NARAYANA ENGINEERING COLLEGE::NELLORE
AUTONOMOUS

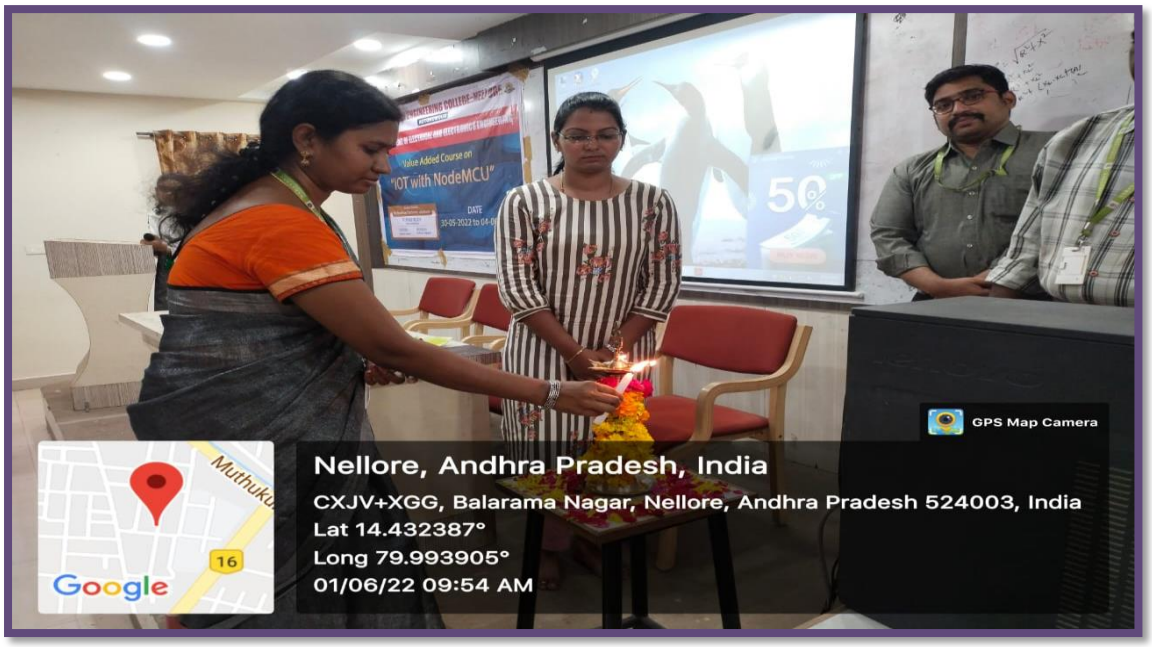
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Report on Value Added Course – IoT with NodeMCU

A value added course on "IoT with NodeMCU" was conducted by the Department of EEE for the students of Second Year EEE from 30th May 2022 to 4th June 2022.

The objectives of the course were to introduce the students to the core concepts of Internet of Things (IoT), make them understand the building blocks & characteristics of IoT and to explain the role & scope of smart sensors for ensuring convergence of technologies.

The course covered various topics starting from the basics of IoT, different operating systems used on IoT, basics of the different programming languages related to IoT and more. The students were also given hands on training during the practical sessions, where the students experienced and understood how to use the different boards such as Raspberry Pi and Intel Edison Boards. The students also performed simple programs using different components and sensors during the practical session.



The internet of things (IoT) is connecting the devices and tools to the internet network to be controlled by websites and smart phone applications remotely, also, to control tools and instruments by codes and algorithms structures for artificial intelligence issues. In case we want to create advanced systems using python algorithms, Wi-Fi or Ethernet connection is connected to

our tools, equipment, and devices controlling them by smart phone applications or internet websites. That's actually the simplified definition of IoT.

Farther than just using the IoT as a smart home to operate lamps or other home-use devices, it can be used as a security system or an industrial-use system, for example, to open or close the main building gate, to operate full automatic industrial machine, or even to control internet and communication ports. And more ideas can be done by using IoT technology. A huge industrial facilities or governmental institutions have much of lamps. Employees sometimes forget to turn them off in the end of the day. This research suggests a solution that can save energy by letting the security to control lighting of the building with his smart home by Blynk application. The lamps can be controlled by switches distributed in the building and Blynk application at the same time with a certain electrical installation. This research presents a simple prototype of smart home, or the easy way and low cost to control loads by Wi-Fi connection generally.

Dr K. Murali, HOD of ECE Department gave felicitation and motivated the students to develop innovative products and effective use of IoT to enhance their knowledge. The students appreciated the course instructors for their effective coaching and told that the course would be of most useful to them for their projects and finding new products as well as their career.

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