

# **Formula Style Race car Designing**

## **Course Content**

**Overview:** Designing your own vehicle, even if you don't build it, can be a very rewarding experience. You'll learn a lot about how cars work and if you do build it, you'll be part of a select group of people who've taken on the challenge of building their dream

### **Day 1**

#### **Session 1:**

- Introduction
- Basics of Vehicle dynamics
- Basics of tire and performance

#### **Session 2:**

- Suspension design optimization and finalizing parameters.
- Ride, roll and pitch analysis -suspension rigidity design.

### **Day 2**

#### **Session 1:**

- Spring design and Damper selection.
- Braking system design and assembly Exploration.
  
- Steering System Design-vehicle cornering performance optimization.
- Vehicle Stability Design-Oversteer, understeer and stability calculations.

**Session 2:**

- Steering wheel and assembly design on solid works
- Vehicle Transmission assembly design.
- Engine power and Torque discussion.
- Engine Intake and Exhaust Discussion.
- Vehicle Overall assembly Discussion.
- Tips on manufacturing of vehicle.

**Section 3:**

- Competition
- Certificate Distribution