



## **Automobiles & Electric Vehicles**

### **Introduction:**

**Eager to learn Automobile and Electric vehicles!!!** Automobile and Electric Vehicles Workshop mainly focuses from Basics to Advanced concepts in Automobile Engineering. It covers chassis design, working of Suspension unit, Steering System, Braking unit, Transmission, Fuel Supply System, IC Engine and Advanced Technologies like ABS, EBD, DTS-Fi, MPFI, VVTI. All the concepts are explained in detail with the Help of Theory and With Specially Designed Animations which would help students to visualize Things before practically working on it.

### **Topics to be covered:**

#### **Session 1 (Introduction to Automobiles & IC Engines)**

- Introduction to Automobiles
- Introduction to IC Engines
  - 2 Stroke Engine
  - 4 Stroke Engine
  - 6 Stroke Engine
  - Crank Shaft Mechanism
  - Timing Valve Diagram
- Coolant used in IC Engines
  - Air Cooling
  - Water Cooling

#### **Session 2 (Superchargers / Turbochargers)**

- Supercharger
- Turbocharger

#### **Session 3 (Chassis & Suspension System)**

- Chassis
  - Introduction to chassis
  - Types of chassis
  - Technology used in chassis to prepare
- Suspension System
  - Types of Suspension system
  - Parts in Suspension system
  - Wheel Alignment



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#### Session 4 (Steering & Braking Mechanism)

- Steering mechanism
- Principle of Steering
- Steering Geometry
- Types of Steering
- Braking mechanism
- Different types of brake
- Source to apply brake
- Electronic Braking system

#### Session 5 (Transmission System)

- 2WD
- 4WD
- All wheel drive

#### Session 6 (Electrical Vehicles)

- Battery Management System
- Battery Thermal Management System
- Power Train
- Hybrid Vehicle

#### Benefits:

- Internship offers by the Organizing partner
- Training coupons
- Participation certificate from Wissenaire, IIT Bhubaneswar and Organizing partner.

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