

## About Electronics & ICT Academy at PDPM IITDM Jabalpur

The Ministry of Electronics and Information Technology (MeitY), Government of India has instituted Electronics and ICT Academies in the year 2015. In the second phase, the academy at PDPM IITDM Jabalpur aims at scalable training programmes in niche areas of Electronics and ICT for the development of the required knowledge base, skills and tools to unleash the talent of the Indian population. In addition to the faculty development programmes (FDPs) on fundamental and advanced topics in electronics, information and communication technologies, the Academy conducts customized training programmes for students, corporate sectors and research promotion workshops in emerging areas. The Academy is identified by the MeitY as the central hub of activities on training, internships, research, and consultancy programmes.

### About PDPM IITDM Jabalpur

PDPM IITDM Jabalpur was established in 2005 with a focus on education and research in IT-enabled Design and Manufacturing. Since its inception, PDPM IITDM Jabalpur has been playing a vital role in producing quality human resources for contribution to India's mission of inclusive and sustainable growth. The Institute offers undergraduate, postgraduate and PhD programmes in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Design and PhD programmes in Mathematics, Physics and Literature. Further, the Institute offers an undergraduate programme in Smart Manufacturing. Under IIT act, the Institute has been declared as an Institute of National Importance. The Institute campus is developed on 250 acres of land close to Dumna Airport, Jabalpur. The Institute is 10 kms from the main railway station and 5.5 kms from Dumna Airport, Jabalpur.

## Faculty Development Programme

### Leveraging AI for Information and Cybersecurity

The course is designed to provide fundamental knowledge of artificial intelligence (AI) and emerging research areas with an emphasis on AI-driven security solutions for network security applications. The purpose is to equip teachers of higher and technical education with the skills required to train students on advanced AI techniques with hands-on experience in developing and implementing AI models for enhancing network security and addressing modern cybersecurity challenges.

**Who can attend:** The Programme is open to faculty from all colleges, universities, and technical and professional institutes. Students, fresh graduates, researchers, and industry personnel working in allied disciplines can also attend.

### Important Dates:

Last Date of Online Registration: **January 20, 2025**

FDP Dates: **January 23-31, 2025**

### Coordinators:

Dr. Munesh Singh

Computer Science and Engineering

PDPM IITDM Jabalpur

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## Faculty Development Programme

### Leveraging AI for Information and Cybersecurity

**January 23-31, 2025 (online mode)**



### Electronics and ICT Academy, Phase II



*An Initiative of  
Ministry of Electronics and Information Technology,  
Government of India*



PDPM Indian Institute of Information Technology,  
Design and Manufacturing, Jabalpur Dumna  
Airport Road, Jabalpur 482005

## Faculty Development Programme Leveraging AI for Information and Cybersecurity

January 23-31, 2025 (online mode)

### RESOURCE PERSONS

- Dr Sanjeev Patel, NIT Rourkela
- Dr. Sanjeet Nayak, IIITDM Kancheepuram
- Dr. Vijaypal Rathor, IIITM Gwalior
- Dr. Kshira Sagar Sahoo, SRM Amravati
- Dr Durgesh Singh, IIITDM Jabalpur
- Dr Neelam Dayal, IIITDM Jabalpur
- Dr Munesh Singh, IIITDM Jabalpur
- Mr. Ankur Mudgal, IIITDM Jabalpur
- Dr.Sriramalu Bojjagani, SRM Amaravati
- Dr. Ram Prasad Padhy IIT Bhubaneswar
- Dr. Sanjay Panda, NIT Warangal

### COURSE COORDINATORS

Dr. Munesh Singh, Assistant Professor, CSE  
PDPM IIITDM Jabalpur  
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### Course Contents

- Introduction to Network security.
- Introduction to SDN security.

- Hardware-Based Security Threats, Attack for AI-Enable IC Design
- AI assisted Security Primitives for Securing Digital System Design.
- Cloud data security.
- Deep learning for digital watermarking for image authentication and restoration.
- Optimizing IoT Security: The Role of Feature Selection in Cyber Attack Detection
- Bringing Transparency to IoT Security: Explainable AI for DDoS Defense
- Adversarial machine learning for SD-IoT network.
- Malware Analysis.
- Facing Modern Challenges in Mobile Application Security: Insights for Advanced Penetration Testing.
- Applications of artificial intelligence in cybersecurity.
- Artificial Intelligence in Cyber Security

### Hands-On Sessions

- Introduction to various tools.
- Design, Simulation and Testing of Digital Circuit
- Simulation of SDN framework using Mininet and Scapy.
- Generating attack and background traffic.
- Dataset creation and analysis.
- AI for attack detection, AWS-S3 Security
- AI for cybersecurity

### Programme Features

- Application of artificial intelligence in Network security.
- Opportunities to connect with experts in the field.
- Instructor-led rigorous hands-on sessions with online (live streaming) sessions.
- Certificate on successful completion with full access to the course material.

### Registration Details

- Registration link – Please fill out registration using the following link:  
<https://forms.gle/1pU2WzY8eeSC5EMd9>
- Registration fee: 500/- INR
- Last Date for Registration: **January 20, 2025**

### Online Payment Details

#### Internet banking

Beneficiary Name	PDPM IIITDM Jabalpur
Bank Name	INDIAN BANK
A/C No.	50018692852
IFSC Code	IDIB000M694

- **UPI ID: iiitdmj@indianbk**

