



## **I. Course Overview:**

Upon successful completion of this course, the students should be able to Upon successful completion of this course, the students should be able to demonstrate an understanding of the principles, operations, and maintenance of automotive and light truck diesel electrical systems, lubrication, and exhaust systems, and emission control.

## **II. Units:**

### **Unit 1. Diesel Theory**

#### General Outcome:

- 1.0 The students should be able to describe the operation of diesel engines.

#### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 1.1 Identify each engine component and its relation to adjacent components.
- 1.2 Relate the differences between gasoline and diesel automotive fuels.
- 1.3 State the differences between gasoline and diesel engines, including references to each stage of fuel processing.

## Unit 2. Diesel Maintenance and Repair

### General Outcome:

2.0 The students should be able to discuss the maintenance requirements and repair procedures of automotive diesel engines.

### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 2.1 Perform all scheduled diesel engine maintenance procedures, including compression tests and resistance tests, with the use of shop manuals and factory service bulletins for reference.
- 2.2 Identify the causes of: (a) Diesel engine failures, (b) Rough idles, (c) excessive smoke, (d) Poor mileage
- 2.3 Perform selected diesel engine repairs, including injector pumps, injectors, and glow plug circuits, with the aid of shop manuals and factory service bulletins for reference.