



# GALGOTIAS UNIVERSITY



**Bachelor of Technology in Computer Science and  
Engineering (Artificial Intelligence and Data Science)**

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**Name of School:** School of Computer Science and  
Engineering

**Department:** Artificial Intelligence and Data Science

**Year:** \_\_\_\_\_

# Curriculum

<b>First Semester B.Tech. CSE (Artificial Intelligence and Data Science)</b>							
Sl.No.	Course Code	Course Title	L	T	P	S	C
1	101	Foundation of AI	3	0	1	0	4
2	102	Advanced Engineering Materials for AI	3	0	0	0	3
3	103	Mathematics for Computer Science	3	0	0	0	3
4	104	Programming for Problem Solving	3	0	1	1	5
5	105	YOGA	0	0	0	0	0
6	106	Aptitude Skills	0	0	2	0	2
<b>Total Credits</b>			<b>17</b>				

<b>Second Semester B.Tech. CSE (Artificial Intelligence and Data Science)</b>							
Sl.No.	Course Code	Course Title	L	T	P	S	C
1	201	Digital Logic Design	3	0	1	0	4
2	202	Engineering Design and Prototyping	3	0	1	0	4
3	203	Mathematical Foundation of AI	3	0	1	0	4
4	204	Discrete Structure	3	0	0	0	3
5	205	Object-Oriented Programming	3	0	1	1	5
6	206	Environmental Impact Analysis	1	0	0	0	1
7	207	Applied Aptitude Skills	0	0	2	0	2
<b>Total Credits</b>			<b>23</b>				

<b>Third Semester B.Tech. CSE (Artificial Intelligence and Data Science)</b>							
Sl.No.	Course Code	Course Title	L	T	P	S	C
1	301	Database Management System	3	0	1	1	5
2	302	Data Structures	3	0	1	0	4
3	303	Python Programming	3	0	1	1	5
4	304	Data Communication and Networking	3	0	1	0	4
5	305	Computer Organization and Architecture	3	0	0	0	3
6	306	Programming Skills with Computational Maths	0	0	2	0	2
7	307	Advanced Aptitude Skills	0	0	2	0	2
<b>Total Credits</b>			<b>25</b>				

Fourth Semester B.Tech. CSE (Artificial Intelligence and Data Science)							
Sl.No.	Course Code	Course Title	L	T	P	S	C
1	401	Design and Analysis of Algorithm	3	0	1	0	4
2	402	Probability and Statistics	3	0	0	0	3
3	403	Machine Learning	3	0	1	1	5
4	404	Operating System	3	0	1	0	4
5	<b>405</b>	<b>Minor Track Course - I / Program Core</b>	3	0	1	1	5
6	406	Programming Skills with Data Structures	0	0	2	0	2
7	407	Aptitude Proficiency	0	0	2	0	2
<b>Total Credits</b>			<b>25</b>				

Fifth Semester B.Tech. CSE (Artificial Intelligence and Data Science)							
Sl.No.	Course Code	Course Title	L	T	P	S	C
1	501	Software Engineering	3	0	1	1	5
2	502	Web Technology	3	0	1	1	5
3	503	Design Thinking	1	0	0	0	1
4	504	Summer Internship - I	0	0	0	1	1
5	<b>505</b>	<b>Minor Track Course – II/ Program Core</b>	3	0	1	0	4
6	506	Open Elective - I	3	0	0	0	3
7	507	Programming Skills with Algorithmic Design	0	0	2	0	2
8	508	Soft Skills & Aptitude Readiness	0	0	2	0	2
<b>Total Credits</b>							<b>23</b>

Sixth Semester B.Tech. CSE (Artificial Intelligence and Data Science)							
Sl.No.	Course Code	Course Title	L	T	P	S	C
1	601	Natural Language Processing	3	0	1	1	5
2	602	Deep Learning and Generative AI	3	0	1	1	5
3	603	Big Data Technologies	3	0	1	0	4
4	604	<b>Minor Track Course - III / Program Core</b>	3	0	1	1	4
5	605	Open Elective - II	3	0	0	0	3
6	606	Understanding Harmony and Ethical Human Conduct	1	0	0	0	1
7	607	Programming Skills with Advanced Data Structures	0	0	2	0	2
8	608	Professional Readiness	0	0	2	0	2
<b>Total Credits</b>							<b>26</b>

**Seventh Semester B.Tech. CSE (Artificial Intelligence and Data Science)**

Sl.No.	Course Code	Course Title	L	T	P	S	C
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	<b>Minor Track Course - IV / Program Core</b>	3	0	1	1	5
<b>Total Credits</b>							<b>14</b>

**Eighth Semester B.Tech. CSE (Artificial Intelligence and Data Science)**

Sl.No.	Course Code	Course Title	L	T	P	S	C
1	801	Capstone Project Phase II	0	0	0	8	8
2	802	Industrial Internship	0	0	0	2	2
<b>Total Credits</b>							<b>10</b>
<b>Total Program Credits</b>							<b>162</b>

**List of Electives**

S.N.	Course Code	Open Elective-I (Sem V)	L	T	P	S	Credits
1	506	Understanding India	3	0	0	0	3
2	506	Bio-Safety and Bio-Hazards	3	0	0	0	3
3	506	Introduction to Construction Technology	3	0	0	0	3
4	506	Photography	3	0	0	0	3
5	506	Health and Lifestyle Disorders	3	0	0	0	3
6	506	Space Science	3	0	0	0	3
7	506	Food, Nutrition and Health	3	0	0	0	3
8	506	NGOs and Sustainable Development	3	0	0	0	3

S.N.	Course Code	Open Elective-II (Sem VI)	L	T	P	S	Credits
1	605	Entrepreneurship	3	0	0	0	3
2	605	Introductory Agriculture	3	0	0	0	3
3	605	Introduction to Business Economics	3	0	0	0	3
4	605	Mathematical Puzzles and Games	3	0	0	0	3
5	605	Microprocessor & Microcontroller	3	0	0	0	3
6	605	Digital marketing	3	0	0	0	3
7	605	Human Resource Management	3	0	0	0	3
8	605	Electric Vehicle Technology	3	0	0	0	3

S.N.	Course Code	Program CORE	L	T	P	S	Credits
1	405	Computer Vision	3	0	1	1	5
2	505	Optimization Techniques for Deep Learning	3	0	1	0	4
3	604	Cognitive Computing	3	0	1	0	4
4	704	Advanced Visualization Techniques	3	0	1	1	5

### Proposed List of Minor Tracks

Sr	Minor Tracks	Credits
1	Healthcare	18
2	Business Analytics	18
3	Agriculture	18
4	Fin-Tech	18
5	Gaming Technology	18
6	Ed-Tech	18
7	Robotics	18
8	Human Computer Interaction	18
9	Drone Technology	18
10	Quantum Computing	18