

RoboCure: Robotics and Internet of Things Training

Duration & Fees

Fees:	INR 16999/-
Duration:	30 Hours
Deliverables:	Hardware Toolkit (Details Below) & Certificate of completion

Introduction

What can a candidate do after Complete Training?

1. **DIY: Autonomous Robots**
2. **DIY: Human controlled bots (Fantastic Five)**
 - a. **Android Controlled**
 - b. **Mobile DTMF controlled**
 - c. **Computer Controlled**
 - d. **RF controlled**
 - e. **Quadcopters**
3. **DIY: Raspberry setup and Using of GPIO**
 - a. **Using Python**
 - b. **Using Processing3**

Module Structure

This training module introduces you to latest Electronics like Raspberry Pi, Arduino, Relays etc. It will make you learn about the most important techniques related to Automation and Hardware controllers via Internet.

What Will You Learn?

Introduction to Electronics

- ✓ Electronics Vs Electrical
- ✓ What is Microcontroller?
- ✓ AC Current Vs DC Current
- ✓ Concepts of volt, Ampere and Resistance
- ✓ Microcontroller vs Microprocessors
- ✓ Controlling AC Devices with DC Current

Introduction to Robotics

- ✓ How to assemble a circuit on a breadboard circuit?
- ✓ Let's get acquainted with Arduino
- ✓ Development tools for Arduino IDE
- ✓ Using GPIO Pins in Arduino
- ✓ Code and play with LEDs

- ✓ Connecting Jumpers, breadboards and Arduino

Sensors and ICs

- ✓ Type of Sensors
 - IR Sensor
 - Sound Sensor
 - Light Sensor
- ✓ Application of IR Sensor in real World
- ✓ DTMF Module
- ✓ Bluetooth module
- ✓ WiFi Module

Create a Bot

- ✓ Setting up your Bot
- ✓ Coding for Bot
- ✓ Use of L293D IC
- ✓ Creating Circuit and Connections

- ✓ Run your bot

Introduction to Internet of Things

- ✓ Introduction of IoT
- ✓ Live applications of IoT
- ✓ Future scope of IoT
- ✓ Introduction to HTML and CSS
- ✓ Introduction to PHP
- ✓ File Handling in PHP
- ✓ Introduction to Processing3 Programming
- ✓ Setting up Devices
- ✓ Using Arduino with Relay
- ✓ Writing Arduino Code
- ✓ Test your Program

Little bit about Web Technologies

- ✓ Hosting your Website
- ✓ Website as Arduino GPIO Controller
- ✓ Using Arduino to control Home Appliances
- ✓ Hands-On Internet of things

Introduction to Raspberry Pi

- ✓ Setting up Raspberry Pi
- ✓ Application of Raspberry Pi in real life
- ✓ Using Python to control GPIO of Raspberry Pi
- ✓ Using Processing 3 to Control GPIO of Raspberry Pi
- ✓ Implementing Home Automation System using Raspberry Pi

Toolkit Details

S.No	Component	Quantity	Price(in INR)
1	Fiber or Mettalic Chassis	1	195
2	Caster Wheel	1	100
3	Motors	2	250
4	Wheels	2	100
5	Motor Driver	1	250
6	Batteries	2	25
7	Connectors	2	25
8	Jumper Wires(Mix)	30	110
9	Bluetooth Module	1	400
10	LEDs	10	50
11	Double Tape	1	20
12	Bright LED	1	150
13	Arduino Nano or Uno	1	500
14	Bread Board	1	180
15	Single Channel Relay	1	220
16	IR Sensors	2	200
17	Screw Driver	1	25
18	Fittings packet	1	180
19	Shipping		120
		Total	3100

Following Components are required in Training but not available in Hardware Kit:

- Raspberry Pi
- Micro SD Card
- Raspberry pi Case
- A Bulb
- Electric wire
- 2 Pin Plug

Students can Procure the above-mentioned Items themselves or from our website separately: <https://www.cctinternshala.in/buy-now>