



**GALGOTIAS
UNIVERSITY**



School of Artificial Intelligence

**BCA (AIML)
(In Association with IBM)**

2026-2030

Curriculum

First Semester BCA (AIML)							
S. No.	Course Code	Course Title	Credit Structure				Total Credits
			L	T	P	S	C
1	101	Problem Solving with Programming (IBM)	3	0	1	0	4
2	102	AI Foundation Analyst (IBM)	3	0	1	0	4
3	103	Mathematics for Computing	3	1	0	0	4
4	104	SQL and NoSQL	2	0	1	0	3
5	105	Communication Skills	2	0	0	0	2
6	106	Innovation Lab	0	0	1	0	1
7	107	Environmental Science	2	0	0	0	2
Second Semester BCA (AIML)							
1	201	Software Foundation & Programming with C++ (IBM)	3	0	1	0	4
2	202	ML Foundation Analyst (IBM)	3	0	1	0	4
3	203	Prompt Engineering	1	0	1	0	2
4	204	MLOps	3	0	1	0	4
5	205	Introduction to Entrepreneurship	2	0	0	0	2
6	206	Next Generation Innovation Lab	1	0	1	0	2
7	207	Indian Knowledge System	2	0	0	0	2
Third Semester BCA (AIML)							
1	301	Programming in Java	2	0	1	0	3
2	302	Agile Development Methodologies - IBM (Design Thinking & DevOps)	2	0	1	0	3
3	303	Deep Learning	3	0	1	0	4
4	304	Computer Networks	3	0	0	0	3
5	305	Data Structures	3	0	1	0	4
6	306	GPU Programming Lab	0	0	1	0	1
7	307	Design Thinking and Innovation 1	2	0	0	0	2
Fourth Semester BCA (AIML)							
1	401	Python for Machine Learning (IBM)	3	0	1	0	4
2	402	Introduction to Data Science (IBM)	3	0	1	0	4
3	403	Cloud Computing	2	0	1	0	3
4	404	Design and Analysis of Algorithm	3	0	1	0	4
5	405	Ethical and Responsible AI	2	0	0	0	2

6	406	CUDA Computing Lab	0	0	1	0	1
7	407	Design Thinking and Innovation 2	2	0	0	0	2
Fifth Semester BCA (AIML)							
1	501	Dockers & Kubernetes (IBM)	3	0	1	0	4
2	502	Predictive Analytics (IBM)	3	0	1	0	4
3	503	Natural Language Processing	3	0	1	0	4
4	504	Capstone Project 1	0	0	4	0	4
5	505	Elective 1	2	0	1	0	3
6	506	Dashboard and Storytelling	0	0	1	0	1
Sixth Semester BCA (AIML)							
1	601	Descriptive Analytics (IBM)	2	0	1	0	3
2	602	Artificial Intelligence (IBM)	2	0	1	0	3
3	603	Agentic AI and RAG	3	0	1	0	4
4	604	AI Deployment	1	0	1	0	2
5	605	Elective 2	2	0	1	0	3
6	606	Capstone Project 2	0	0	5	0	5
Seventh Semester BCA (AIML)							
1	701	UG Research 1	0	0	8	0	8
2	702	Summer Internship	0	0	2	0	2
3	703	Elective 3	3	0	1	0	4
4	704	Open Elective 1	2	0	0	0	2
5	705	Open Elective 2	2	0	0	0	2
6	706	Research Methodology and IPR	2	0	0	0	2
Eighth Semester BCA (AIML)							
1	801	UG Research 2 / Industrial Training	0	0	18	0	18
2	802	MOOC Certification	0	0	2	0	2
List of Electives							
S.N.	Course Code	Elective 1 (Sem V)	L	T	P	S	Credits
1	505	Computer Vision and Image Analytics	2	0	1	0	3
2	505	Reinforcement Learning	2	0	1	0	3
3	505	Big Data Engineering for AI	2	0	1	0	3
4	505	AI in Healthcare	2	0	1	0	3

S.N.	Course Code	Elective 2 (Sem VI)	L	T	P	S	Credits
1	605	AI Security and Privacy-Preserving ML	2	0	1	0	3
2	605	Edge AI and IoT Intelligence	2	0	1	0	3
3	605	Robotics and UAV	2	0	1	0	3
4	605	Multimodal Generative AI	2	0	1	0	3

S.N.	Course Code	Elective 3 (Sem VII)	L	T	P	S	Credits
1	703	Federated Learning and Distributed AI	2	0	1	0	3
2	703	Human-AI Interaction and AI UX	2	0	1	0	3
3	703	Advanced Natural Language Processing	2	0	1	0	3
4	703	AI in Agriculture	2	0	1	0	3

S.N.	Course Code	Open Elective 1 (Sem VII)	L	T	P	S	Credits
1	704	Introduction to Artificial Intelligence for All Disciplines	2	0	0	0	2
2	704	Data Analytics and Visualization using NoCode Tools	2	0	0	0	2
3	704	Generative AI for Productivity and Content Creation	2	0	0	0	2
4	704	AI for Business and Entrepreneurship	2	0	0	0	2

S.N.	Course Code	Open Elective 2 (Sem VII)	L	T	P	S	Credits
1	705	AI for Climate Action and Sustainability	2	0	0	0	2
2	705	AI for Smart City	2	0	0	0	2
3	705	AI for Media, Communication and Creative Industries	2	0	0	0	2
4	705	AI for Education and Learning Technologies	2	0	0	0	2