

## 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. 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 IIITDM Jabalpur

PDPM IIITDM Jabalpur was established in 2005 with a focus on education and research in IT-enabled Design and Manufacturing. Since its inception, PDPM IIITDM 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 IIIT 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

### Robot Kinematics, Dynamics and Trajectory Planning

The course is second in the series of FDPs to cover courses for the requirement of curriculum of AICTE Minor Degree in Robotics. This course will cover ROB2 (Mechanics) of the curriculum and mainly focus on aspects related to mechanics of the Manipulators. The course is designed to provide participants with in-depth knowledge of the aspects related to Robot Kinematics, Dynamics and Trajectory Planning.

**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: July 10, 2026**

**FDP Dates: July 27- August 01, 2026**

### Coordinators:

**Prof. Tanuja Sheorey and Prof. Vijay Kumar Gupta, Mechanical Engineering Discipline, PDPM IIITDM Jabalpur**

### Contact us:

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## Faculty Development Programme

### Robot Kinematics, Dynamics and Trajectory Planning

**July 27- August 01, 2026**

**(Physical 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

### Robot Kinematics, Dynamics and Trajectory Planning

July 27- August 01, 2026 (Physical Mode)

#### RESOURCE PERSONS

- Prof. Subir Kumar Saha, IIT Delhi
- Prof. P.M. Pathak, IIT Roorkee
- Prof. Arun Dayal, IITISM Dhanbad
- Prof. D.K. Pratihari, IIT Kharagpur
- Prof. Tanuja Sheorey, PDPM IIITDM Jabalpur
- Prof. Vijay Kumar Gupta, PDPM IIITDM Jabalpur
- Dr. Rajeev Lochana, Amrita University Bengaluru
- Dr. Neeraj Goswami, Banasthali Vidyapeeth, Newai

#### COURSE COORDINATORS

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## Course Contents

- Mathematics Preliminaries
- Forward Kinematics: DH Parameters
- Inverse Kinematics: Geometric and Analytical Approach
- Differential Kinematics, Jacobian
- Trajectory Planning
- Force, concept of virtual work
- Mechanical Design of Robot linkages
- Practical applications

## Hands-On Sessions

- Hands-on experience on Roboanalyzer
  - Transformations
  - Forward Kinematics
  - Inverse Kinematics
- Trajectory Planning
- ROS

## Programme Features

- Covers fundamentals related to the mechanics of the manipulator.
- Opportunities to connect with experts in the field.
- Instructor-led rigorous tutorials and hands-on sessions with online (live streaming) sessions.
- Certificate on successful completion with access to the course material.

## Registration Details

- Registration link – Please fill out registration using the following link:  
<https://forms.gle/dTk4osxSKGjyuy3YA>
- Registration fee:
  - 1000 INR

\*Registration fee is non-refundable
- Limited seats are available for the physical mode and will be allotted on a first-come, first-served basis
- Last Date for Registration: **July 10, 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](mailto:iiitdmj@indianbk)**

