

COURSE CONTENTS

Session I:

- ❖ Introduction to Robotics
- ❖ Overview of Electronic Components
 - ❖ a. Batteries
 - ❖ b. Diodes, Resistors, Capacitor, Transistor and Many More
 - ❖ c. Motors, Motor types, Motor Drive, Actuators, Gears
- ❖ Look up at some of the advanced robots
- ❖ Doubts, queries, and additional information

Session II:

- ❖ Making of Robot Chassis- Battery Powered Robot
- ❖ Making of Robot Automatic Move, Forward, Left ,Right
- ❖ Obstacle Avoidance Robot using PIR Sensor
- ❖ Hands-on Training
- ❖ Doubts, queries, and additional information

Session III:

- ❖ Making of Line Follower Robot
- ❖ Making of Pit Avoid Robot
- ❖ Making of Light Follower Robot
- ❖ Testing the Robot
- ❖ Doubts, queries, and additional information

Session IV:

- ❖ Learning about Micro Controller- Arduino
- ❖ Experiments using Arduino Micro Controller
- ❖ Experiment to blink a LED
- ❖ Experiment to run a motor using PWM
- ❖ Experiment to Connect a PIR sensor for theft prevention system
- ❖ Experiment to Connect a Ultrasonic Sensor sensor for distance Measurement
- ❖ Doubts, queries, and additional information

Session V:

- ❖ Constructing own Robot Chasis, adding Motor and Drive Mechanisms
- ❖ Adding PIR Sensor to Arduino Micro Controller
- ❖ Experiment to run the Robot using Micro Controller
- ❖ Experiment to Connect a Ultrasonic Sensor sensor for Obstacle avoidance
- ❖ Programming the robot to make Autonomous Movements
- ❖ Programming to robot to make alarms when obstacle detected
- ❖ Doubts, queries, and additional information