**Course Title: Development of IoT application with Node MCU & Cloud Computing**  **Course Code: IR 110**

## Course Background / Summary:

This is an introductory course aimed at providing participants with the fundamental concepts of the Internet of Things (IoT). This course will emphasize the technical knowledge and skills on how to develop an IoT system using NodeMCU controller board and MQTT to publish the data to the broker

## Course Objectives:

- Hardware and software interfacing with NodeMCU.
- Integrated mobile apps with NodeMCU.
- Publish NodeMCU data to cloud.

## Target Audience:

- Engineers, IOT Analytics, Fresh Graduates, Industrial Workers

## Course Duration: 4 Days

## Course Contents

### 1.0 Introduction to Technology

### 2.0 NodeMCU: Hardware Interfacing
- Introduction to NodeMCU
- NodeMCU Pin configuration
- Getting Familiar with IDE Compiler
- Installing NodeMCU libraries to IDE Compiler
- Practical Activity: NodeMCU with Digital Input/ Output Device
- Practical Activity: NodeMCU with Analog Input/ Output Device

### 3.0 Integrated NodeMCU with Mobile Apps Platform
- Introduction to Blynk Platform
- Include Blynk Libraries in Compiler
- Blynk Widget and Its Properties
- Practical Activity: Integrate Blynk Widget with NodeMCU

### 4.0 Cloud Computing
- Introduction to Cloud Computing
- Architecture of Cloud Computing
- Cloud Storage
- Practical Activity: Publish DHT11 data from NodeMCU to Cloud

IR 4.0 / ICT