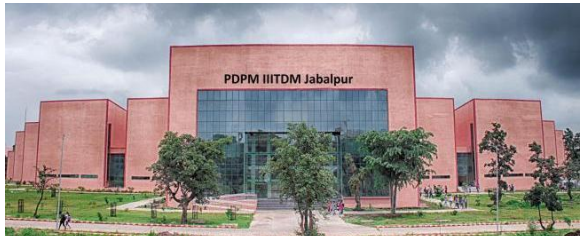
About Electronics & ICT Academy at



PDPM IIITDM 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 IIITDM 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 customised academic programmes for students, corporate sectors and researchers.

Centre for Nano and Material Sciences, Jain (Deemed-to-be University)

Centre for Nano and Material Sciences (CNMS) is a new research centre established in 2012 by JAIN (Deemed-to-be University). The centre presently has oriented its research in chemistry focusing on Electrochemistry, Nanotechnology and Energy materials. It offers a critical mass of world class researchers with unique capabilities and expertise in nano-structured assemblies, electrochemical phenomena, catalyst materials integral to energy conversion and storage sensing technologies.

Faculty Development Programme

On

Frontiers in Functional Materials for Energy, Optoelectronics, and Smart Sensing Technologies

The programme is designed to provide fundamental and advanced knowledge on nanomaterials, with a particular emphasis on 2D materials and their emerging applications in energy, sensing, and optoelectronics. The primary aim is to train researchers in understanding the synthesis strategies, structure–property relationships, and multifunctional applications of nanomaterials. The programme further focuses on modern developments such as 2D materials, heterostructures, and advanced fabrication techniques, including CVD and laser-assisted methods. In addition, participants will gain hands-on experience in nanomaterial synthesis and characterization using state-of-the-art analytical tools.

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

Important Dates:

Last Date of Online Registration: 15th July 2026

FDP Dates: 20th July-25th July 2026

Patrons

Prof. Bhartendu K. Singh
Director, PDPM IIITDM Jabalpur, Madhya Pradesh, India

Dr. Chenraj Roychand
Founder Chairman, JAIN Group & Chancellor, Jain (Deemed-to-be University), Bengaluru, Karnataka, India

Prof. R. Geetha Balakrishna
Director, Centre for Nano & Material Sciences, Jain (Deemed-to-be University), Bengaluru, Karnataka, India

Coordinators

Prof. Asish K. Kundu, PDPM-IIITDM Jabalpur

Prof. Chandra Sekhar Rout, CNMS, Jain University

Prof. Pramoda Kumar Nayak, CNMS, Jain University

Contact us: r.chandrasekhar@jainuniversity.ac.in
pramoda.nayak@jainuniversity.ac.in;
asish.kundu@iiitdmj.ac.in

Faculty Development Programme

On

Frontiers in Functional Materials for Energy, Optoelectronics, and Smart Sensing

Technologies

Jointly Organized by

Centre for Nano and Material Sciences (CNMS), Jain (Deemed-to-be University)

and

Electronics and ICT Academy, Phase II IIITDM Jabalpur

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

Faculty Development Programme

On

Frontiers in Functional Materials for Energy, Optoelectronics, and Smart Sensing Technologies

20th-25th July 2026 (physical mode)

Resource Persons

- Prof. Vinod K. Singh, IIT Kanpur
- Prof. Asish K. Kundu, PDPM-IIITDM Jabalpur
- Prof. Motin Seikh, Visva Bharati University
- Prof. Dattatray Late, CSIR-NCL
- Prof. Prasanna K. Sahoo, IIT Kharagpur
- Prof. Ashutosh Singh, CeNS-Bangalore
- Prof. Neena Susan John, CeNS-Bangalore
- Prof. Pramoda K. Nayak, JAIN University
- Prof. Gopal K. Pradhan, KIIT-Bhubaneswar
- Prof. Adarsh K V, IISER Bhopal

Course Contents

- Introduction to Nanomaterials; Synthesis of Nanomaterials (Top-down approach, Bottom-up approach)
- Magnetic Properties of Nanomaterials & their applications
- 2D Quantum Materials: Fundamentals, Properties and Applications
- In-plane and van der Waals Heterostructure for Reconfigurable Optoelectronic Devices
- Energy Storage Devices (based on nanomaterials): Batteries, Supercapacitors and Hybrid Devices.
- Energy Efficient Smart Glass Windows: Fundamentals to Applications
- Electrocatalysis and Water Splitting State-of-the-Art Gas Sensors: From Fundamentals to Applications
- Development of 2D Hybrid Materials for Advanced Sensor Technology
- LASER: Fundamentals and Applications
- Photoexcitation on Low-dimensional Semiconductors for Tunable Optical Properties and Applications
- Optoelectronic Properties and Devices based on 2D Materials and Their Heterostructures
- Fundamentals of Raman Spectroscopy and Applications on 2D and Quantum Materials (For Probing Phonons, Defects, and Electronic Coupling etc.)

Hands-On Sessions

- MXenes: Synthesis and modification (Etching, delamination, engineering approaches to tune the properties)
- Chemical Vapour Deposition (CVD) synthesis of 2D Quantum Materials
- LASER Scribing-based approaches for the fabrication of energy storage devices and micro supercapacitors
- Characterization of Nanomaterials by different analytical techniques (XRD, FESEM, NMR, UV-Visible spectroscopy)

Programme Features

- Rigorous training for theoretical and practical knowledge on nanomaterial synthesis and their application
- Opportunities to connect with experts in the field.
- Instructor-led rigorous hands-on 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/4TDKxDyxKmDPL5KB7

Registration fee: 1000/- INR for offline participation

- Last Date for Registration: **15th July 2026**

Online Payment Details

- **Internet banking [Partner Institute]**

Beneficiary Name	JAIN UNIVERSITY
Bank Name	Bank of Maharashtra
A/C No.	60143268072
IFSC Code	MAHB0001155

Contact Persons

1. Mr. Biswajit Sahoo
(CNMS, Jain (Deemed-to-be University)
Email: bsphy128@gmail.com,
+91-70085 04128 (WhatsApp)

2. Mr. Sumanta Sekhar Samal
(CNMS, Jain (Deemed-to-be University)
Email: sekharsumanta7@gmail.com,
+91-6371934143 (WhatsApp)

3. Ms. Warfa Fatima
(PDPM-IIITDM Jabalpur)
Email: warfaf22@gmail.com,
+91 98193 32085 (WhatsApp)