

SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY

COURSE STRUCTURE

B. TECH.

in

COMPUTER SCIENCE AND ENGINEERING

4 YEARS PROGRAMME



**GAUTAM BUDDHA UNIVERSITY
GAUTAM BUDH NAGAR, GREATER NOIDA**

SEMESTER I

S. No	Course Code	Courses	L-T-P	Credits
1	MA101	Engineering Mathematics-I	3-1-0	4
2	PH102	Engineering Physics	3-1-0	4
3	EE102	Basic Electrical Engineering	3-1-0	4
4	ME101	Engineering Mechanics	3-1-0	4
5	ES101	Environmental Studies	3-1-0	4
6	PH104	Engineering Physics Lab	0-0-2	1
7	EE104	Basic Electrical Engineering Lab	0-0-2	1
8	EN151	Language Lab	0-0-2	1
9	ME102	Workshop Practice	1-0-2	2
10	GP	General Proficiency	Non Credit	
Total Credits			25	
Total Contact Hours			16-5-8 = 29	

SEMESTER II

S. No	Course Code	Courses	L-T-P	Credits
1	MA102	Engineering Mathematics-II	3-1-0	4
2	CY101	Engineering Chemistry	3-1-0	4
3	CS101	Fundamentals of Computer Programming	3-1-0	4
4	CS105	Introduction of Artificial Intelligence	2-0-0	2
5	EC101	Basic Electronics Engineering	3-1-0	4
6	EN101	English Proficiency	2-0-0	2
7	CE103	Engineering Graphics	1-0-2	2
8	CY103	Engineering Chemistry Lab	0-0-2	1
9	CS181	Computer Programming Lab	0-0-2	1
10	EC181	Basic Electronics Engineering	0-0-2	1
11	GP	General Proficiency	Non Credit	
Total Credits			25	
Total Contact Hours			14-3-8 = 29	

SEMESTER III

S. No	Course Code	Courses	L-T-P	Credits
1	CS201	Internet Technology	3-0-0	3
2	CS203	Operating System	3-0-0	3
3	CS205	Data Structure & Algorithms	3-0-0	3
4	CS207	Problem solving using C++	3-0-0	3
5	EC201	Digital Electronics	3-0-0	3
6	MA201	Engineering Mathematics-III	3-1-0	4
7	EC281	Digital Electronics Lab	0-0-3	2
8	CS283	Data Structure & Algorithms Lab	0-0-3	2
9	CS285	Object Oriented Programming Lab	0-0-3	2
10	GP	General Proficiency	Non Credit	
Total Credits			25	
Total Contact Hours			18-1-9 = 28	

SEMESTER – IV

S. No	Course Code	Courses	L-T-P	Credits
1	CS202	Software Engineering	3-0-0	3
2	CS204	Java Programming	3-0-0	3
3	CS206	Database Management System	3-0-0	3
4	CS208	Theory of Automata	3-0-0	3
5	CS210	Discrete Structure	3-0-0	3
6	CS212	Artificial Intelligence	3-0-0	3
7	CS282	Software Engineering Lab	0-0-3	2
8	CS284	Java Programming Lab	0-0-3	2
9	CS286	Database Management System Lab	0-0-3	2
10	GP	General Proficiency	Non Credit	
Total Credits			24	
Total Contact Hours			18-0-9 = 27	

SEMESTER V

S. No	Course Code	Courses	L-T-P	Credits
1	CS301	Computer Networks	3-0-0	3
2	CS303	Compiler Design	3-0-0	3
3	CS307	Analysis & Design of Algorithms	3-0-0	3
4	CS309	Computer Organization & Architecture	3-1-0	4
5		Elective I	3-0-0	3
6		Elective II	3-0-0	3
7	CS381	Computer Networks Lab	0-0-3	2
8	CS383	Compiler Design Lab	0-0-3	2
9	CS385	Analysis & Design of Algorithms Lab	0-0-3	2
10	GP	General Proficiency	Non Credit	
Total Credits			25	
Total Contact Hours			18-1-9 = 28	

