

Skill Development Programme

under

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

IoT and Embedded Systems

July 1– July 30, 2024



Organized by

**PDPM Indian Institute of Information Technology,
Design and Manufacturing Jabalpur**

Course Contents

- Introduction to IoT and Embedded Systems
- Physical Interfacing. Connecting Input Devices.
- Programming with SBC (ESP32, Raspberry PI),
- Data acquisition and sensor integration.
- IoT communication protocols (MQTT, CoAP, HTTP).
- Wireless communication standards(Wi-Fi, Zigbee, etc.)
- IoT device management and security.
- IoT Architecture and cloud platforms for IoT.
- Understanding event-driven architecture.

Hand's On

- Physical Design: using Arduino UNO Thinker CAD simulator. I/O with UART, I2C, SPI, PWM, ADC, DAC. Actuators using stepper/DC/ BLDC Motors.
- Network Design: with ESP32, Raspberry PI. REST API, MQTT, Wi-Fi, Bluetooth, LoRA, and Zigbee. Virtualization with VM Hypervisor, Docker.
- Logical Design: Basic Python, Data Visualization, Data Analytics IoT Dashboard Design Technology. ThinkSpeak/AWS/Azure Clouds. Kubernetes, Flask, and Django Web development frameworks. Use cases demonstration.

Course Coordinators

Dr. Munesh Singh, and Dr. Vijaypal Singh Rathor
Assistant Professor, Department of CSE,
PDPM IIITDM Jabalpur

Programme Features

- Instructor-led rigorous hands-on sessions with online and offline sessions.
- Opportunities to improve skills for getting jobs based on course and connect with experts from academia.
- Certificate of completion on successful completion of the course with full access to the course material.

Patron

Prof. Bhartendu K. Singh,
Director, IIITDM Jabalpur

Registration Details

- Registration link** – Please fill out registration using the following link:
<https://forms.gle/22Dyd6RC5Bu1d4Pc7>
- Registration fee: 500/- INR (Refundable on Successful completion of the course)**
- Accommodation is available on a payment basis if needed

Last Date for Registration: June 29, 2024

Contact Details

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Online payment details:

- Internet banking**
Beneficiary Name: PDPM IIITDM Jabalpur
Bank Name: INDIAN BANK
A/C No. : 50018692852
IFSC Code: IDIB000M694
Branch: Mehgawan(6433)
- UPI ID:** iiitdmj@indianbk

SCAN & PAY

