Date: 10-10-2025

IOT: Hands-On Workshop ForFuture Innovators

Introduction: The IoT Handson training program is emerging as a ground breaking field, transforming the landscape of computing, communication, and sensing. The Internet of Things ('IoT'), all-embracing heterogeneous networks of smart devices hyper-connected with each other via the Internet. Notably, the IoT is transforming and disrupting our daily lives faster than any other technology before. The aim of workshop to discuss real life use cases on IoT application and make the session really interactive by providing an opportunity to suggest a solution to real life scenario also has been include to discuss some bonus: IoT demo applications with Arduino and NodeMCU. Day ended with the demonstration of live project such as Weather monitoring, etc.

The session began with an address by the HOD-ECE, who welcomed the participants and emphasized the importance of emerging technologies like IOT in shaping tomorrow's world. Following the HOD-ECE words of encouragement, the session was handed over to the resource person, **Prof S.Premkumar**, who conducted a Two days on the theme *"IOT: Hands-on Workshop For Future Innovators".*

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Objectives :

- Different types of Arduino board such as Arduino Uno, Arduino Uno R3 SMD, Ardino Pro 3.348 MHz , Arduino mini , Aurdino Ethernet, NodeMCU and there characteristics (Power supply, clock speed, Digital I/O, Analog Input, PWM modulation and different kinds of interfacing.
- Wi-Fi module Programming with Arduino.
- Interfacing of sensors and uploading data on cloud.

- For Interfacing different types of sensors with Arduino and Arduino with data base ,different programming steps have been discussed (function , statement ,control statement levels variables, math, pin mode, serial mode, digital mode variable, delay and for loop)
- Interfacing and controlling various devices like LED, motors, sensors etc with Arduino and NodeMCU.
- Four examples have been taken as a hands-on such as LED glow, Switch sensing,Temperature display, small motor controlling.

Speaker's Details : Prof. S. Premkumar, Vice-Pricipal, Department of ECE, Adhipaaraskathi College of Engineering, Tamilnadu.

Convener : Dr. S. Sugumaran, Mrs.V.G.Hamsaveni & Mr.P. Bharath Kumar

Date :10.10.2025 & 11.10.2025

Target Audience : **III year** Students

Organized by : Department of ECE, IIC & IIIC cell, SITAMS.