



**SHARDA**  
UNIVERSITY  
*Beyond Boundaries*



**SCHOOL OF  
PHARMACY**



COURSE

**AI Application  
Fundamentals  
in Pharmacy  
(AIP300)**

**VALUE ADDED**  
**COURSE BROCHURE-30 HRS**  
**2026-27**

## 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 imbining competitive abilities in students. The University is approved by UGC and prides itself in being the only multidiscipline 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.

## ABOUT SCHOOL

The School of Pharmacy includes a diverse community of scholars who work together and inspire one another in pharmaceutical research, practice, and service with an aim to enhance the quality of life for people globally. The school aims in providing brand new, cutting-edge facilities to its students that act as a perfect resource for them to learn, grow, and put their ideas into practice. They develop future pharmacists who can meet the physical, emotional, and spiritual needs of patients with ethics and commitment.

The School of Pharmacy has well-equipped laboratories for General Pharmaceutics, Microbiology, Pharmacology and Toxicology as well as Pharmacognosy and Herbal Medicine to provide practical knowledge to the students.

The School is under a constant accreditation process and is approved from Pharmacy Council of India, New Delhi.

## VALUE ADDED COURSE (VAC)

A Value Added Course (VAC) is a concise, skill-building program designed to supplement academic studies. It offers practical training, industry insights, and interdisciplinary knowledge to enhance students' employability and innovation. VACs are typically taught by experts, held beyond regular class hours, and culminate in a certificate of completion. From tech and healthcare to management and humanities, they empower learners to stay competitive in fast-evolving professional environments.

## ABOUT COURSE

AIP300 offers an in-depth exploration of AI applications with a focus on practical, project-based learning. Students will refine prompt engineering skills for complex AI tasks, gain a foundational understanding of neural networks and LLMs, and analyze the ethical and regulatory considerations of AI. Through hands-on projects, students will apply their skills in building AI-driven solutions adaptable to various industries, preparing them to handle complex, real-world challenges.

## COURSE SCHEDULE

| Week | Unit/Topics                                                                                                                      | Activities/Examples                                                                                                                                                                                                      | Duration |
|------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1.   | <b>Advanced Prompt Engineering</b> <ul style="list-style-type: none"><li>Refining prompt techniques for complex tasks</li></ul>  | <ul style="list-style-type: none"><li>Lab: Craft prompts for automated healthcare reporting</li><li>Exercise: Summarizing pharmacy case studies</li></ul>                                                                | C01      |
| 2.   | <b>Customizing AI Tools</b> <ul style="list-style-type: none"><li>Fieldspecific AI applications</li></ul>                        | <ul style="list-style-type: none"><li>Case study: AI for legal document summarization</li><li>Assignment: Pharmacy reporting automation</li></ul>                                                                        | C01,C02  |
| 3.   | <b>Neural Networks Basics</b> <ul style="list-style-type: none"><li>Fundamentals of deep learning</li></ul>                      | <ul style="list-style-type: none"><li>Lab: Build a simple feedforward neural network</li><li>Exercise: Drug classification dataset</li></ul>                                                                             | C03      |
| 4.   | <b>Large Language Models (LLMs)</b> <ul style="list-style-type: none"><li>Overview of GPTstyle models and applications</li></ul> | <ul style="list-style-type: none"><li>Lab: Use LLMs for patient feedback analysis</li><li>Miniproject: Alassisted drug discovery insights</li></ul>                                                                      |          |
| 5.   | <b>Pharmacy Applications of Deep Learning &amp; LLMs</b>                                                                         | <ul style="list-style-type: none"><li>Case study: Personalized medication plan generator</li><li>Lab: Sentiment analysis of patient reviews</li></ul>                                                                    | C04      |
| 6.   | <b>Ethical Implications of AI</b> <ul style="list-style-type: none"><li>Biases, fairness, regulatory guidelines</li></ul>        | <ul style="list-style-type: none"><li>Debate: "AI in clinical decision making"</li><li>Reflection assignment on compliance challenges</li></ul>                                                                          | C05      |
| 7.   | <b>Emerging Trends in AI</b> <ul style="list-style-type: none"><li>Future directions, innovative solutions</li></ul>             | <ul style="list-style-type: none"><li>Seminar: AI in predictive analytics for pharmacy</li><li>Group discussion: Industry adoption challenges</li></ul>                                                                  | C06      |
| 8.   | <b>Capstone Project &amp; WrapUp</b> <ul style="list-style-type: none"><li>Handson project integrating course concepts</li></ul> | <ul style="list-style-type: none"><li>Project options: – Customer support chatbot – Albased content summarizer – Predictive analytics tool for pharmacy data</li><li>Final presentations &amp; peer evaluation</li></ul> | C05,C06  |

