



# GALGOTIAS UNIVERSITY



**School of Computer Science and Engineering**

**PhD Program**

**in**

**Computer Science and Engineering**

## Curriculum

First Semester – University Course Work							
S.N.	Course Code	Course Title	Credit Structure				Total Credits
			L	T	P	S	
1	101	Research Methodology	3	0	0	0	2
2	102	Statistics and Computer Applications	3	0	0	0	2
3	103	Ethics in Research and Publications	3	0	0	0	2
	Total credits						6

Second Semester – Domain Course Work (CSE) ( Mandatory Any One 4 Credit)							
S.N.	Course Code	Course Title	Credit Structure				Total Credits
			L	T	P	S	
1	MCSE1110	Advanced Design and Analysis of Algorithm	3	0	2	0	4
2	MCSE1120	Advanced Computer Networks	3	0	2	0	4
3	MCSE1130	Advanced Operating System	3	0	2	0	4
4	MCSE1150	Advanced Software Engineering	3	0	2	0	4
5	MCSE1240	Artificial Intelligence and Machine Learning	3	0	2	0	4
6	MCSE1235	Cloud Computing and Technology	3	0	2	0	4
7	MCSE2322	Requirement Analysis and Project Management	3	0	2	0	4
8	MCSE9340	Bio Inspired Computing	3	0	2	0	4
	Total credits						4

Second Semester – Domain Course Work (CSE) (Choice Based Any One 2/3/4 Credit) Elective list							
S.N.	Course Code	Course Title	Credit Structure				Total Credits
			L	T	P	S	
1	PHDCS2401	Ethical Hacking & Cyber Forensic	3	0	0	2	4
2	PHDCS2402	Introduction To Industry 4.0 And Industrial Internet Of Things	3	0	0	2	4
3	PHDCS2403	Advanced Computer Architecture	3	0	1	2	4
4	PHDCS2404	AI: Constraint Satisfaction	3	0	0	2	4
5	PHDCS2405	An Introduction To Artificial Intelligence	3	0	0	2	4
6	PHDCS2406	Linux Administration	3	0	0	2	4
7	PHDCS2407	Block chain and Its Applications	3	0	0	2	4
8	PHDCS2408	Cloud Computing and Distributed Systems	3	0	0	2	4
9	PHDCS2409	Deep Learning	3	0	0	2	4
10	PHDCS2410	Computer Networks And Internet Protocol	3	0	0	2	4
11	PHDCS2411	Design And Engineering Of Computer Systems	3	0	0	2	4
12	PHDCS2412	Foundations Of Cryptography	3	0	0	1	3
13	PHDCS2413	Information Security - 5 - Secure Systems Engineering	3	0	0	2	4
14	PHDCS2414	Bio Inspired Computing	3	0	0	2	4
15	PHDCS2415	Advanced Graph Theory	3	0	0	2	4
16	PHDCS2416	AI:Constraint Satisfaction	3	0	0	1	3

17	PHDCS2417	AI: Search Methods For Problem Solving	3	0	0	1	3
18	PHDCS2418	Applied Natural Language Processing	3	0	0	1	3
19	PHDCS2419	Technical Writing for Engineers with Research Ethics	3	0	0	1	3
20	PHDCS2420	Advanced Graph Theory	3	0	0	1	3
21	PHDCS2421	AI: Search Methods For Problem Solving	3	0	0	1	3
22	PHDCS2422	Applied Natural Language Processing	3	0	0	1	3
23	PHDCS2423	Computer Networks And Internet Protocol	3	0	0	1	3
24	PHDCS2424	Design And Engineering Of Computer Systems	3	0	0	1	3
25	PHDCS2425	LaTeX and MsOffice for Engineers, and Scientists	3	0	0	1	3
26	PHDCS2426	Data Analytics With Python/R	3	0	0	1	3
27	PHDCS2427	Introduction To Parallel Programming With OpenMP And MPI	3	0	0	1	3
28	PHDCS2428	Introduction To Quantum Computing: Quantum Algorithms And Qiskit	2	0	0	0	2
29	PHDCS2429	Introduction To Wireless And Cellular Communications	2	0	0	0	2
30	PHDCS2430	Parallel Algorithms	2	0	0	0	2
31	PHDCS2431	Secure Computation: Part I	2	0	0	0	2
32	PHDCS2432	Privacy And Security In Online Social Media	2	0	0	0	2
33	PHDCS2433	User-centric Computing For Human-Computer Interaction	2	0	0	0	2
34	PHDCS2434	Systems And Usable Security	2	0	0	0	2
35	PHDCS2435	Software Conceptual Design	2	0	0	0	2
36	PHDCS2436	Algorithms For Protein Modelling And Engineering	2	0	0	0	2
37	PHDCS2437	Introduction to Internet of Things	2	0	0	0	2
38	PHDCS2438	Image Processing	2	0	0	0	2
39	PHDCS2439	Data Analytics With Python (12 week)	2	0	0	0	2
40	PHDCS2440	Fundamentals of Artificial Intelligence	2	0	0	0	2
41	PHDCS2441	Optimization Theory	2	0	0	0	2
42	PHDCS2442	Machine Learning	2	0	0	0	2
43	PHDCS2443	Big Data Computing/Data Science and Applications	2	0	0	0	2
44	PHDCS2444	Stress Management	2	0	0	0	2
45	PHDCS2445	Data Science	2	0	0	0	2