Jointly Organized by
Electronics & ICT Academies

IITR, NITW, MNIT Jaipur
http://www.mnit.ac.in/eict

Online Programme on
Special topics in AI: Generative AI for Computer Vision

09-19 Mar 2026

Faculty Development Programme
Electronics & ICT Academy under aegis of

Ministry of Electronics and Information Technology
Government of India

meity.gov.in/content/schemes-projects

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Objective (Electronics & ICT Academy-Phase II)
1)To conduct specialized FDPs for faculty/mentor training in line with the vision of MeitY by promoting emerging areas of technology and other high-priority areas that are pillars of both the "Make in India" and the "Digital India" programs.
2) To promote synergy and collaboration with industry, academia, universities and other institutions of learning, especially in emerging technology areas.
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.
5) To support the vision of the National Education Policy (NEP 2020), which mandates that Indian educators go through at least 50 hours in professional development programmes per year.
6) To design, develop & deliver specialised FDPs on emerging technologies/ niche areas/ specialised modules for specific research areas for Faculty in Higher Education Institutions (HEI), besides FDPs on multi-disciplinary areas connected with ICT tools and technologies and other digital hybrid domains, covering a wide spectrum of engineering and non-engineering colleges, polytechnics, ITIs, and PGT educators

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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 Special topics in AI: Generative AI for Computer Vision.

Experts/Speakers- A blend of academic excellence from IITs, NITs, and IIITs, together with practical perspectives from industrial leaders.

Programme Modules:

Module 1: Module 1: The New Foundations—Diffusion & Beyond: Denoising Diffusion Probabilistic Models (DDPM): Understanding the forward (noise-adding) and reverse (denoising) processes, Latent Diffusion & Stable Diffusion: Exploring the efficiency of generating in compressed latent space rather than pixel space, Score-Based Generative Modeling: The mathematical framework of gradients and data distributions, Adversarial Training (GANs) in 2026: How GANs are still used for real-time synthesis and high-frequency detail refinement.
Module 2: Controllable Generation & Editing: ControlNet & T2I-Adapters: Adding spatial constraints (edges, depth maps, human poses) to guide image generation, In-painting & Out-painting: Techniques for seamless image completion and background expansion, Personalized Generation: Fine-tuning models with LoRA or DreamBooth for specific characters, styles, or products, Segment-Everything-to-Generate: Using masks (SAM 2) to selectively edit or replace objects within high-resolution images.
Module 3: Video Synthesis & Temporal Consistency: Text-to-Video (T2V) Architectures: Expanding 2D diffusion into 3D (space + time) using temporal attention layers, Video-to-Video (V2V) Translation: Style transfer for video and realistic motion retargeting, Fluid Motion & Consistency: Addressing the "flicker" problem through latent flow and consistent noise scheduling. Generative World Models: How video generation is being used to train autonomous vehicles and robots in simulated "hallucinated" environments.
Module 4: 3D Generation & Multimodal Vision: 3D Reconstruction from Text/Images: Using Neural Radiance Fields (NeRFs) and 3D Gaussian Splatting for generative 3D assets, Vision-Language-Action (VLA) Models: Teaching models to "see" a scene and generate the visual plan for a robotic arm to execute, Ethical Vision & Forensic AI: Detecting deepfakes, implementing invisible watermarking (C2PA standards), and mitigating bias in generative datasets.

Programme Coordinator:

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Registration:
Registration is open to faculty, working professionals, industry persons, doctoral, postgraduate and graduate students from India and rest of the world. Participants will be admitted on first-come first-served basis. Register online at–(http://online.mnit.ac.in/eict/)

Registration Fee:

Mode of programme	Academia (faculty/Students): India/SAARC/Africa	Others: India/SAARC/Africa	Rest of the world
Online	Rs. 500/-	Rs. 1000/-	US $ 60/-

Fee once paid will not be refunded back.
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, provid
Detailed schedule will be shared after receiving registration form.
For queries, email 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 43rd nationally in the NIRF ranking-2024 (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.