

About Electronics & ICT Academy at PDPM IITDM Jabalpur



The MeitY, Govt of India, instituted Electronics and ICT Academies in the year 2015. In the 2nd 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. The Academy is identified by the MeitY as a hub of activities for capacity building through training, internships, research, and consultancy programmes in fundamental and advanced topics in electronics, information and communication technologies. The Academy conducts customized academic programmes for students, the corporate sector, and researchers.

About MITS-DU Gwalior

Madhav Institute of Technology & Science (MITS), Gwalior, established in 1957 by Sir Jiwaji Rao Scindia, is a premier technical institution in India. Declared a Deemed University in 2024 under Distinct Category by Ministry of Education, Government of India and accredited with an A++ grade by NAAC. MITS offers undergraduate, postgraduate, and doctoral programs in various engineering and technology disciplines. The institute is committed to providing quality education, fostering research, and offering innovative courses to meet global advancements.

Faculty Development Programme On

Smart and Secure Communication Systems: Role of 5G, 6G, and Quantum Technologies

The programme is designed to provide fundamental and advanced knowledge of emerging smart and secure communication technologies, forming the foundation for next-generation intelligent wireless systems. It will cover the evolution from 5G to 6G, wireless communication fundamentals, AI/ML in 6G networks, intelligent reflecting surfaces, visible light communication, physical layer security, and quantum communication with QKD concepts. The programme also includes hands-on sessions on 5G Core and gNodeB configuration, MATLAB/LabVIEW-based simulations, AI/ML techniques, and quantum communication experiments to develop practical skills for modern communication system design and analysis.

Who can attend: Suitable for faculty from colleges, universities, and technical and professional institutes can attend. Students, fresh graduates, researchers, and industry personnel working in allied disciplines can also attend.

Important Dates:

Last Date of Online Registration: November 14, 2026

FDP Dates: 16 – 23 November 2026

Coordinators:

Dr. Matadeen Bansal, IITDM Jabalpur

Dr. Laxmi Shrivastava, MITS-DU Gwalior

Dr. Mukesh Kumar Mishra, MITS-DU Gwalior

Dr. Kumar Gaurav, MITS-DU Gwalior

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Faculty Development Programme On

Smart and Secure Communication Systems: Role of 5G, 6G, and Quantum Technologies

Jointly Organized

by

**Electronics and ICT Academy
IITDM Jabalpur**



and

**Madhav Institute of Technology &
Science- Deemed University
(MITS-DU), Gwalior**



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



Faculty Development Programme

On

Smart and Secure Communication Systems: Role of 5G, 6G, and Quantum Technologies 16-23 November 2026 (Online Mode)

Resource Persons

- Prof. Vimal Bhatia, IIT Indore
- Prof. Aditya Trivedi, ABV-IIITM, Gwalior
- Prof. Yogendra Kumar Prajapati, MNNIT Allahabad, Prayagraj
- Mr. Arka Mukherjee, Scientist G, CDoT, New Delhi
- Dr. Bhaskar Kanseri, IIT Delhi
- Dr. Om Jee Pandey, IIT BHU
- Dr. Prabhat Sharma, VNIT Nagpur
- Dr. Mahendra Shukla, ABV-IIITM Gwalior
- Dr. Pragya Swami, ABV-IIITM Gwalior
- Dr. Matadeen Bansal, IIITDM Jabalpur
- Other faculty members from IITs, NITs, IIITs, and industry experts.

Coordinators

Dr. Matadeen Bansal, IIITDM Jabalpur
Dr. Laxmi Shrivastava, MITS-DU Gwalior
Dr. Mukesh Kumar Mishra, MITS-DU Gwalior
Dr. Kumar Gaurav, MITS-DU Gwalior

Course Contents

- Evolution from 5G to 6G: Vision, requirements, and use cases
- Quantum communication fundamentals and Quantum Key Distribution (QKD)
- Fundamentals of wireless communication and fading channel models
- Advanced multiple access techniques
- Artificial Intelligence and Machine Learning in 6G networks
- Intelligent Reflecting Surfaces and smart radio environments
- Visible Light Communication for beyond 5G systems
- IoT and aerial communication networks in 6G
- Physical layer security in next-generation wireless networks

Hands-On Sessions

- Configure and bring up the 5G Core, IMS, and gNodeB.
- Analyze NGAP packets between gNodeB and Core Network during UE attachment.
- Basic quantum communication simulation (QKD concepts)
- Simulation of 5G use cases and performance evaluation
- MATLAB-based wireless channel modelling and fading simulation
- BER, SINR, and outage probability analysis
- Visible Light Communication (VLC) system simulation
- AI/ML for resource allocation and channel estimation techniques

Programme Features

The programme features expert-led sessions by academicians and industry professionals from premier institutions. Participants will gain hands-on experience in 5G/6G technologies, AI/ML-enabled wireless systems, quantum communication, and secure communication frameworks through practical demonstrations and simulation-based exercises. The FDP includes interactive discussions, exposure to emerging research areas, access to course materials, and certificates upon successful completion of the programme.

Participants will be awarded certificates only on successful completion of the course.

Registration Details

- Registration link – Please fill out the registration using the following link:
<https://forms.gle/MyJwgN67RmrNDfsm9>
- Registration fee: INR 500/ (Online participation)
- Last Date for Registration: **November 14, 2026**

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**
- **QR Code:**

