

REGISTRATION FORM

FACULTY DEVELOPMENT PROGRAMME
on
Industrial IoT and Cyber-Physical
Systems
(11th to 15th April 2023)

1. Name of Applicant:
2. Sex: Male/Female
3. Designation:
4. Highest Qualification:
5. Department:
6. Teaching Experience (Years):.....
7. Name/Address of affiliated College/Organization:
.....
8. Phone/Mobile No.:
9. E-Mail:
10. Food Preference: Veg/Non-Veg

DECLARATION

I declare that the information furnished herewith is true to the best of my knowledge and belief. I agree to abide by the rules and regulations governing the course. If I am selected, I shall attend the course for the entire duration.

Signature of the applicant:

SPONSORSHIP

This is to certify that Dr./Mr./Ms..... is a faculty member of our institution and is hereby sponsored for the Short term course on Industrial IoT and Cyber-Physical Systems. The applicant would be permitted to attend the course if selected.

Signature of Head of Institution

Office Seal

Who Can Attend

- The FDP is open for faculty of APJ Abdul Kalam University (APJAKTU) affiliated Engineering Colleges.
- Participants from Govt Organisations and Industries are also welcome.

Advisory Committee

Very Rev.Msgr.Wilfred E
Manager , Marian Engineering College
Dr.David J
Principal , Marian Engineering College
Dr.Samson A
Dean , Marian Engineering College
Rev.Fr.Sudeesh A.
Bursar , Marian Engineering College
Prof. Keerthi Krishnan (HOD/CSE)

FDP Coordinators

Dr.Jayaprakash (Professor/CSE)
Dr. Sheeja Agustin(Professor/CSE)
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FACULTY DEVELOPMENT PROGRAMME

on

Industrial IoT and Cyber-Physical Systems

11th April – 15th April 2023

Sponsored by

**APJ ABDUL KALAM
TECHNOLOGICAL UNIVERSITY**



Organized by

**DEPARTMENT OF COMPUTER
SCIENCE & ENGINEERING**

(Accredited By NBA)

**Marian Engineering College
Kazhakootam - 695582**



Resource Persons

Sankar Karupannan, Director,
Mathiimigal Technologies,
Bengaluru

Dr.V. Ananthanarayanan, Amrita
School of computing, Coimbatore

Dr. S. Arumuga Perumal , Director,
Riyasaa Labs, Nagercoil

Important Dates

Last Date Of Registration -**4th April 2023**

Confirmation Of Registration - **6th April 2023**

Registration

The participants have to fill and submit the Registration form through mec.cse@marian.ac.in. Selected Participants will be intimated by Email. No registration fee for the faculty of APJ Abdul Kalam Technological University.

Link - bit.ly/FDP_KTU



About Us

The Marian Engineering College established in 2001 is affiliated to APJ Abdul Kalam Technological University (KTU). The College is being managed by the Trivandrum Social Service Society (TSSS) which is under the control of Trivandrum Latin Catholic Archdiocese. The long term vision is to establish a high level centre of learning, comparable to international standards with research and academic atmosphere to foster engineering education in the private sector. The rich experience gained by the Archdiocese in running educational institutions of superior quality over half a century is the driving force behind this venture. Approval from the All India Council for Technical Education (AICTE), Government of India, New Delhi is obtained for running this professional college.

About the department

The Computer Science & Engineering Department takes pride in being abreast with the latest requirements of the industry and the changing technological environment. A department that develops self-esteemed, creative, and competent computer engineers focusing on the progress of society.

FDP Details

This training program will be blended with a right combination of conceptual and practical sessions spanning the state-of-the-art technologies in IoT with required breadth and depth.

All participants will get hands-on exposure to Sensors, Actuators, protocols like UART, I2C, SPI, Modbus, ZigBee, BLE, Wi-Fi, GPRS, 4G/LTE, NB-IoT, LoRa, Arduino programming,

embedded C program for Arduino platforms, ARM-based Cortex M Series MCUs, Python program for RPi Pico (End devices) RPi based Single Board Computers, LAMP / WAMP Servers, Cloud Interface, IoT Core, Python-based Data Analytics, Predictive maintenance and Decision support systems and IoT Security

Course Content

The course mainly focuses on the following topics.

- Introduction to Industrial Internet of Things
- Wireless Sensor Networks – Role of BLE Mesh and Wi-Fi Mesh in IoT
- Embedded System design using ARM Cortex M Series MCU – ESP32- Usage of GPIO , Analogue Sensors and UART – Arduino Platform
- Integration of IoT End Node (ESP32 based) with Thing Speak Cloud and deployment of closed loop end-to-end IoT application
- IoT Enabling Technologies – Infrastructure, IP Addressing, Network Protocols
- Implementation of MQTT protocol using ESP32 as MQTT Client and Free on line MQTT broker
- IoT based Smart Home Simulation using Cisco Packet Tracer etc.