Course Title:
Internet of Things from Beginners to Expert in 30 days.

Introduction:

1. Introduction to Arduino Hardware & IDE Arduino IDE Installation
2. Understanding Arduino Libraries
3. Working with Analog I/O's
4. Working with Digital I/O's
5. Software Serial Library in Arduino Working with PWM outputs.

Arduino Interfaces(Sensors - Displays - Serials):

1. Arduino Led Blinking
2. DHT11 Sensor Interfacing with Arduino UNO
3. Soil Moisture Sensor Interfacing with Arduino UNO
4. LM35 Interfacing with Arduino UNO
5. Ultrasonic Sensor HC-SR04 Interfacing with Arduino Uno
6. Gas Sensor Interfacing with Arduino Uno
7. 4x4 Keypad Interfacing With Arduino UNO
8. DC Motor Interfacing with Arduino UNO
9. LCD 16x2 Interfacing With Arduino Uno
10. OLED Graphic Display Interfacing With Arduino UNO
11. 7-Segment Display Interfacing with Arduino UNO
12. GPS Module Interfacing With Arduino UNO
13. Sim900A GSM Module Interfacing with Arduino UNO
14. HC-05 Bluetooth Module Interfacing with Arduino UNO
15. ESP8266 WiFi Module Interfacing with Arduino UNO

Arduino & Actuators:

1. Working with Actuators (DC Motor, Servo Motor and Relay)
2. Controlling Motor directions and RPM speed
3. Applying Bluetooth Technology to control Actuators
4. Building wheel robots with actuators

Arduino & IoT Cloud:

1. ThinkSpeak IoT Platform
2. AWS IoT Platform
3. Sending sensors data to the cloud server

Hands on Projects (Arduino Based):

1. Smart Garbage Bin
2. Child Safety Tracking system
3. Smart & Secure Agriculture
4. Child Safety with ESPCAM 32 with Telegraph / Gmail / Whatsapp
5. Smart Health Monitoring System with ThinkSpeak Cloud
6. Bluetooth Controlled & Obstacle Detection Robot
7. Home Automation