

National Institute of Technical Teachers Training and Research, Chandigarh

Department of Computer Science and Engineering

TAC No.	ICT-29
Name of the Course	Generative AI (in Collaboration with Intel) (21-25 September 2026)
Course Outcomes	<ul style="list-style-type: none">• Understand the core fundamentals of Generative AI, underlying neural network concepts, and the evolution of Large Language Models and diffusion models.• Apply effective prompt engineering techniques and utilize modern Generative AI productivity tools for text and image generation.• Analyze the technical lifecycle of GenAI projects, including pre-training, fine-tuning, and optimization strategies for generative models.• Build Generative AI applications aligned with contemporary industry implementation models.• Evaluate ethical considerations, model alignment challenges, and establish best practices for the responsible deployment of Generative AI technologies.
Course Contents	<ul style="list-style-type: none">• Introduction to Generative AI• Applications of Generative AI• Demystifying Generative AI Models• Prompt Engineering• Text and Image Generation• Using Gen AI for Productivity• Generative AI Ethics• Gen AI Project Lifecycle• Neural Network Fundamentals• Gen AI Tools and Evolution of Large Language Models• Diffusion Models and Evolution of Text-to-Image Generation• Pre-Training Generative AI Models• Fine-Tuning Generative AI Models• Optimizing Generative AI Models• LLM Alignment and the Responsible Use of Generative AI• Sharing Best Practices of Implementation Model• Development of the Implementation Model
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