UNIVERSITY SCHOOL
OF
INFORMATION AND COMMUNICATION TECHNOLOGY

Department Of Computer Science & Engineering

COURSE STRUCTURE

B. Tech.
In
Computer Science And Engineering
(Self Finance)

2022-2026

GAUTAM BUDDHA UNIVERSITY
GAUTAM BUDH NAGAR, GREATER NOIDA
UP (INDIA)

SEMESTER – I

Sr. 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	Electrical Technology 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

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS101	Fundamentals of Computer Programming	3-1-0	4
2	CS102	Computer Organization and Architecture	3-1-0	4
3	MA102	Engineering Mathematics-II	3-1-0	4
4	EC101	Basic Electronics Engineering	3-1-0	4
5	CS105	Introduction to Artificial Intelligence	2-0-0	2
6	EN101	English Proficiency	2-0-0	2
7	CE103	Engineering Graphics Lab	1-0-2	2
8	CS181	Computer Programming Lab	0-0-2	1
9	CS183	Computer Organization and Architecture Lab	0-0-2	1
10	EC181	Basic Electronics Engineering Lab	0-0-2	1
11	GP	General Proficiency	Non Credit	
		Total Credits	**25**	
		Total Contact Hours	**17-4-8=29**	

SEMESTER – III

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS201	Internet Technology	3-0-0	3
2	CS203	Concepts of Operating Systems	3-0-0	3
3	CS205	Data Structure and Algorithms	3-0-0	3
4	CS207	Problem Solving using C++	3-0-0	3
5	CS209	Logic Design	3-0-0	3
6	MA201	Engineering Mathematics- III	3-1-0	4
7	CS281	Data Structure and Algorithms Lab	0-0-3	2
8	CS283	Object- Oriented Programming Lab	0-0-3	2
9	CS285	Logic Design Lab	0-0-3	2
10	GP	General Proficiency	Non Credit	
		Total Credits	**25**	
		Total Contact Hours	**18-1-9=28**	

SEMESTER – IV

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS202	Software Engineering	3-0-0	3
2	CS204	Database Management System	3-0-0	3
3	CS206	Java Programming	3-0-0	3
4	CS208	Artificial Intelligence	3-0-0	3
5	CS210	Theory of Automata	3-0-0	3
6	CS 212	Discrete Structure	3-1-0	4
7	CS282	Database Management System Lab	0-0-3	2
8	CS284	Java Programming Lab	0-0-3	2
9	CS286	Artificial Intelligence Lab	0-0-3	2
10	GP	General Proficiency	Non Credit	
		Total Credits	**25**	
		Total Contact Hours	**18-1-9=28**	

SEMESTER V

Sr. 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	CS305	Wireless Communication	3-0-0	3
4	CS307	Python	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	Python Programming Lab	0-0-3	2
10	GP	General Proficiency	Non Credit	
		Total Credits		**25**
		Total Contact Hours	**18-1-9=28**	

Elective I

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS309	Computer Graphics	3-0-0	3
2	CS311	Computer Vision	3-0-0	3
3	CS313	Android Operating System	3-0-0	3
4	CS315	Computer Based Numerical and Statistical Techniques	3-0-0	3
5	CS317	Data Mining		

Elective II

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS319	System Analysis & Design	3-0-0	3
2	CS321	Software Project Management	3-0-0	3
3	CS323	Information Retrieval System	3-0-0	3
4	CS325	Graph Theory	3-0-0	3
5	CS327	Knowledge Engineering	3-0-0	3

B.Tech in Computer Science and Engineering
Self Finance

Effective for Session 2022-23
Annexure 29.1.3

SEMESTER VI

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS302	Web Development using PHP	3-0-0	3
2	CS304	Software Testing	3-0-0	3
3	CS306	Analysis and Design of Algorithms	3-1-0	4
4	CS308	Cyber Security	3-0-0	3
5		**Elective III**	3-0-0	3
6		**Elective IV**	3-0-0	3
7	CS382	Web Development using PHP Lab	0-0-3	2
8	CS384	Analysis and Design of Algorithms Lab	0-0-3	2
9	CS386	Cyber Security Lab	0-0-3	2
10	GP	General Proficiency	Non Credit	
		Total Credits		**25**
		Total Contact Hours	**18-1-9=28**	

Elective III

Sr. 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 System	3-0-0	3
4	CS316	Fault tolerant System	3-0-0	3
5	CS318	Mobile Computing		

Elective IV

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS320	Computer security	3-0-0	3
2	CS322	Management Information system	3-0-0	3
3	CS324	Evolutionary Computation	3-0-0	3
4	CS326	Fuzzy logic	3-0-0	3
5	CS328	Big Data Analytics	3-0-0	3

- Industrial Training will be done by candidate individually 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

Sr. No	Course Code	Courses	L-T-P	Credits
1	MA401	Modeling and Simulation	3-1-0	4
2	CS401	Internet of Things	3-0-0	3
3	CS403	Soft Computing Techniques	3-0-0	3
4	CS405	Machine Learning	2-0-0	2
5		**Elective V**	3-0-0	3
6	CS481	Internet of Things Lab	0-0-3	2
7	CS491	Minor Project	0-0-6	3
8	CS493	Industrial Training	0-0-10	5
9	GP	General Proficiency	Non Credit	
		Total Credits		**25**
		Total Contact Hours	**14-1-19=35**	

Elective V

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS407	Pattern Recognition	3-0-0	3
2	CS409	Robotics	3-0-0	3
3	CS411	Optimization Techniques	3-0-0	3
4	CS413	Cloud Computing	3-0-0	3
5	CS415	Information Security	3-0-0	3

SEMESTER VIII

Sr. No	Course Code	Courses	L-T-P	Credits
1	CS490	Seminar	0-0-3	2
2	CS492	Major Project	0-0-16	8
3	CS494	Internship	0-0-30	15
4	GP	General Proficiency	Non Credit	
		Total Credits		**25**
		Total Contact Hours	**0-0-49=49**	

GRAND TOTAL CREDITS- 200

- In the **Seminar**, student need to study and present individually, on latest research paper of their specialized area and It will be evaluated as per University Examination Rules.
- The **Internship** in Industry will be done by candidate individually during the 8th semester and it will be for 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.