignition Systems**

Topical Description: (Outline chapters and sections to be covered in the book – may include timeline)

Chapter Title

69 week 1 Ignition System Components

70 week 2 Ignition System Repair and Diagnosis

71 week 3 & 4 Computer Fundementals

77 week 5 Fuel Pumps, Lines, and Filters

78 week 6 & 7 Fuel Injection Components and Operation

80 week 8 Electronic Throttle Control Systems

81 week 9 & 10 Fuel Injection Diagnosis and Repair

87 week 11 & 12 OnBoard Diagnosis

88 week 13 & 14 Scan Tools and Engine Performance Diagnosis

 week 15 ASE test preparation & study guide review

 week 16 Final Exam

Each week 30 minutes will be devoted to supervised on line interactive study in associated topics

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Notes to Instructors

(List information about optional topics, departmental exams, etc)

1. CDX testing should be completed by week 15
2. Practical exam is given on week 16

1. If schedule allows, ASE test preparation quiz is helpful to students in determining future certification options