



HINDUSTAN

INSTITUTE OF TECHNOLOGY & SCIENCE
(DEEMED TO BE UNIVERSITY)

**DEPARTMENT OF AUTOMOBILE ENGINEERING
HINDUSTAN INSTITUTE OF TECHNOLOGY AND SCIENCE
PADUR – 603 103**

VEHICLE DIAGNOSTICS LABORATORY

Goal of the Lab course:

To provide practical knowledge on Vehicle Diagnostics and Maintenance

Objective of the course:

The course will enable the students to

1. Know about workshop layout, vehicle maintenance procedures and fault finding techniques.
2. Understand the maintenance and reconditioning procedure for automotive engines, chassis and auxiliary systems

Outcome of the course:

The student should be able to

1. Familiarize on workshop layout, vehicle maintenance procedures and fault finding techniques.
2. Acquire the knowledge on maintenance and reconditioning procedure for automotive engines, chassis and auxiliary systems

Description:

Vehicle Maintenance/ Vehicle Diagnostics Laboratory is one of the most significant and relevance practical laboratory in the Department of Automobile Engineering.

The following experiments are conducted:

1. Study the layout of automobile repair shop, tools and instruments.
2. Fault diagnosis of ignition, starting and charging system.

3. Fault diagnosis of petrol and diesel fuel system and filters & air cleaners.
4. Adjustment of pedal play in clutch, brake, hand brake and steering wheel.
5. Removal of tyre & tube.
6. Cylinder reboring.
7. Valve grinding and valve lapping.
8. Calibration of fuel injection pump
9. Wheel balancing and alignment
10. Brake bleeding and adjustment

The following equipment are available in the Lab

1. Cylinder compression pressure gauge
2. Vacuum gauge
3. Tachometer
4. Wheel balancer and
5. Wheel aligner
6. Tyre remover
7. Cylinder reboring machine
8. Valve grinding machine
9. Valve lapping machine
10. Fuel injection calibration test bench with nozzle tester

Faculty Incharge:

Dr. V. Ramanathan, M.E, Ph.D
Associate Professor

Lab Instructor:

Mr. Zhacharias Thomas