

COURSE OUTLINE

Revision: Howard Andersen, January 2013

DEPARTMENT:	Automotive Technology
CURRICULUM:	Automotive Technology
COURSE TITLE:	Fuel System Servicing
COURSE NUMBER:	AUT 138
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	3 weeks
CREDIT HOURS:	4
LECTURE HOURS:	15
LAB HOURS:	60
CLASS SIZE:	20
PREREQUISITES:	MVM 100 (Introduction to Automotive), AUT 100 (Basic Electrical Systems), AUT 102 (Advanced Electrical Systems), AUT 104 (Automotive Electronics), AUT 106 (Basic Power Accessories) and AUT 136 (Minor Tune-up Procedures) or equivalent, or instructor's permission

COURSE DESCRIPTION:

This course will cover gasoline ignition and fuel systems. Included are distributor waste spark and coil on plug ignition systems also fuel pumps both electric and mechanical, fuel injection throttle body, port fuel sequential and gasoline direct injection systems.

AUT 138 Fuel System Servicing

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Critical Thinking – Use problem solving skills to diagnose and repair automotive electrical problems. (SLO 4.1)
2. Technology - Proper use and care of automotive electrical repair tools and equipment. (SLO 5.1)

PROGRAM OUTCOMES ADDRESSED

1. Inspect, diagnose, disassemble, repair, replace and service each of the major systems in various types of vehicles. (SLO 4.1)
2. Locate sources, make parts write-ups, calculate costs and explain repair or service. (SLO 2.1 & 7.1)
3. Access and apply manufacturer's specifications in repair and replacement. (SLO 7.1)
4. Work safely and responsibly within all shop safety and environmental guidelines and standards. (SLO 6.4 & 6.5)
5. Demonstrate ability to pass the ASE test required for NATEF certification. (SLO 1.1, 1.2 & 7.1)
6. Demonstrate computer competency for accessing data and documenting service (SLO 5.1)
7. Communicate and document service records. (SLO 1.2)
8. Compute costs, time and measurements. (SLO 2.1)
9. Work independently and in groups to service, repair, test and maintain vehicles. (SLO 3.1 & 6.3)
10. Describe employer expectations for employees within the automotive industry workplace (SLO 7.2)
11. Use technology to test vehicles. (SLO 5.1)
12. Work with accuracy, dependability, proficiency and in a timely manner, when servicing equipment. (SLO 6.3 & 6.4)

TOPICAL OUTLINE:

APPROX. HOURS

I. Ignition systems and sensors	18
II. Fuel pumps,	8
III. Fuel tanks	5
IV. Fuel systems	8
V. Throttle Body Injection	5
VI. Port Fuel Injection	4
VII. Sequential Fuel Injection	7
VIII. Gasoline Direct Injection	5
IX. Troubleshooting	<u>15</u>
Total	<u>75</u>