UNIVERSITY SCHOOL
OF
INFORMATION AND COMMUNICATION TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAMME STRUCTURE

B.Tech. in Computer Science and Engineering
2020-2024
UNDER SELF FINANCE SCHEME

GAUTAM BUDDHA UNIVERSITY
GAUTAM BUDH NAGAR, GREATER NOIDA, U.P.

SEMESTER I

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	MA101	Engineering Mathematics-I	3	1	0	4	GE1
2	PH102	Engineering Physics	3	1	0	4	GE2
3	EE102	Basic Electrical Engineering	3	1	0	4	GE3
4	ME101	Engineering Mechanics	3	1	0	4	GE4
5	ES101	Environmental Studies	3	1	0	4	GE5
6	PH104	Engineering Physics Lab	0	0	2	1	GE L1
7	EE104	Basic Electrical Engineering Lab	0	0	2	1	GE L2
8	EN151	Language Lab	0	0	2	1	GE L3
9	ME102	Workshop Practice	1	0	2	2	GE L4
10	GP	General Proficiency		Non Credit			
		Total Hours and Credits	**16**	**5**	**8**	**25**	

SEMESTER II

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	MA102	Engineering Mathematics-II	3	1	0	4	GE6
2	CY101	Engineering Chemistry	3	1	0	4	GE7
3	CS101	Fundamentals of Computer Programming	3	1	0	4	C1
4	EC101	Basic Electronics Engineering	3	1	0	4	GE8
5	CS105	Introduction of Artificial Intelligence	2	0	0	2	C2
6	EN101	English Proficiency	2	0	0	2	GE9
7	CE103	Engineering Graphics	1	0	2	2	GE10
8	CY103	Engineering Chemistry Lab	0	0	2	1	GE L5
9	CS181	Computer Programming Lab	0	0	2	1	L1
10	EC181	Basic Electronics Engineering Lab	0	0	2	1	GE L6
11	GP	General Proficiency		Non Credit			
		Total Hours and Credits	**17**	**4**	**8**	**25**	

SEMESTER III

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS201	Internet Technology	3	0	0	3	C3
2	CS203	Operating Systems	3	0	0	3	C4
3	CS205	Data Structure & Algorithms	3	0	0	3	C5
4	CS207	Problem Solving using C++	3	0	0	3	C6
5	EC201	Digital Electronics	3	0	0	3	GE11
6	MA201	Engineering Mathematics-III	3	1	0	4	GE12
7	EC281	Digital Electronics Lab	0	0	3	2	GE L7
8	CS283	Data Structure & Algorithms Lab	0	0	3	2	L2
9	CS285	Object-Oriented Programming Lab	0	0	3	2	L3
10	GP	General Proficiency	Non Credit				
		Total Hours and Credits	**18**	**1**	**9**	**25**	

SEMESTER IV

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS202	Software Engineering	3	0	0	3	C7
2	CS204	Database Management System	3	0	0	3	C8
3	CS206	Java Programming	3	0	0	3	C9
4	CS208	Artificial Intelligence	3	0	0	3	C10
5	CS210	Theory of Automata	3	0	0	3	C11
6	CS212	Discrete Structure	3	1	0	4	C12
7	CS282	Software Engineering Lab	0	0	3	2	L4
8	CS284	Database Management System Lab	0	0	3	2	L5
9	CS286	Java Programming Lab	0	0	3	2	L6
10	GP	General Proficiency	Non Credit				
		Total Hours and Credits	**18**	**1**	**9**	**25**	

SEMESTER V

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS301	Computer Networks	3	0	0	3	C13
2	CS303	Compiler Design	3	0	0	3	C14
3	CS305	Software Testing	3	0	0	3	C15
4	CS307	Python	3	1	0	4	C16
5		Elective 1	3	0	0	3	E1
6		Elective 2	3	0	0	3	E2
7	CS381	Computer Networks Lab	0	0	3	2	L7
8	CS383	Compiler Design Lab	0	0	3	2	L8
9	CS385	Python Programming Lab	0	0	3	2	L9
10	GP	General Proficiency	Non Credit				
		Total Hours and Credits	**18**	**1**	**9**	**25**	

