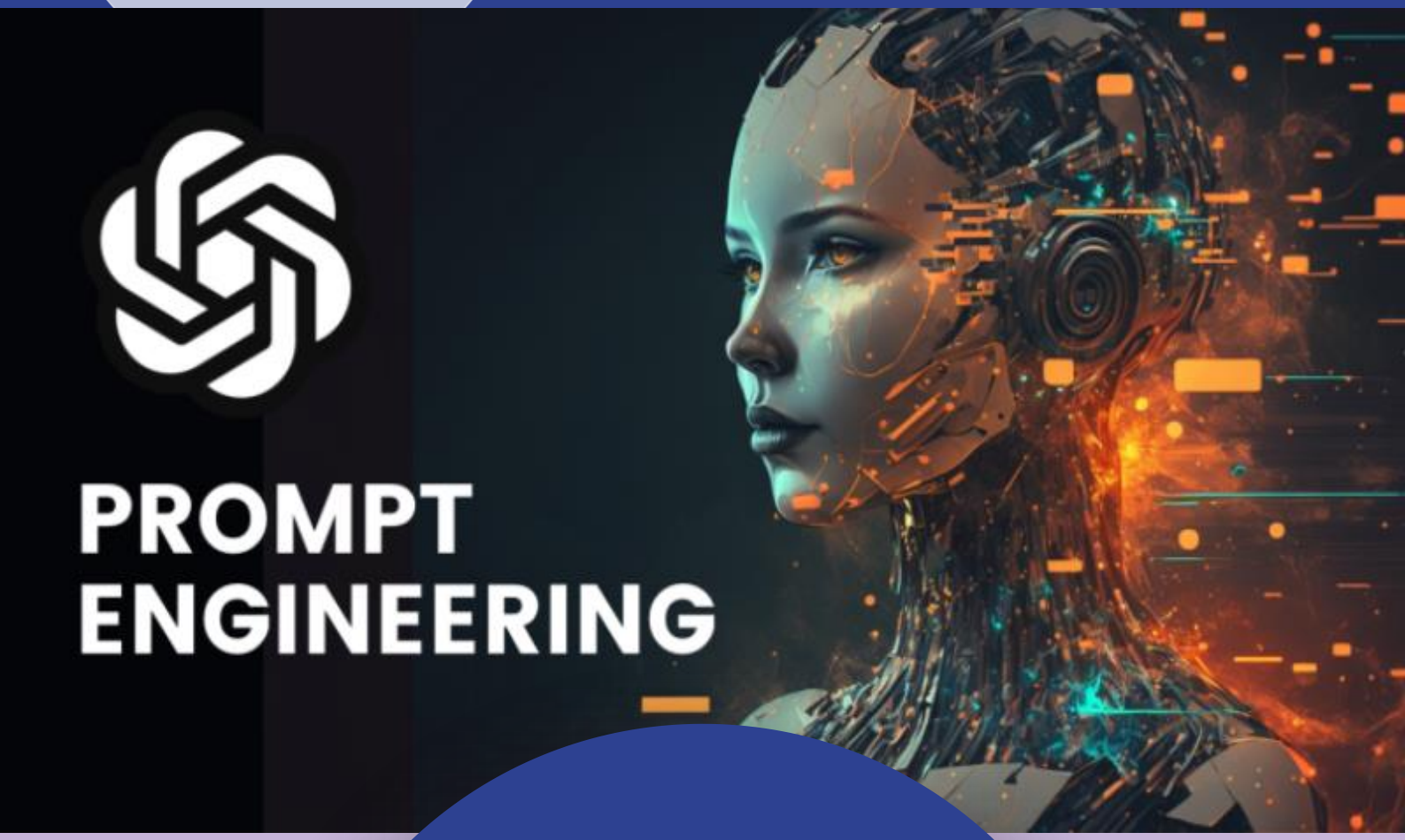
SHARDA UNIVERSITY
Beyond Boundaries

NAAC A+ ACCREDITED

SHARDA SCHOOL OF COMPUTING SCIENCE & ENGINEERING



COURSE

Introduction to Prompt Engineering (NVI0101)

VALUE ADDED
Course Brochure
2025-26

ABOUT THE UNIVERSITY

Sharda University envisions serving society by being a global University of higher learning in pursuit of academic excellence, innovation, and nurturing entrepreneurship. It has 13,000+ students from 95+ countries, 29 states, and Union Territories, providing cultural diversity and global exposure to students. It has 26000+ alumni who are today leaders in their realms. Sharda University is a NAAC A+ University with an Overall NIRF Rank of 86. The Teaching Learning Center at Sharda University is to equip the faculty members with the expertise, skills, and knowledge they need for capacity building of students. Teaching as a profession requires highly specialized skills and knowledge to have a significant impact on student learning; therefore, teachers must continually refine their conceptual and pedagogical skills.

