National Institute of Electronics & Information
Technology Near IIT Patna, Amhara, Bihta,
Patna(Bihar) -801106

Details of the Course

Name of The Course: Industrial Training & Internship in Internet of Things (6 weeks)

Duration (in Hrs.): 60(6 weeks)
Fee (in Rs.): Rs 2974/-
Eligibility: Diploma/B.Sc./B.Tech/ In Electronics, Electrical, Instrumentation Engineering, Computer Science, IT or its equivalent/BCA/MCA. (Completed or Pursuing).
Contact No.: 6287942205

Email ID: ankit@nielit.gov.in
Apply Online:
http://nielitpatnaonline.in/onlinecourse/Certificate_Course.php?fbclid=IwAR3a0xB-VpOGOnUhGwfQSdPuDrQvsIRr56stjObTfKq8YN3PUJGEEC1qqek

Course Content:

IoT Evolution, Introductions, IoT Terminologies, IoT Building Blocks, IoT Architecture, IoT Applications, Scope and Case Studies

Introduction to Sensors & Actuators, Working Principle, Types of Sensors, Sensors for IoT, Actuators for IoT

Introduction to IoT hardware platforms, Microcontrollers basics, Arduino, Components of Arduino Board, Serial Serial Communication Protocols, GPIO, Timer

Arduino IDE, Basics of C Programming, Arduino Programming, Data Types, Operators and expressions, Conditional statements, Function, Array, Object-oriented programming, Digital I/O interfacing, LED, Button, Analog Interfacing, Potentiometer, PWM, Interfacing various sensors to Arduino DHT11, Ultrasonic, LDR, Touch, IR, Water level, Sound, Air Quality. etc., LCD, Keypad, OLED, Buzzer

Basics of Wireless communication, Networking fundamentals, IoT stack, Wireless protocols for IoT, Personal area networks, IEEE 802.15.4, XBee, Bluetooth Classic, HC05, ESP8266, Bluetooth HCO5, NRF24L01, Introduction to ESP32, ESP32 Dev kit, GPIOs, WiFi modes, WiFi module configuration, Client Server Model, Web Server Development, HTTP Client, Device control and Monitoring, Classic Bluetooth, Interfacing with Smartphone, Device control and monitoring using Bluetooth, BLE Server, Configuration

Single Board Computer, Introduction to Raspberry Pi, RaspberryPi Board: Hardware Layout and Pinouts, Operating Systems on RaspberryPi, Booting RPi, Interacting and configuring the RPi OS, Networking the RPi, Remote access, Python packages for IoT, Rpi Hardware interfaces, GPIO and interfacing peripherals, Sensor Interfacing, Webserver, Node-RED, Wiring Pi, MQTT, Thingspeak, Thingspeak MQTT API, IoT application development using RPi