SEMESTER VI

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS302	Web Development using PHP	3	0	0	3	C17
2	CS304	Internet of Things	3	0	0	3	C18
3	CS306	Analysis & Design of Algorithms	3	1	0	4	C19
4	CS308	Cyber Security	3	0	0	3	C20
5		Elective 3	3	0	0	3	E3
6		Elective 4	3	0	0	3	E4
7	CS382	Internet of Things Lab	0	0	3	2	L10
8	CS384	Web Development using PHP Lab	0	0	3	2	L11
9	CS386	Cyber Security Lab	0	0	3	2	L12
10	GP	General Proficiency	Non Credit				
		Total Hours and Credits	**18**	**1**	**9**	**25**	

Industrial Training will be done by candidate after third year during the summer break and it will be of minimum 4 weeks. It will be evaluated as per University Examination in VII semester.

SEMESTER VII

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	MA402	Modeling and Simulation	3	0	0	3	GE13
2	CS401	Wireless Communication	3	0	0	3	C21
3	CS403	Soft Computing Techniques	3	0	0	3	C22
4	CS405	Machine Learning	3	0	0	3	C23
5		Elective 5	3	0	0	3	E5
6	CS481	Soft Computing Techniques Lab	0	0	3	2	L13
7	CS491	Industrial Traning	0	0	6	3	IT1
8	CS493	Minor Project	0	0	10	5	MP1
9	GP	General Proficiency	Non Credit				
		Total Hours and Credits	**15**	**0**	**19**	**25**	

SEMESTER VIII

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS490	Seminar	0	0	3	2	S1
2	CS492	Intenship	0	0	30	15	I1
3	CS494	Major Project	0	0	16	8	MP2
4	GP	General Proficiency	Non Credit				
		Total Hours and Credits	**0**	**0**	**49**	**25**	

GRAND TOTAL OF CREDITS   =   200

In the **Seminar**, students need to study and present in the group, any latest topic of their specialized area and It will be evaluated as per University Examination Rules.

The **Internship** in Industry will be done by candidate during the 8th semester and it will be for a minimum of 4 (-6) months. It will be evaluated as per University Examination Rules.

Minor and Major Project will be in a group and It will be evaluated as per University Examination Rules.

USICT will provide a mentor/supervisor for industrial training, seminar, internship, minor and major projects.

ELECTIVES FROM USICT

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS309	Computer Graphics	3	0	0	3	E1
2	CS311	Computer Organization & Architecture	3	0	0	3	E1
3	CS313	Android Operating System	3	0	0	3	E1
4	CS315	Computer Based Numerical & Statistical Techniques	3	0	0	3	E1
5	CS317	Data Mining	3	0	0	3	E1
6	CS319	System Analysis & Design	3	0	0	3	E2
7	CS321	Software Project Management	3	0	0	3	E2
8	CS323	Information Retrieval System	3	0	0	3	E2
9	CS325	Graph Theory	3	0	0	3	E2
10	CS327	Knowledge Engineering	3	0	0	3	E2
11	CS310	Digital Image Processing	3	0	0	3	E3
12	CS312	Adhoc & Sensor Networks	3	0	0	3	E3
13	CS314	Expert Systems	3	0	0	3	E3
14	CS316	Fault Tolerant System	3	0	0	3	E3
15	CS318	Mobile Computing	3	0	0	3	E3
16	CS320	Computer Security	3	0	0	3	E4
17	CS322	Management Information System	3	0	0	3	E4
18	CS324	Evolutionary Computation	3	0	0	3	E4
19	CS326	Fuzzy logic	3	0	0	3	E4
20	CS328	Distributed Operating System	3	0	0	3	E4
21	CS407	Pattern Recognition	3	0	0	3	E5
22	CS409	Robotics	3	0	0	3	E5
23	CS411	Optimization Techniques	3	0	0	3	E5
24	CS413	Cloud Computing	3	0	0	3	E5
25	CS415	Big Data Analytics	3	0	0	3	E5

CS	Computer Science		**L**	Lab from USICT
GE	General Elective from other Deptt./School		**IT1**	Industrial Training
GE L	General Elective Lab from other Deptt./School		**MP**	Minor / Major Project
C	Compulsary Course from USICT		**S1**	Seminar
E	Elective from USICT		**I1**	Internship