

## Certificate Course

on

# IoT System Development : **Connect Things Easy**

**RIG – IoT and Wireless Communication**

**Dept. of ECE, ASIET**

**5th February 2024 – 31st March 2024**

**Duration: 30 Hrs**

### About the course

The course offers a hands-on experience for beginners to delve into the world of IoT. Participants will get an opportunity to work with Node MCU and Raspberry Pi, and grasp the cutting edge IoT technologies and protocols. The course fosters a deep hands-on experience in designing IoT based systems focussing on data transfer to Thingspeak server, utilizing MQTT on the node, digital and analog sensor interfacing.

### Course Contents

- Introduction to Node MCU (ESP 8266)
- Sensors interfacing with Node MCU
- Introduction to IoT protocols
- Data upload to Thingspeak server
- Introduction to MQTT protocol
- Node MCU as MQTT client
- Publish and subscribe from Node MCU
- Publish Sensor Data to Adafruit IO Platform
- Node Red and its applications
- MQTT nodes on Node Red
- Uploading data from sensors to Node Red UI application using MQTT
- MQTT with Raspberry Pi
- Projects using Node MCU and Raspberry Pi

### Course Benefits

- Certificate upon completion
- Completely Hands-on
- Core domain exposure
- Useful for mini and main projects

### Scope

Internet of Things (IoT) is paving its way to make the world a smarter place to live in. IoT transforms our homes, workplaces, and cities with an increasing number of internet-enabled devices. IoT refers to the interconnection of everyday objects with the internet. With the advancement in AI and learning through machines, the prospects in IoT have risen remarkably. It finds its application in various domains like home automation, where smart devices, often powered by ESP8266 or Raspberry Pi, can be controlled remotely for increased convenience and efficiency. The future of IoT is billions of cheap, small, low-powered devices that provide real-time insights into every asset, process and system. It would be invisible, ubiquitous and primarily driven by notifications.

Register Now



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### Contact:

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