A Report on

One-week national level

Faculty Development Programme (FDP) on

"Embedded Systems, Smart Sensors for IOT Applications"

From 27 -05-2019 to 01-06-2019

Academic Staff College organised a one-week national level Faculty Development Programme (FDP) on "**Embedded Systems, Smart Sensors for IOT Applications**" from 27-05-2019 to 01-06-2019. The FDP was a jointly organised programme by Academic Staff College and Dept. of Computer Science and Engineering, KL University in association with Electronic and ICT Academy of NIT, Warangal. The FDP was financed by the Ministry of Electronics and Information Technology (MeitY), Govt. of India.

The programme was coordinated by Dr. J. Ravi Kumar, Associate Professor, Dept. of ECE, NIT-Warangal and Dr. G. Sai Krishna Santhosh, Associate professor, Dept of ECE, KLEF. The one-week FDP was successfully conducted by Dr. J Ravi Kumar, Associate Professor, Dept. of ECE, NIT-W; Mr Madhu, Founder, Orange research Laboratories, Hyderabad; Mr Nagendra Bandi, Corel Technologies, Hyderabad and Dr M Satish, Asst Professor, Dept of ECE, NIT Warangal.

The resource persons conducted the hands on sessions besides delivering the resource lectures.

The resource persons dealt with the following areas:

Dr. J Ravi Kumar from NIT Warangal dealt with „Introduction to Embedded Systems", „Introduction to Audrino Architecture" and „Interfacing Motors and drivers to Arduino boards", „Introduction to sensors and Interfacing", „Interfacing blue tooth Module to Arduino and implementing IOT Applications".

Mr. Madhu from Orange research Laboratories, Hyderabad conducted hands on sessions [Lab sessions] on „Introduction to Raspberry Pi", „Architecture and Basic Pin out", Python Programming, Basic concepts and syntaxes in Python", „Getting Started with RPi", „Booting OS", „Configuration of RPi", „Interfacing sensors", „Reading data from sensors with Raspberry Pi", „Creating a Channel at OLP Dashboard", „uploading data for visualization at OLP", „Deploying Device at OLP Dashboard", „device connectivity through cloud", „Socket communication", „building an IoT Gateway".

Mr. Nagendra Bandi from Corel Technologies, Hyderabad conducted practical sessions on „Embedded Processors‟, „FPGA architectures‟, „Embedded system design using PYNQ boards‟ and „Implementation of IOT on PYNQ board‟.

Dr. M. Satish from NIT Warangal conducted practical sessions on „MQTT Protocol‟, „Gateway Implementation over Wireless Network‟, and „IOT Application Using ESP32.
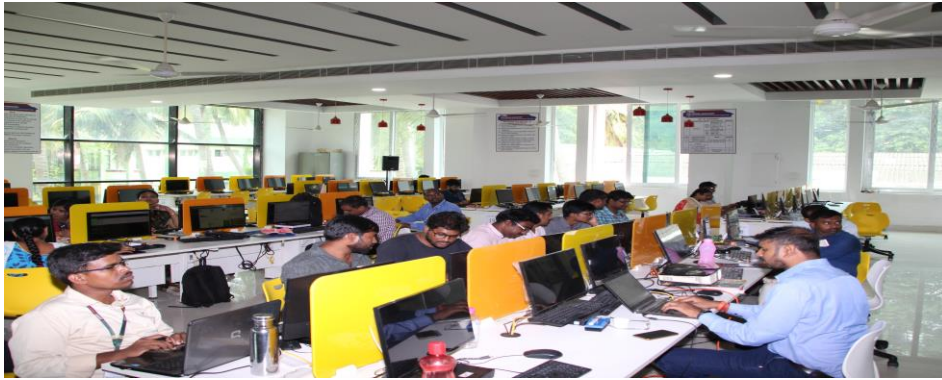
A good number of participants from A.P. and Telangana attended the FPD and expressed their feedback that the FDP helped them to learn key issues on *Embedded Systems, Smart Sensors for IOT Applications* which will enable them to conduct effective lab sessions in their respective departments and labs.

The resource persons were facilitated with shawls and mementos by Dr. V. Rajesh, Principal of ASC, Dr. Ch. Sri Kavya, Head, Dept. of ECE and Dr. B. Siva Nagaiah, Vice-Principal of ASC.

Dr. J Ravi Kumar, NIT Warangal

Participants doing Hands on Practice

Mr. Madhu, Orange research Laboratories

Mr. Nagendra Bandi, Corel Technologies

Dr. M. Satish,NIT Warangal

Group Photo