

**UNIVERSITY SCHOOL  
OF  
INFORMATION AND COMMUNICATION TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**PROGRAMME STRUCTURE**

**B.TECH. INFORMATION TECHNOLOGY  
2018-2022**



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

## 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	2	0	0	2	OE1 / AECC
6	EN101	English Proficiency	2	0	0	2	OE2 / AECC
7	EN151	Language Lab	0	0	2	1	OE-L1 / AECC
8	EE104	Basic Electrical Engineering Lab	0	0	2	1	GE-L1
9	PH104	Engineering Physics Lab	0	0	2	1	GE-L2
10	ME102	Workshop Practice	1	0	2	2	GE-L2 / SEC
11	GP	General Proficiency	Non Credit				
<b>Total Hours and Credits</b>			<b>17</b>	<b>4</b>	<b>8</b>	<b>25</b>	

## SEMESTER II

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	MA102	Engineering Mathematics-II	3	1	0	4	GE5
2	CY101	Engineering Chemistry	3	1	0	4	GE6
3	CS101	Fundamentals of Computer Programming	3	1	0	4	CC1 / SEC
4	EC101	Basic Electronics Engineering	3	1	0	4	GE7
5	BS101	Human Values & Buddhist Ethics	2	0	0	2	OE2 / AECC
6	CE103	Engineering Graphics Lab	1	0	2	2	GE-L3
7	CY103	Engineering Chemistry Lab	0	0	2	1	GE-L4
8	CS181	Computer Programming Lab	0	0	2	1	CC-L1 / SEC
9	EC181	Basic Electronics Engineering Lab	0	0	2	1	GE-L5
10	GP	General Proficiency	Non Credit				
<b>Total Hours and Credits</b>			<b>15</b>	<b>4</b>	<b>8</b>	<b>23</b>	

## SEMESTER III

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	IT203	Animation and Computer Graphics	3	1	0	4	CC2
2	IT205	Operating System	3	1	0	4	CC3
3	IT207	Data Structure	3	1	0	4	CC4 / SEC
4	IT209	System Design & Analysis Techniques	3	1	0	4	CC5
5	MA201	Engineering Mathematics-III	3	1	0	4	GE8
6	IT281	Animation & Computer Graphics Lab	0	0	2	1	CC-L2 / SEC
7	IT283	Operating System Lab	0	0	2	1	CC-L3
8	IT285	Data Structure Lab	0	0	2	1	CC-L4 / SEC
9	IT287	Web Technologies Lab I	0	0	2	1	CC-L5 / SEC
10	GP	General Proficiency	Non Credit				
<b>Total Hours and Credits</b>			<b>15</b>	<b>5</b>	<b>8</b>	<b>24</b>	

## SEMESTER IV

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	IT202	Software Engineering	3	1	0	4	CC6
2	IT204	Discrete Structure	3	1	0	4	CC7
3	IT206	Database Management System	3	1	0	4	CC8
4	EC221	Fundamentals of Digital Electronics Circuits	3	1	0	4	GE9
5	EC230	Digital Communication & Coding	3	1	0	4	GE10
6	IT282	Web Technologies Lab II	0	0	2	1	CC-L6
7	IT284	Database Management System Lab	0	0	2	1	CC-L7 / SEC
8	IT285	Software Engineering Lab	0	0	2	1	CC-L8 / SEC
9	IT288	Digital Electronics Circuits Lab	0	0	2	1	CC-L9
11	GP	General Proficiency	Non Credit				
<b>Total Hours and Credits</b>			<b>15</b>	<b>5</b>	<b>8</b>	<b>24</b>	

## SEMESTER V

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	IT301	Theory of Automata	3	0	0	3	CC9
2	IT303	Computer Networks	3	0	0	3	CC10
3	IT305	Compiler Design	3	0	0	3	CC11
4	IT307	Machine Learning	3	1	0	4	CC12 / SEC
5		Elective 1	3	0	0	3	E1 / DSE
6		Elective 2	3	0	0	3	E2 / DSE
7	IT381	Computer Networks Lab	0	0	3	2	CC-L10
8	IT383	Compiler Design Lab	0	0	3	2	CC-L11
9	IT385	Machine Learning Lab	0	0	3	2	CC-L12 / SEC
10	GP	General Proficiency	Non Credit				
<b>Total Hours and Credits</b>			<b>18</b>	<b>1</b>	<b>9</b>	<b>25</b>	

