



Online FDP Programme on Robot Basics Use Cases



Ministry of Electronics and
Information Technology
Government of India

MNIT Jaipur & Spoke Academies
<http://www.mnit.ac.in/eict>

Dec 28- Jan 01, 2027

meity.gov.in/content/schemes-projects

Experts/Speakers-

Experts from IITs, NITs, Industrial and
Academia Experts

EICT Academy MNIT Jaipur

Chairman, EICT Academy &
Director MNIT Jaipur

Prof. Narayana Prasad Padhy

Chief Investigator: **Prof. Vineet Sahula**

Coordinator: **Dr. Satyasai Jagannath
Nanda**

Co- Chief Investigators: **Prof. Lava
Bhargava, Prof. Pilli Emmanuel
Shubhakar,
Dr. Ravi Kumar Maddila**

Objective (Electronics & ICT Academy-Phase II)

- 1) To conduct specialized FDPs for faculty/mentor training in line with the vision of MeitY in high-priority areas supporting the "Make in India" and the "Digital India" programs.
- 2) To promote synergy and collaboration with industry, academia, universities and other institutions of learning
- 3) To support the National Policy on Electronics 2019 (NPE 2019), which envisions positioning India as a global hub for ESDM sector, including MeitY Schemes/policies such as Programme for Semiconductors and Display Fab Ecosystem; India AI; National Programme on AI, Production Linked Incentive Scheme for IT Hardware & Large-Scale Electronics Manufacturing; EMC; SPECS; Chips to System (C2S); etc.
- 4) To promote standardization of FDPs through Joint Faculty Development Programmes.

An intensive 40 Hours Training Programme in online mode is being organized for faculty and doctoral students of engineering and technological institutions. It is also open to working professionals from industry/organizations. The main theme of training program will be oriented around exploring the state of the art methods for robot basics use cases. **The programme will run during week days.**

Programme Modules:

Module 1: Foundations of Robotics & Core Architecture

Covers robot anatomy, classification, hardware components, sensor integration (LiDAR, cameras), actuators, power systems, and embedded closed-loop control architectures.

Module 2: Motion Dynamics, Kinematics & Programming

Focuses on forward and inverse kinematics, coordinate transformations, trajectory planning, control logic programming with ROS (Robot Operating System), and virtual testing using Gazebo.

Module 3: AI Perception & Autonomous Systems

Examines computer vision with OpenCV, multi-sensor fusion, SLAM (Simultaneous Localization and Mapping), machine learning for adaptive motion, and autonomous decision workflows.

Module 4: Industrial & Sector-Specific Use Cases

Explores practical real-world deployments including manufacturing cobots, warehouse AMRs, healthcare and agricultural robotics, and human-robot interaction safety standards.

Programme Coordinators

Prof. Harlal Singh Mali

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Registration:

Registration is open to faculty, working professionals, industry persons, doctoral, postgraduate, and graduate students from India and the rest of the world. Participants will be admitted on a first-come, first-served basis.

Registration Fee

Mode of Programme	India/SAARC/Africa (18% GST extra)		Rest of the world
	Academia (faculty/Students)	Others	
Online	Rs. 750/-	Rs. 1500/-	US \$60/-

- Fee once paid will not be refunded back; however, can be adjusted for a future programme.
- The fee covers online participation in the programme, tutorial, notes and examination, certification charges etc.
- The registration amount may be paid through online mode- NEFT/UPI/Cards/SWIFT, provided at the registration portal.
- A detailed schedule will be shared after receiving the registration form.

Register online at - <http://online.mnit.ac.in/eict/>

→ For queries, contact us at fdp.academy@mnit.ac.in



MNIT Jaipur one of the oldest NITs, the institute has a rich heritage of sixty years producing world class engineers, managers, architects and scientists. Ranked 42nd nationally in the NIRF ranking-2025 (Engineering), the institute offers learning opportunities for undergraduate, postgraduate students, and researchers in various domains. Having a lush green campus of over 317 acres within the heart of the pink city, close to Jaipur International Airport, the campus offers a safe and lively environment. A world class teaching infrastructure, state-of-art laboratories welcome you at the campus. The institute has a vision to impart education of international standards and conduct research at the cutting edge of technology.