ELECTIVE I

S. No	Course Code	Courses	L-T-P	Credits
1	CS305	Computer Graphics	3-0-0	3
2	CS311	E-Commerce	3-0-0	3
3	CS313	Knowledge Engineering	3-0-0	3
4	CS315	Computer Based Numerical & Statistical Techniques	3-0-0	3

ELECTIVE II

S. No	Course Code	Courses	L-T-P	Credits
1	CS317	System Analysis & Design	3-0-0	3
2	CS319	Software Project Management	3-0-0	3
3	CS311	Information Retrieval System	3-0-0	3
4	CS323	Graph Theory	3-0-0	3

SEMESTER VI

S. No	Course Code	Courses	L-T-P	Credits
1	CS302	Internet of Things	3-0-0	3
2	CS304	Web Development using PHP	3-0-0	3
3	CS306	Software Testing	3-0-0	3
4	CS308	Soft Computing Techniques	3-0-0	3
5		Elective III	3-0-0	3
6		Elective IV	3-0-0	3
7	CS384	Web Development using PHP Lab	0-0-3	2
8	CS386	Soft Computing Techniques Lab	0-0-3	2
9	CS388	Software Testing Lab	0-0-3	2
10	Industrial Training (Min Six Weeks) Evaluation will be in VII Semester			
11	GP	General Proficiency	Non Credit	
Total Credits			24	
Total Contact Hours			18-0-9 = 27	

ELECTIVE III

S. No	Course Code	Courses	L-T-P	Credits
1	CS310	Digital Image Processing	3-0-0	3
2	CS312	Adhoc & Sensor Networks	3-0-0	3
3	CS314	Expert Systems	3-0-0	3
4	CS316	Fault tolerant System	3-0-0	3

ELECTIVE IV

S. No	Course Code	Courses	L-T-P	Credits
1	CS318	Computer Security	3-0-0	3
2	CS320	Management Information System	3-0-0	3
3	CS322	Evolutionary Computation	3-0-0	3
4	CS324	Fuzzy logic	3-0-0	3

SEMESTER VII

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS401	Simulation & Modeling	3-0-0	3
2	CS403	Wireless Communication	3-0-0	3
3	CS405	Machine Learning	3-0-0	3
4	CS407	Mobile Computing	3-0-0	3
5		Elective V	3-0-0	3
6		Elective VI	3-0-0	3
7	CS481	Machine Learning Using Python	0-0-3	2
8	CS483	Industrial Training Evaluation		2
9	GP	General Proficiency	Non Credit	
Total Credits				22
Total Contact Hours			18-0-6=24	

ELECTIVE V

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS409	Pattern Recognition	3-0-0	3
2	CS411	Robotics	3-0-0	3
3	CS413	Optimization Techniques	3-0-0	3
4	CS415	Visual Basic using asp.net	3-0-0	3

ELECTIVE VI

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS417	Natural Language Processing	3-0-0	3
2	CS419	Distributed Operating System	3-0-0	3
3	CS421	Data Analytics	3-0-0	3
4	CS423	Embedded System	3-0-0	3

SEMESTER VIII

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS402	Big Data	3-0-0	3
2	CS404	Data Mining & Warehousing	3-0-0	3
3	CS406	Cloud Computing	3-0-0	3
4		Elective VI	3-0-0	3
5	CS484	Big Data Lab	0-0-3	2
6	CS492	Project	0-0-16	8
7	GP	General Proficiency	Non Credit	
Total Credits			22	
Total Contact Hours			12-0-19 = 31	

ELECTIVE VI

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS410	Parallel Distributed System	3-0-0	3
2	MA406	Operation Research	3-0-0	3
3	CS414	Neural Networks	3-0-0	3
4	CS416	Data Science	3-0-0	3

GRAND TOTAL CREDITS = 192