



# Course Content for Automobile Engineering Training

45 Days

## 1. Automotive Service & Shop work

- Introduction to Automobile
- Your job in Automotive Service
- Shop work and Service Information
- Measuring Systems & Measuring Tools
- Automotive Fasteners, Gaskets & Sealants
- Shop Hand Tools
- Shop Equipment and Power Tools

## 2. Automotive Engines

- Fundamentals of Engine Operation
- Electricity & Electronic Engine Controls
- Piston-Engine Operation
- Engine Types & Classifications
- Valves & Valves Trains

## 3. Automotive Engine Systems

- Automotive Engine Fuels
- Engine Fuel & Exhaust Systems
- Superchargers & Turbochargers
- Electronic-Fuel-Injection Systems
- Fuel-Injected Fuel Systems: Diagnosis & Service
- Carburetors
- Carbureted Fuel Systems
- Diesel Fuel-Injection Systems
- Engine Lubricating Systems
- Engine Cooling Systems



## 4. Automotive Electrical & Electronics Equipment

- Automotive Electric and Electronics Systems
- Automotive Battery: Construction & Service
- Starting System: Operation & Service
- Charging System: Operation & Service
- Contact-Point Ignition System
- Electronic Ignition Systems
- Ignition System Diagnosis & Service
- Lights, Safety & Signaling

## 5. Engine Performance and Driveability

- Automotive Emission-Control Systems
- Servicing Emission-Control Systems
- Engine Test Equipment & Tuneup
- Engine Performance & Drivability Diagnosis

## 6. Automotive Engine Service

- Engine Service: Cylinder Head & Valve Trains
- Engine Service: Connecting Rods, Rod Bearings, Piston & Piston Rings

## 7. Automotive Drive Trains

- Automotive Clutches: Operation & Service
- Manual Transmissions & Transaxles
- Driveshaft, Universal Joints, Differentials, & Drive axles
- Four-Wheel Drive, Transfer Cases, Viscous Couplings
- Automatic Transmissions & Transaxles: Diagnosis & Service



## 8. Automotive Chassis

- Automotive Suspension Systems
- Automotive Steering Systems
- Wheel-Alignment, Steering, & Suspension
- Automotive Brakes
- Antilock Braking, Traction Control, & Brake Diagnosis
- Tires & Wheels : Construction

## 9. Automotive Heating & Air Conditioning

- Ventilation, Heating, & Air Conditioning