

**UNIVERSITY SCHOOL
OF
INFORMATION AND COMMUNICATION TECHNOLOGY
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

COURSE STRUCTURE

**B.Tech. (ELECTRONICS & COMMUNICATION ENGINEERING)
Session: 2024-2028**



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

SEMESTER I

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	MA101	Engineering Mathematics-I	3	1	0	4	C1
2	PH102	Engineering Physics	3	1	0	4	C2
3	EE102	Basic Electrical Engineering	3	1	0	4	C3
4	ME101	Engineering Mechanics	3	1	0	4	SCE1
5	ES101	Environmental Science	4	0	0	4	OE1
7	PH104	Engineering Physics Lab	0	0	2	1	P1
8	EE104	Basic Electrical Engineering Lab	0	0	2	1	P2
9	EN151	Language Lab	0	0	2	1	P3
10	ME102	Workshop Practices	1	0	2	2	P4
11	GP	General Proficiency	Non Credit				GP
Total Hours and Credits			17	4	8	25	

SEMESTER II

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	MA102	Engineering Mathematics-II	3	1	0	4	C6
2	CY101	Engineering Chemistry	3	1	0	4	C7
3	CS101	Fundamentals of Computer Programming	3	1	0	4	C8
4	EC101	Basic Electronics Engineering	3	1	0	4	GE1
5	BS101	Human Values and Buddhist Ethics	2	0	0	2	E1
6	CE103	Engineering Graphics	0	0	2	2	P5
7	CY103	Engineering Chemistry Lab	0	0	2	1	P6
8	CS181	Computer Programming Lab	0	0	2	1	P7
9	EC181	Basic Electronics Engineering Lab	0	0	2	1	P8
10	GP	General Proficiency	Non Credit				GP
Total Hours and Credits			14	4	8	23	

SEMESTER III

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	MA201	Engineering Mathematics-III	3	1	0	4	C10
2	EC221	Fundamental of Digital Electronic Circuits	3	1	0	4	C11
3	EC223	Network Analysis	3	1	0	4	C12
4	EC225	Introduction to Signal and Systems	3	1	0	4	C13
5	EC227	Analog Electronic Circuits	3	1	0	4	C14
6	EC271	Analog Electronic Circuits Lab	0	0	2	1	P9
7	EC273	Digital Electronics Circuits Lab	0	0	2	1	P10
8	EC275	Network Analysis Lab	0	0	2	1	P11
9	EC277	PCB Design Lab	0	0	2	1	P12
10	GP	General Proficiency	Non Credit				GP
Total Hours and Credits			15	5	8	24	

SEMESTER IV

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	EC222	Analog Communication	3	1	0	4	C15
2	EC224	Linear Integrated Circuits	3	1	0	4	C16
3	EC226	Microprocessors and Microcontrollers	3	1	0	4	C17
4	EC228	Electromagnetic Field Theory	3	1	0	4	C18
5	EC220	Data Structures	3	1	0	4	C19
6	EC272	Communication Lab	0	0	2	1	P13
7	EC274	Microprocessor and Microcontroller Lab	0	0	2	1	P14
8	EC276	Analog Integrated Circuits Lab	0	0	2	1	P15
9	EC278	Data Structures Lab	0	0	2	1	P16
10	GP	General Proficiency	Non Credit				GP
Total Hours and Credits			15	5	8	24	

SEMESTER V

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	EC321	Digital Logic Design	3	1	0	4	C20
2	EC323	Digital Communication	3	1	0	4	C21
3	EC325	Antenna & Wave Propagation	3	1	0	4	C22
4	EC327	Control System	3	1	0	4	C23
5		Elective 1	3	0	0	3	E1
6	EC371	Control System Lab	0	0	2	1	P17
7	EC373	Digital Communication Lab	0	0	2	1	P18
8	EC375	Digital Logic Design Lab	0	0	3	2	P19
9	EC377	Antenna & Wave Propagation Lab	0	0	2	1	P20
10	GP	General Proficiency	Non Credit				GP
Total Hours and Credits			15	4	9	24	

SEMESTER VI

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	EC320	Microwave and Radar Engineering	3	1	0	4	C24
2	EC322	Digital Signal Processing and Applications	3	1	0	4	C25
3	EC324	Fundamentals of Microelectronics	3	1	0	4	C26
4	EC326	Data Communication Network	3	0	0	3	C27
5	EC328	IC Fabrication Technology	3	0	0	3	C28
6		Elective 2	3	0	0	3	E2
7	EC372	Microwave Engineering Lab	0	0	2	1	P21
8	EC374	Digital Signal Processing and Applications Lab	0	0	2	1	P22
9	EC376	Simulation Lab	0	0	2	1	P23
10	GP	General Proficiency	Non Credit				GP
Total Hours and Credits			18	3	6	24	

* Industrial Training after 6 semester during summer break. It is mandatory and will be of minimum 4 weeks for each student. It will be evaluated at the end of 7th semester.

SEMESTER VII

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	EC421	Wireless Communication	3	0	0	3	P24
2	EC423	Fiber Optic Communication	3	0	0	3	P25
3	EC425	VLSI Design	3	0	0	3	P26
4		Elective 3	3	0	0	3	E3
5		Elective 4	3	0	0	3	E4
6	EC471	Fiber Optic Communication Lab	0	0	2	1	P24
7	EC473	VLSI Design Lab	0	0	2	1	P25
8	EC491*	Industrial Training	0	0	0	3	MP1
9	EC493	Minor Project	0	0	10	5	P27
10	GP	General Proficiency	Non Credit				GP
Total Hours and Credits			15	0	14	25	

* Industrial Training after 6 semester during summer break. It is mandatory and will be of minimum 4 weeks for each student. It will be evaluated at the end of 7th semester.

SEMESTER VIII

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	EC490	Seminar#	0	0	3	2	S1
2	EC492	Internship**	0	0	30	15	I2
3	EC494	Major Project	0	0	16	8	MP2
4	GP	General Proficiency	Non Credit				GP
Total Hours and Credits			0	0	49	25	

In the seminar, students needs to study and present any latest topic related to their specilization.

It will be evaluated at the end of 8th Semester.

** The internship will be of atleast four months in any industry. Its evaluation will be done by the end of the 8th semester by the concerned department.

GRAND TOTAL OF CREDITS = 194

ELECTIVES

S.No.	Course Code	Course Name	L	T	P	Credits	Types
2	EC343	Electronic Instrumentation and Measurements	3	0	0	3	E1
3	EC345	Digital Image Processing	3	0	0	3	E1
4	EC347	Electronic Commerce	3	0	0	3	E1
5	EC346	Reliability Engineering	3	0	0	3	E2
6	EC340	Secure Communication	3	0	0	3	E2
7	EC344	Broadband Networks	3	0	0	3	E2
8	EC342	RF Engineering	3	0	0	3	E2
9	CS340	Python Programming	3	0	0	3	E2
10	PHUD414	Fundamentals of Electro-optics and Photonics	3	0	0	3	E2
11	EC441	Electronic Switching Systems	3	0	0	3	E3
12	EC443	Introduction to Robotics	3	0	0	3	E3
13	EC445	Television Engineering	3	0	0	3	E3
14	EC447	Fundamentals of Internet of Things	3	0	0	3	E3
15	CS425	Artificial Neural Network & Fuzzy Logic	3	0	0	3	E4
16	CS427	Evolutionary Computation	3	0	0	3	E4
17	EC455	Mobile Communication	3	0	0	3	E4
18	EC457	Satellite Communication	3	0	0	3	E4