GALGOTIAS UNIVERSITY

NAAC GRADE A+
Accredited University

School of Computer Science and Engineering

Program

Bachelor of Technology in Computer Science and Engineering (Artificial Intelligence and Machine Learning)

Curriculum

First Semester B. Tech CSE (AIML)

S. No.	Course Code	Course Title	L	T	P	S	Total Credits C
1	101	Engineering Mathematics-I	3	0	1	0	4
2	102	Basic Electrical & Electronics Engg.	3	0	1	0	4
3	103	Environmental Impact Analysis	0	0	1	0	1
4	104	Biology for Engineers / Nano Technology / Alternate Energy / Synthetic Chemistry / Bio-Materials and Implants/Chemical and Biological Materials	3	0	0	0	3
5	105	Programming for Problem Solving using C	3	0	1	0	4
6	106	Aptitude Skills	0	0	2	0	2

Second Semester B. Tech CSE (AIML)

S. No.	Course Code	Course Title	L	T	P	S	Total Credits C
1	201	Engineering Design and Prototyping	3	0	1	0	4
2	202	Introduction of Digital System	3	0	0	0	3
3	203	Modern Physics / Semiconductor Physics / Condensed matter Physics/Semiconductor and Opto Electro Devices	3	0	1	0	4
4	204	YOGA	0	0	0	0	0
5	205	Engineering Mathematics-II	3	0	1	0	4
6	206	Discrete Mathematics	3	0	0	0	3
7	207	OOPS Using C++	3	0	1	0	4
8	208	Applied Aptitude Skills	0	0	2	0	2

Third Semester B. Tech CSE (AIML)

S. No.	Course Code	Course Title	L	T	P	S	Total Credits C
1	301	Database Management System	3	0	1	0	4
2	302	Data Structures	3	0	1	0	4
3	303	Java Programming	3	0	1	0	4
4	304	Probability and Statistics	3	0	0	0	3
5	305	Computer Organization and Architecture	3	0	0	0	3
6	306	Advanced Aptitude Skills	0	0	2	0	2
7	307	Programming Skills with Computational Maths	0	0	2	0	2
8	308	Design Thinking	1	0	0	0	1

Fourth Semester B. Tech CSE (AIML)

S. No.	Course Code	Course Title	L	T	P	S	Total Credits C
1	401	Data Communication and Networking	3	0	1	0	4
2	402	Design and Analysis of Algorithm	3	0	1	0	4
3	403	Operating System	3	0	1	0	4
4	404	Theory of Computation	3	0	0	0	3
5	405	Aptitude Proficiency	0	0	2	0	2
6	406	Fundamentals of Cyber Security	3	0	0	0	3
7	407	Python Programing	0	0	2	0	2
8	408	Understanding Harmony and Ethical Human Conduct	1	0	0	0	1
9	409	Programming Skills with Data Structures	0	0	2	0	2

Fifth Semester B. Tech CSE (AIML)

S. No.	Course Code	Course Title	L	T	P	S	Total Credits C
1	501	Machine Learning	3	0	1	0	4
2	502	Software Engineering & Testing	3	0	1	0	4
3	503	Soft Skills & Aptitude Readiness	0	0	2	0	2
4	504	Programming Skills with Algorithmic Design	0	0	2	0	2
5	505	Soft Computing	3	0	1	0	4
6	506	Summer Internship-I	0	0	0	1	1
7	507	Applied Predictive Analysis	3	0	1	0	4
8	508	Open Elective-1	3	0	0	0	3

		Sixth Semester B. Tech CSE (AIML)					
1	601	Professional Readiness	0	0	2	0	2
2	602	Programming Skills with Advanced Data Structures	0	0	2	0	2
3	603	Algorithms for Intelligent Systems	3	0	1	0	4
4	604	Data Ethics and Explainable AI	3	0	1	0	4
5	605	Program Specific Elective-1	3	0	1	0	4
6	606	Program Specific Elective-2	3	0	1	0	4
7	607	Open Elective-2	3	0	0	0	3
		Seventh Semester B. Tech CSE (AIML)					
1	701	Research Methodology & IPR	3	0	1	0	4
2	702	Summer Internship II	0	0	0	1	1
3	703	Capstone Project Phase I	0	0	0	4	4
4	704	Program Specific Elective-3	3	0	1	0	4
		Eighth Semester B. Tech CSE (AIML)					
1	801	Capstone Project Phase II	0	0	0	8	8
2	802	Industrial Internship	0	0	0	2	2

List of Electives

S.N.	Course Code	Program Specific Elective-1 (Sem VI)	L	T	P	S	Credits
1	605	Deep Learning and Neural Networks	3	0	1	0	4
2	605	Scalable Machine Learning	3	0	1	0	4
3	605	Optimization for Machine Learning	3	0	1	0	4
4	605	Reinforcement Learning	3	0	1	0	4

S.N.	Course Code	Program Specific Elective-2 (Sem VI)	L	T	P	S	Credits
1	606	Adversarial Machine Learning	3	0	1	0	4
2	606	Privacy-Preserving Machine Learning	3	0	1	0	4
3	606	Natural Language Processing	3	0	1	0	4
4	606	Intelligent and Expert Systems	3	0	1	0	4

S.N.	Course Code	Program Specific Elective-3 (Sem VII)	L	T	P	S	Credits
1	704	AI Model Deployment and MLOps	3	0	1	0	4
2	704	AI for Edge and IoT Systems	3	0	1	0	4
3	704	AIML for Cybersecurity	3	0	1	0	4
4	704	Privacy-Preserving Machine Learning	3	0	1	0	4

List of Open Electives

S.N.	Course Code	Open Elective-1 (Sem V)	L	T	P	S	Credits
1	508	Understanding India	3	0	0	0	3
2	508	Bio-Safety and Bio-Hazards	3	0	0	0	3
3	508	Introduction to Construction Technology	3	0	0	0	3
4	508	Photography	3	0	0	0	3
5	508	Health and Lifestyle Disorders	3	0	0	0	3
6	508	Space Science	3	0	0	0	3
7	508	Food, Nutrition and Health	3	0	0	0	3
8	508	NGOs and Sustainable Development	3	0	0	0	3

S.N.	Course Code	Open Elective-2 (Sem VI)	L	T	P	S	Credits
1	607	Entrepreneurship	3	0	0	0	3
2	607	Introductory Agriculture	3	0	0	0	3
3	607	Introduction to Business Economics	3	0	0	0	3
4	607	Mathematical Puzzles and Games	3	0	0	0	3
5	607	Microprocessor & Microcontroller	3	0	0	0	3
6	607	Digital marketing	3	0	0	0	3
7	607	Human Resource Management	3	0	0	0	3
8	607	Electric Vehicle Technology	3	0	0	0	3