

About Institute

Guru Nanak Dev Engineering College (GNDEC), Ludhiana, established in 1956, is one of the oldest and a premier Engineering Institute of India. The Institute is set up on 88 acres of sprawling pristine land along Gill Road (Ludhiana Malerkotla Highway). The foundation stone of the college was laid by Honourable Dr. Rajendra Prasad Ji, President of India on April 8, 1956. GNDEC is now an autonomous college under UGC Act 1956 [2(f) and 12(B)] and also accredited by NAAC with 'A' grade. The Institution has six Under Graduate (UG) programmes, thirteen Post Graduate (PG) programmes, besides being a QIP centre for Ph.D.

About Department

Computer Science and Engineering Department was established in 1997. Department is currently offering undergraduate and postgraduate programmes with an intake of 300 and 12 respectively. Ph.D. programme is also being offered in the department. The department has various laboratories equipped with state of the art computing facilities to support the research and teaching activities. The research activities in the department involve fields like Natural Language Processing, Image Processing, Big Data, Cloud Computing, Software Engineering, Network Security, etc.

Objective

Prompt Engineering is the art of crafting effective instructions to interact with AI models, enabling smarter and more accurate responses. This training program introduces participants to core concepts of prompt design, optimization techniques, and the use of leading AI platforms like Google AI Studio and OpenAI. It covers real-world applications such as code generation, speech processing, and AI-driven automation, along with advanced topics like RAG, agents, and function calling. Through hands-on labs and projects, learners will gain practical skills to build intelligent, prompt-based solutions for modern AI-driven tasks.

Who can apply?

Students from B.Tech. (all branches), BCA, MCA, BBA, MBA, B.Com. (Entrepreneurship), B.Voc. (Interior Design) and Diploma (all branches) programs can apply for this training program. Students from other Engineering and Polytechnic colleges can also join this training.

FOUR WEEKS SUMMER TRAINING PROGRAM

ON

Prompt Engineering

(June - July 2025)



Dr. Kiran Jyoti
(Head, Department of CSE)

Prof. Jaswant Singh Taur
(Training Coordinator)

Organized by:

Testing and Consultancy Cell

in collaboration with

Department of Computer Science and Engineering
GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA
AN AUTONOMOUS COLLEGE U/S ACT-1956 [2(f) and 12(B)]

Prompt Engineering

Duration: 4 Weeks

Mode: Offline

Contents to be covered

Week 1: Basics of Prompt Engineering

Introduction to Generative AI, Need for Prompt Engineering, Applications of Prompt Engineering, Python Basics for Prompt Engineering, Fundamentals of Prompt Engineering, Types of Prompts, Prompt Parameter Settings, Overview of AI Models Offered by Leading Companies (OpenAI, Google etc.), Hands-on with Prompt Basics, Hands-on with Different Prompting Strategies, Best Practices in Prompt Engineering

Week 2: Foundation of Prompt Engineering and Google AI Studio

Introduction to Google AI Studio, Exploring the Interface and Features, Prompt Design in Google AI Studio, Experimenting with Different AI Models, Understanding Model Parameters, Implementing Real-Time Use Cases, Speech-to-Text Integration, Text-to-Speech Integration, Audio-Based Prompt Use Cases, Using Gemini Models in Google AI Studio, Hands-on Lab on Google AI Studio and Audio Models, Introduction to Prompt Evaluation Techniques

Week 3: AI Agents and OpenAI Integration

Introduction to OpenAI Studio, Exploring the OpenAI Playground, Creating a Supervised Machine Learning Model with OpenAI, Dataset Preparation for Fine-Tuning, Using OpenAI for Code Optimization, Prompt Engineering for Code Generation and Debugging, Understanding Multimodal vs Text vs Audio Models, Introduction to Retrieval-Augmented Generation (RAG) Solutions, Introduction to NotebookLM, Introduction to OpenAI Agents and Function Calling, Automation through Function Calling, Understanding Function Calling Schemas, Hands-on Lab for OpenAI Integration and Agent-Based Prompting

Week 4: Real Time Projects (Hands-On)

Creating an Invoice Processing Solution using Prompts, Developing a Video Analysis Application with Prompts, Introduction to Langflow, Introduction to RAG Agents in Langflow, Automation Using Prompts

- **Daily Quiz**
- **Hands on Practice on daily tasks**
- **Weekly Assignment with Practical Problems**
- **Project Submission Within One Week after completion of the course.**

Registration Form

Name (in block letters): _____

University Roll Number: _____

Class Roll Number: _____

Department: _____

Institution: _____

Mailing Address: _____

Age: _____ Gender (M/F): _____

Mobile Number: _____

Email: _____

Registration Fee: Rs. 4500 (Including GST)

Receipt No. (Cash Payment): _____ Date: _____

Signature of the Applicant: _____

Note:

The course fee must be submitted to the Testing and Consultancy Cell during working days. The participants should send through e-mail the scanned copy of the filled and duly signed registration form to the training coordinator on or before 30th May, 2025. The hard copy of the registration form must be submitted on the first day of the program at the registration desk.

Contact Details:

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