

Content

Introduction to the Internet of Things

- The Internet of Things
- The Basics of Sensors & Actuators
- Introduction to Cloud Computing

The Arduino Platform

- Arduino Architecture
- Arduino IDE and Programming

Setting the Arduino Platform

- Connecting to Laptop
- Basic Programming
- Run Sample Programs

Connecting Arduino Platform to the Network

- Setting up the setting for Wifi Connectivity
- Connecting to Internet

Interface of Sensors

- Programming to read sensor data

Hands on : Turn on/off led using Sensor

Hooking Up the Relay

- How to use a Relay?
- Writing the program
- Control Electric Appliance using the Relay

Home Automation & Security System

- Combining the things learnt till now students will make smart Automation and Security System.
- The system will turn on the lights as someone is detected and also sends a automatic email in absence of the user.

Automated Tweeting

Hands on : Tweet a automated message using your IoT Device.

- Creating App on Twitter
- Integrating to talk to Twitter via App
- Scripting to automate tweet based on particular event

DHT Sensor -Sensing Temperature and Humidity

- Creating your own Weather Station

Setting up ThingSpeak

- Sending Data to Cloud

Number of Team Members: 4