## RESOURCE PERSON

### Mr. Faraz Imtiyaz Mir

Mr. Faraz Imtiyaz Mir is a postgraduate scholar in Data Science at Sharda University, with a strong academic and research background in Computer Science, Artificial Intelligence, and Machine Learning. He has hands-on experience working as an AI Technical Trainer, where he has been actively involved in developing and implementing research-driven, real-world solutions.

His academic and project work spans diverse domains including crop demand and supply forecasting, yoga pose detection and classification, automatic number plate recognition (ANPR), and liver cancer prediction using hybrid deep learning models. His research interests primarily focus on healthcare AI, predictive analytics, computer vision, and deep learning-based decision support systems.

### Mr. Mir

**Mr. Mir** has contributed to multiple international conferences and has published research papers addressing advanced machine learning techniques and medical image analysis. He possesses strong technical expertise in Python, Java, JavaScript and modern deep learning frameworks. He is keenly interested in applied research, interdisciplinary innovation, and leveraging artificial intelligence to solve real-world problems in healthcare and analytics.

**School: School of Pharmacy**  
**Department: Pharmacy**  
**Programme: B.Pharm**

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|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Course Code             | AIP300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2. Course Title            | AI Application Fundamentals in Pharmacy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3. Credits                 | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. Contact Hours (L-T-P)   | 30 Hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Course Type                | Value added course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5. Course Objective        | To provide students with advanced knowledge in artificial intelligence (AI) applications, including deep learning and large language models (LLMs). This course emphasizes the ethical considerations and future trends in AI while enabling students to create impactful, real-world AI solutions tailored to industry challenges.                                                                                                                                                                                                                                                                                                                                                                         |
| 6. Course Outcomes         | CO1: Develop advanced prompt engineering techniques to tackle complex tasks across various fields.<br>CO2: Customize AI tools to address industry-specific challenges and optimize task efficiency.<br>CO3: Understand the fundamentals of neural networks and deep learning, applying them to practical AI tasks.<br>CO4: Utilize large language models (LLMs) to address language-based challenges, tailoring applications to industry needs.<br>CO5: Analyze and assess the ethical implications of AI, including biases, fairness, and compliance with regulatory guidelines.<br>CO6: Evaluate emerging trends and future directions in AI, exploring innovative solutions and their potential impacts. |
| 7. Course Description      | AIP300 offers an in-depth exploration of AI applications with a focus on practical, project-based learning. Students will refine prompt engineering skills for complex AI tasks, gain a foundational understanding of neural networks and LLMs, and analyze the ethical and regulatory considerations of AI. Through hands-on projects, students will apply their skills in building AI-driven solutions adaptable to various industries, preparing them to handle complex, real-world challenges.                                                                                                                                                                                                          |
| 8. Outline syllabus        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Unit 1</b>              | <b>Advanced Prompt Engineering and AI Applications</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| A                          | Refining prompt techniques for complex tasks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| B                          | Customizing AI tools for field-specific challenges                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| C                          | Examples: automated reporting in healthcare, summarizing case laws in law                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Unit 2</b>              | <b>Deep Learning and Large Language Models</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| A                          | Basics of neural networks and deep learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| B                          | Overview of LLMs like GPT and their applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| C                          | Examples of real-world pharmacy applications of deep learning and LLMs, such as AI-assisted drug discovery, personalized medication plans, or analyzing patient feedback.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Unit 3</b>              | <b>Ethical and Future Considerations</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| A                          | Understanding the ethical implications of AI in various fields, addressing biases and fairness in AI applications, exploring regulatory and legal considerations for AI deployment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| B                          | Review of emerging trends in AI applications, understanding the potential future directions of AI in various industries, exploring innovative AI solutions and their potential impact.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| C                          | Developing hands-on projects and case studies to demonstrate practical applications of AI in selected industries<br>Examples include building a customer support chatbot, creating an AI-based content summarizer, or a predictive analytics tool for industry data.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Mode of Examination</b> | Practical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Weightage                  | 100marks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Text book/s*               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Other References           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |