



GALGOTIAS UNIVERSITY



NAAC
GRADE A+
Accredited University

School of Computer Science and Engineering

Program

**Post Graduate Diploma (PG Diploma) in Data Science
with Artificial Intelligence
(Duration: 1 Year/2 Semesters)**

Proposed Curriculum - PG Diploma in Data Science with Artificial Intelligence

| First Semester- PG Diploma in Data Science with Artificial Intelligence) | | | | | | | |
|---|--------------------|--|-----------|----------|----------|----------|----------|
| Sl.No. | Course Code | Course Title | L | T | P | S | C |
| 1 | 101 | Foundations of Data Science | 3 | 0 | 0 | 0 | 3 |
| 2 | 102 | Data Visualization and Analytics | 3 | 0 | 1 | 0 | 4 |
| 3 | 103 | Artificial Intelligence and Machine Learning | 3 | 0 | 1 | 0 | 4 |
| 4 | 104 | Python Programming | 3 | 0 | 1 | 0 | 4 |
| 5 | 105 | Mathematical Foundations of AI | 3 | 0 | 0 | 0 | 3 |
| 6 | 106 | Term Project | 0 | 0 | 1 | 1 | 2 |
| Total Credits | | | 20 | | | | |

| Second Semester-PG Diploma in Data Science with Artificial Intelligence | | | | | | | |
|--|--------------------|--------------------------------------|-----------|----------|----------|----------|----------|
| Sl.No. | Course Code | Course Title | L | T | P | S | C |
| 1 | 201 | Deep Learning Techniques | 3 | 0 | 1 | 0 | 4 |
| 2 | 202 | Computer Vision | 3 | 0 | 0 | 0 | 3 |
| 3 | 203 | Generative AI and Prompt Engineering | 3 | 0 | 0 | 0 | 3 |
| 4 | 204 | Natural Language Processing | 3 | 0 | 1 | 0 | 4 |
| 5 | 205 | Elective | 3 | 0 | 0 | 0 | 3 |
| 6 | 206 | Capstone Project | 0 | 0 | 1 | 2 | 3 |
| Total Credits | | | 20 | | | | |
| Total Program Credits | | | 40 | | | | |

List of Electives

| S.N. | Course Code | Elective Courses | L | T | P | S | Credits |
|-------------|--------------------|------------------------------------|----------|----------|----------|----------|----------------|
| 1 | 205 | Data Exploration and Visualization | 3 | 0 | 0 | 0 | 3 |
| 2 | 205 | Big Data Analytics | 3 | 0 | 0 | 0 | 3 |
| 3 | 205 | Data Science for Healthcare | 3 | 0 | 0 | 0 | 3 |
| 4 | 205 | AI Optimization Techniques | 3 | 0 | 0 | 0 | 3 |