

Vehicle dynamics and designing Course Content

Overview: Designing of engine parts in catia or solid works.

Day 1

Session 1 : Introduction to

- What is an automobile?
- Locomotion
- Automation

Session 2 : Chassis

- Intro
- Types
- Design

Session 3: Suspension Unit

- Types
 1. Weight transfer(sprung and unsprung)
 2. Jacking forces
 3. Material used

Session 4- steering system

- Steering principle
- Steering geometry
- Types

Day 2

Session 1 : Braking Unit

1. Disc brakes
2. Drum brakes
3. Magnetic brakes
4. Vacuum brakes
5. Anti Braking

Session 2 :Transmission system

- Types of Transmission system
- 1. Manual transmission
- Gear ratio
- Different types of gear
- Clutch & its components
- 2. Automatic transmission
- Torque converter
- Stator

Section 3: Engine cooling

- Turbochargers
- Superchargers
- Problems in IC engine
- Designing of engine parts at catia or solid works

Session 4 :

- Competition
- Certificate Distribution