## SEMESTER VI

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	IT302	Cloud Computing	3	0	0	3	CC13
2	IT304	Algorithm Design & Analysis	3	0	0	3	CC14
3	IT306	Computer Organization	3	0	0	3	CC15
4	IT308	Information and Network Security	3	1	0	4	CC16
5		Elective 3	3	0	0	3	E3 / DSE
6		Elective 4	3	0	0	3	E4 / DSE
7	IT382	Cloud Computing Lab	0	0	3	2	CC-L13 / SEC
8	IT384	Algorithm Design & Analysis Lab	0	0	3	2	CC-L14 / SEC
9	IT386	Information & Network Security Lab	0	0	3	2	CC-L15
10	GP	General Proficiency	Non Credit				
<b>Total Hours and Credits</b>			<b>18</b>	<b>1</b>	<b>9</b>	<b>25</b>	

**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

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	MA402	Modeling and Simulation	3	1	0	4	GE11
2	IT401	Sensor Networks and IoT	3	0	0	3	CC17
3	IT403	Soft Computing Techniques	3	0	0	3	CC18
4	IT405	Big Data Analytics	2	0	0	2	CC19 / SEC
5		Elective 5	3	0	0	3	E5 / DSE
6	IT481	Sensor Networks and IoT Lab	0	0	3	2	CC-L16
7	IT491	Minor Project	0	0	6	3	MP1 / E
8	IT493	Industrial Training	0	0	10	5	IT1 / E
9	GP	General Proficiency	Non Credit				
<b>Total Hours and Credits</b>			<b>14</b>	<b>1</b>	<b>19</b>	<b>25</b>	

## SEMESTER VIII

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	IT490	Seminar	0	0	3	2	S / E
2	IT492	Major Project	0	0	16	8	MP2 / E
3	IT494	Intenship	0	0	30	15	I / E
4	GP	General Proficiency	Non Credit				
<b>Total Hours and Credits</b>			<b>0</b>	<b>0</b>	<b>49</b>	<b>25</b>	

**GRAND TOTAL OF CREDITS = 196**

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 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 DCSE**

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	IT309	IT Forensics	3	0	0	3	E1
2	IT311	Advanced Communication Systems	3	0	0	3	E1
3	IT313	Bio-Informatics	3	0	0	3	E1
4	IT315	Computer Based Numerical & Statistical Techniques	3	0	0	3	E1
5	IT317	Data Compression	3	0	0	3	E2
6	IT319	Software Project Management	3	0	0	3	E2
7	IT321	Information Retrieval System	3	0	0	3	E2
8	IT323	Andriod	3	0	0	3	E2
9	IT310	Digital Image Processing	3	0	0	3	E3
10	IT312	Distributed Data Bases	3	0	0	3	E3
11	IT314	Expert Systems	3	0	0	3	E3
12	IT316	High Speed Networks	3	0	0	3	E3
13	IT318	Computer Security	3	0	0	3	E4
14	IT320	Management Information System	3	0	0	3	E4
15	IT322	Evolutionary Computation	3	0	0	3	E4
16	IT324	Information Retrieval and Management	3	0	0	3	E4
17	IT407	Graph Theory and Algorithms	3	0	0	3	E5
18	IT409	Mobile Computing	3	0	0	3	E5
19	IT411	Data Warehousing and Data Mining	3	0	0	3	E5
20	IT413	Robotics	3	0	0	3	E5

**IT** Information Technology**CC** Core Course from USICT**GE** General Elective from related discipline of other Deptt./School**GE L** General Elective Lab from related discipline of other Deptt./School**OE** Open Elective from other discipline of other Deptt./School**AECC** Ability Enhancement Compulsory Course**DSE** Discipline Specific Course**SEC** Skill Enhancement Course**E** Elective from USICT**CC-L** Core Course Lab from USICT**IT1** Industrial Training**MP** Minor / Major Project**S** Seminar**I** Internship