ABOUT SCHOOL

Sharda School of Computing Science & Engineering is an open platform for diverse voices where teaching runs parallel to the real world, and students are groomed to join the global workforce. SSCSE is distinguished as one of the top-ranked engineering schools in India. The students at SSCSE benefit through the professional grooming of renowned faculty and industry experts who have experience in tackling pressing engineering problems. Students discover their passion in one of the various offered Engineering majors at the Sharda School of Computing Science & Engineering. A student-centric pedagogy, project-based approach, and design-driven curriculum provide students with an inclination for complex problem-solving, design, innovation, and a passion for learning.

ABOUT DEPARTMENT

The Department of Computer Science & Engineering strives to equip faculty and students with all the computing resources needed to address a wide range of scientific, technological, and socially complex problems. The department imparts technical education for designing quirky technological applications and innovations. The department aims to become a center of excellence and impart knowledge to intellectual professionals so as to equip them with the requisite skills as per Industry standards. The department aims to foster an innovative research environment by providing a supportive, amiable, and challenge-based learning culture. The department utilizes high-performance computing equipment and facilities to impart state-of-the-art technical knowledge to students and instill a desire to pursue lifelong learning. To emerge as a world-class department, we focus on innovative research and quality learning in computer science applications that prepare entrepreneurs and professionals to lead the social, economic, and technical development of society. The Value Added Education Courses aim to provide additional learner-centric centric graded skill skill-oriented training, with the primary objective of improving the employability skills of students.

VALUE ADDED COURSE (VAC)

The Value Added Courses aim to provide additional learner-centric centric graded skill skill-oriented training, with the primary objective of improving the employability skills of students. The value added course on Introduction to Prompt Engineering provides undergraduate students 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.

PURPOSE OF VALUE ADDED COURSE

VACs are pertinent instructional strategies designed to close knowledge gaps in students and provide them a competitive edge in the job market. The courses' well-defined structure makes these VACs highly effective in enhancing students' employability quotient by developing diverse competencies. They help students lay the creative groundwork for passion projects (such as interactive dashboards, business analytics, or sector-specific visual reports) beyond their core academic curriculum, offering skills that can transform their enthusiasm into career opportunities.

RESOURCE PERSONS

Dr. Rajendra Kumar, Professor in Computer Science & Engineering department at Sharda School of Computing Science & Engineering, Sharda University has rich experience of teaching and research. He completed his B.E. in CSE from Bundelkhand Institute of Engineering and Technology (Jhansi), M. Tech in CSE from JSS Academy of Technical Education (Noida), and PhD in CSE from Sharda University (Greater Noida). He has published 05 textbooks, 10 edited books (CRC Press, De Gruyter, Scrivener, Nova, IGI Global), 02 monographs, and 04 patents. He has published 30+ papers in National/International Journals, 25 book chapters, and presented 25 papers in National/International conferences.

Dr. Shelja Sharma, is working as an Associate Professor in the Department of Computer Science & Engineering, School of Engineering & Technology, Sharda University. In 2005, she was accorded with B.E. degree in Computer Science & Engineering, with Honors by University of Rajasthan, India. Secured Masters of Technology in Computer Engineering, with Distinction in 2011 and Ph.D in the broad area "Mobile Ad-Hoc Networks" in 2019. She is a certified Wipro TalentNext Mentor for providing Project Based Learning (PBL) in Java. She has also Conceptualized, Designed & Developed the .NET based software for the Faculty of Engineering & Technology, MRIIRS.

RESOURCE PERSONS

Dr. Annu Mishra, is an Assistant Professor in the Sharda School of Computing Science and Engineering, Sharda University, Greater Noida. Her academic background includes advanced studies in computer science, with research interests spanning image processing, object detection, and machine learning. She teaches core CSE courses and actively contributes to research collaborations, including recent work on fine-tuned YOLO-based object detection.

Mr. Amit Kumar Rai, is an Assistant Professor of Computer Science at Sharda University, Greater Noida. He is involved in teaching core subjects such as programming, data structures, algorithms, and related areas, and actively mentors students through projects and hackathons. His academic interests include modern software development practices and emerging technologies, and he regularly participates in departmental events and internal hackathons like Technokrat to promote innovation and problem-solving skills among students.

Mr. Jitendra Singh, is an Assistant Professor in the Department of Computer Science and Engineering at Sharda University. With over 15 years of teaching experience in India and abroad, he has contributed significantly to academia through his expertise in teaching core subjects such as Data Structures, Design and Analysis of Algorithms, DBMS, Android Applications Development, as well as specialized topics like Machine Learning and Deep Learning. He has previously worked at institutions such as SRMS CETR, Bareilly, Wachemo University, Ethiopia, and GL Bajaj ITM, Greater Noida before joining Sharda University in 2024. Jitendra holds a B.Tech in Information Technology (2009) and an M.Tech in Software Engineering (2012) from Dr. APJ Abdul Kalam Technical University. He is currently pursuing a Ph.D. in Computer Science from Lovely Professional University. His research interests lie in the fields of Machine Learning and Algorithms, with several impactful research contributions, including 2 Scopus-indexed journal papers, 3 Scopus-indexed conference papers, and 1 Scopus-indexed book chapter.

