

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

Recent Advances in Computational Fluid Dynamics (CFD) and Its Applications

The course is designed to provide participants with an in-depth understanding of modern CFD techniques and their practical applications across various engineering fields. It covers recent developments in numerical methods, turbulence modeling, and high-performance computing. The course aims to bridge the gap between theoretical advancements and real-world problem-solving.

Who can attend: The programme is open to faculty members, research scholars, postgraduate and undergraduate students, as well as industry professionals working in CFD-related engineering disciplines.

Important Dates:

Last Date of Online Registration: June 14, 2025

FDP Dates: June 16-21, 2025

Coordinators:

Dr. Parikshit Kundu and Dr. Manish Kumar Thakur, Mechanical Engineering Department, PDPM IITDM Jabalpur

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Faculty Development Programme

Recent Advances in Computational Fluid Dynamics (CFD) and Its Applications

June 16-21, 2025 (Hybrid 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 Recent Advances in Computational Fluid Dynamics (CFD) and Its Applications

June 16-21, 2025 (Hybrid mode)

RESOURCE PERSONS

- Prof. Ashoke De, IIT Kanpur
- Prof. Rajneesh Bhardwaj, IIT Bombay
- Prof. Tanuja Sheorey, PDPM IITDM Jabalpur
- Dr. Mohd. Zahid Ansari, PDPM IITDM Jabalpur
- Dr. Tushar Chowdhury, PDPM IITDM Jabalpur
- Dr. Jayabrata Dhar, NIT Durgapur
- Dr. Manish Kumar, NIT Jaipur
- Dr. Kaustav Pradhan, IIST Shibpur
- Dr. Arindam Mitra, ATMECS, Hyderabad
- Dr. Manish Kumar Thakur, PDPM IITDM Jabalpur
- Dr. Parikshit Kundu, PDPM IITDM Jabalpur

COURSE COORDINATORS

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Course Contents

- Fundamentals of fluid dynamics and Governing equations (Navier-Stokes)
- Numerical Methods in CFD
- Grid generation and mesh quality
- Turbulence Modeling
- High-performance computing and parallel processing
- Machine learning integration with CFD
- Adaptive mesh refinement and immersed boundary methods
- Pre-processing, solving, and post-processing techniques
- AL/ML on CFD applications
- Emerging trends and future directions in CFD research

Hands-On Sessions

- Ideas to Predict flow velocity or pressure fields using neural networks
- Hands-on training with tools like ANSYS Fluent, OpenFOAM, or COMSOL
- Introduction to GUI and solver interfaces
- Mesh generation techniques
- Solver Setup and Simulation Execution
- Post-Processing and Data Interpretation
- Case Studies and Industrial Applications
- Simulations of internal and external flow problems

Programme Features

- To enhance the expertise in fluid dynamics simulations.
- Opportunities to connect with experts in the field.
- Instructor-led rigorous hands-on sessions with online (live streaming) sessions.
- Certificate on successful completion of the course.

Registration Details

- Registration link – Please fill out registration using the following link:
<https://forms.gle/WazfQBgn4zCGRpKf9>
- Registration fee: 1000 INR/ (For Offline)/ 500 INR/- (For Online)
- Last Date for Registration: **June 14, 2025**

Online Payment Details

- **Internet banking**

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

- **UPI ID: iiitdmj@indianbk**

