



SHARDA
UNIVERSITY
Beyond Boundaries



**SHARDA SCHOOL OF
BASIC SCIENCES
& RESEARCH**



COURSE

**PROMPT
ENGINEERING
(NVI0101)**

**VALUE ADDED
COURSE BROCHURE-30 HRS
2024-25**

ABOUT THE UNIVERSITY

Sharda University is a leading Educational institution based out of Greater Noida, Delhi NCR. A venture of the renowned Sharda Group of Institutions (SGI), The University has established itself as a high quality education provider with prime focus on holistic learning and imbuing competitive abilities in students.

The University is approved by UGC and prides itself in being the only multi-discipline campus in the NCR, spread over 63 acres and equipped with world class facilities.

Sharda University promises to become one of the India's leading universities with an acknowledged reputation for excellence in research and teaching. With its outstanding faculty, world class teaching standards, and innovative academic programs, Sharda intends to set a new benchmark in the Indian education system. Sharda School of Basic Sciences and Research (SSBSR) boasts of providing an interdisciplinary approach, exposure to different disciplines in science including Chemistry, Bio-Chemistry, Physics, Mathematics, Life Sciences, and Environmental Sciences.

ABOUT SCHOOL

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The Sharda School of Basic Sciences and Research is unique from other institutions of higher learning as it is committed to imparting knowledge in pure and applied sciences, which not only forms the foundation for further academic pursuits in science and technology but also acts as the foundation for students to pursue a career in multi facet directions.

The academic programs are designed to meet the requirement of the latest technological developments and envisages to become a state-of-the-art department that cater the students at Graduate, Post- Graduate and Research level along with providing high-quality education and cutting-edge interdisciplinary research in sciences. SSBSR has well-equipped laboratories for Physics, MATLAB, Microbiology, Molecular Biology, Cell Culture, Virology, Bio-Chemistry, Physical, Organic and Inorganic chemistry for Graduate and Post-Graduate Programs. In addition, there are Central Instrumentation Facility (CIF) and other advance research labs to promote research culture.

ABOUT COURSE

This course introduces students to the essential concepts and practical skills of prompt engineering, focusing on creating effective prompts for AI models. It covers the basics of prompt design, advanced techniques, practical applications, and ethical considerations. Through hands-on exercises and real-world examples, students will learn to craft, optimize, and deploy prompts across various AI domains, making prompt engineering accessible and applicable to their academic and professional pursuits.

COURSE SCHEDULE

| Week | Content |
|------|---|
| 3 | Introduction to Prompt Engineering |
| 4 | Advanced Prompting Techniques |
| 4 | Practical Applications and Ethical Considerations |

RESOURCE PERSONS

Faculty Name: **Dr. Sohan Lal**

Department: **Department of Mathematics, SSBSR
Sharda University**

Dr Sohan Lal joined Sharda University in 2024. At present, he is working as an Assistant Professor in the Department of Mathematics in the School of Basic Sciences and Research. He has done a Ph.D from Shri Mata Vaishno Devi University Katra J&K.

School: SSBSR
 Programme: PG.
 Branch: M.Sc. Mathematics,
 Data Science & Analytics

Batch : 2024-2026
 Current Academic Year: 2024-2025
 Semester : II

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| 1. Course Code | NVI0101 |
| 2. Course Title | Prompt Engineering |
| 3. Credits | Audit Course |
| 4. Contact Hours (L-T-P) | 30 Hours |
| Course Type | Value added course |
| 5. Course Objective | To provide undergraduate and postgraduate students with a comprehensive introduction to the fundamental concepts and practical skills required for prompt engineering, covering essential techniques for crafting effective prompts, optimizing their performance, and understanding their applications across various AI domains |
| 6. Course Outcomes | CO1. Demonstrate proficiency in understanding and crafting various types of prompts for AI applications. CO2. Apply techniques for creating contextually aware and adaptive prompts to enhance AI model performance. CO3. Utilize prompt engineering for data processing tasks such as extraction, summarization, and transformation. CO4. Implement fine-tuning and evaluation methods to optimize prompt performance and iteratively improve their effectiveness. CO5. Design and deploy prompts for specific applications like creative writing, customer support, and code generation. CO6. Analyze and discuss the ethical implications of prompt engineering, including bias detection and mitigation, and the responsible use of AI. |
| 7. Course Description | This course introduces students to the essential concepts and practical skills of prompt engineering, focusing on creating effective prompts for AI models. It covers the basics of prompt design, advanced techniques, practical applications, and ethical considerations. Through hands-on exercises and real-world examples, students will learn to craft, optimize, and deploy prompts across various AI domains, making prompt engineering accessible and applicable to their academic and professional pursuits. |
| 8. Outline syllabus | CO Mapping |
| Unit 1 | Introduction to Prompt Engineering |
| A | Overview of prompt engineering, significance and applications in AI |
| B | Basics of prompts: structure, components, and types |
| C | Techniques for crafting clear and effective prompts |
| Unit 2 | Advanced Prompting Techniques |
| A | Contextual prompts: incorporating context to enhance performance |
| B | Dynamic and adaptive prompts: creating flexible and responsive prompts |
| C | Evaluation and iteration: methods for evaluating and improving prompts |
| Unit 3 | Practical Applications and Ethical Considerations |
| A | Using prompts in real-world scenarios: case studies and hands-on exercises |
| B | Ethical considerations in prompt engineering: bias detection and mitigation |
| C | Special applications: creative writing, customer support, and code generation |
| Mode of Examination | Practical |
| Text Book | |
| Other Reference | |