Mr. Ashish Kumar, is an Assistant Professor in the Department of Computer Science and Engineering at Sharda University, Greater Noida. He holds a degree in Computer Science and Engineering and has experience in teaching core subjects such as programming, data structures, and algorithms. His academic interests include software development and emerging areas in computer science, reflected through multiple research publications and patents. He is actively involved in student mentoring, curriculum delivery, and departmental activities, contributing to both the academic and professional growth of engineering students at Sharda University.

Mr. Shashi Kant, is an Assistant Professor in the Department of Computer Science and Engineering at Sharda University, Greater Noida. He has experience in teaching core subjects such as artificial intelligence, programming, data structures, and algorithms. His academic interests include software development and emerging areas in computer science, reflected through multiple research publications

Mr. Deepansh Raj, is an Assistant Professor of Computer Science at Sharda University, Noida, where he teaches and mentors students in core computing subjects and emerging technologies. He holds an M.Tech in Computer Science and Engineering from IIT Madras and has an academic background connected with DA-IICT. His interests span computer architecture, memory systems, and modern software development, and he actively guides undergraduate projects and contributes to curriculum development in the department.

Ms. Aparna S., is an Assistant Professor in the Department of Computer Science and Applications at Sharda University, Greater Noida. She holds a Bachelor's degree in Computer Science from CCS University, Meerut, and a Master of Computer Applications from AKTU, Lucknow, and is currently pursuing a PhD in the Internet of Things at Amity University, Noida. With over eight years of teaching experience, her academic interests include IoT, computer networks, and emerging computing technologies.

Ms. Shifa Shah is an Assistant Professor in the Department of Computer Science and Applications at Sharda University, Greater Noida. Her academic interests include IoT, AIML, etc.

COURSE SCHEDULE

Week	Topic	Duration Hrs.
1	Introduction to Prompt Engineering	2
2	Overview of prompt engineering, significance and applications in AI	2
3	Basics of prompts: structure, components, and types	2
4	Techniques for crafting clear and effective prompts	2
5	Students' presentation on prompt structure, components, and types	2
6	Advanced Prompting Techniques	2
7	Contextual prompts: incorporating context to enhance performance	2
8	Dynamic and adaptive prompts: creating flexible and responsive prompts	2
9	Evaluation and iteration: methods for evaluating and improving prompts	2
10	Students' presentation on Dynamic and adaptive prompts	2
11	Practical Applications and Ethical Considerations	2
12	Using prompts in real-world scenarios: case studies and hands-on exercises	2
13	Ethical considerations in prompt engineering: bias detection and mitigation	2
14	Special applications: creative writing, customer support, and code generation	2
15	Students' presentation on projects	2
Total		**30 h**

School: Sharda School of Computing Science & Engineering, (Department of Computer Science & Engineering)
Program: B. Tech CSE **Semester:** VI
Batch: 2023-27 **Current Academic Year:** 2025-26

1. Course Code	NVI01010	
2. Course Title	Introduction to Prompt Engineering	
3. Credits	0	
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	The students will be able to: **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 provides a foundational understanding of Kotlin programming for Android app development. It covers programming constructs, UI design, media integration, and cloud-based services. Learners will gain hands-on experience in creating functional Android apps with real-world components.	
8. Outline syllabus	The value added course on Introduction to Prompt Engineering provides undergraduate students 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.	CO Mapping
Unit 1	**Introduction to Prompt Engineering**	
A	Overview of prompt engineering, significance and applications in AI	CO1
B	Basics of prompts: structure, components, and types	CO1
C	Techniques for crafting clear and effective prompts	CO1, CO4
Unit 2	**Advanced Prompting Techniques**	
A	Contextual prompts: incorporating context to enhance performance	CO2
B	Dynamic and adaptive prompts: creating flexible and responsive prompts	CO2
C	Evaluation and iteration: methods for evaluating and improving prompts	CO4
Unit 3	**Practical Applications and Ethical Considerations**	
A	Using prompts in real-world scenarios: case studies and hands-on exercises	CO4
B	Ethical considerations in prompt engineering: bias detection and mitigation	CO6
C	Special applications: creative writing, customer support, and code generation	CO5
Mode of examination	Jury/Practical/Viva	**Text Books** 1. Prompt Engineering by Ajantha Devi Vairamani and Anand Nayyar (Taylor & Francis, 2024) – a broad treatment of prompt engineering concepts, techniques, and applications across domains. 2. Prompt Engineering for Generative AI: Future-Proof Inputs for Large Language Models – a practical guide to designing effective prompts for modern LLMs, covering principles, patterns, and evaluation methods.