



SGT UNIVERSITY
SHREE GURU GOBIND SINGH TRICENTENARY UNIVERSITY
GURGAON, DELHI-NCR
(Established by the Haryana Act No.8 of 2013)

Curriculum and Syllabi



BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGINEERING

**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
FACULTY OF ENGINEERING AND TECHNOLOGY
(2019-2020)**

Curriculum & Syllabus

B.Tech. in ECE

(General Branch)

(w.e.f. 2019-2020)

SGT UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
CURRICULUM- 2019-2020
B. Tech.-ECE – I Semester

Sr. No.	Subject Code	Course title	Schedule				Mark		
			L	T	P	C	Int.	Ext.	Total
1	13040101	Engineering Mathematics-I	3	1	0	4	40	60	100
2	13040102	Engineering Physics	3	1	0	4	40	60	100
3	13040103	Basics of Electronics Engineering	3	0	0	3	40	60	100
4	13040104	Fundamental of Computer Programming	3	0	0	3	40	60	100
5	13040106	Engineering Graphics and Design	1	0	0	1	40	60	100
6	13040107	Engineering Physics Lab	0	0	2	1	20	30	50
7	13040108	Basic Electronics Engineering Lab	0	0	2	1	20	30	50
8	13040109	Fundamental of Computer Programming Lab	0	0	2	1	20	30	50
9	13040110	Engineering Graphics and Design Lab	0	0	4	2	20	30	50
10	13040112	Engineering Lab	0	0	4	2	20	30	50
Total Contact Hours			13	2	14	22	300	450	750
			29						

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CURRICULUM-ECE- 2019-2020
B. Tech. – II Semester

Sr. No.	Subject Code	Course title	Schedule				Mark		
			L	T	P	C	Int.	Ext.	Total
1	1304020 1	Engineering Mathematics-II	3	1	0	4	40	60	100
2	1304020 2	Industrial Chemistry	3	1	0	4	40	60	100
3	1304020 3	Communication Skills	2	0	0	2	40	60	100
4	1304020 6	Workshop Technology	1	0	0	1	40	60	100
5	1304020 4	Basics of Electrical Engineering	3	0	0	3	40	60	100
6	1304021 2	Environment science	0	0	0	0	40	60	100
7	1304020 7	Industrial Chemistry Lab	0	0	2	1	20	30	50
8	1304020 8	Communication Skills Lab	0	0	2	1	20	30	50
9	1304021 1	Workshop Technology Lab	0	0	4	2	20	30	50
10	1304020 9	Basics of Electrical Engineering Lab	0	0	2	1	20	30	50
Total			12	2	10	19	320	480	800
			24						

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CURRICULUM- 2019-2020
B. Tech.-ECE – III Semester

Sr. No.	Subject Code	Course title	Schedule				Mark		
			L	T	P	C	Int.	Ext.	Total
1	13040301	Digital Electronics & Computer Organization	3	0	0	3	40	60	100
2	13040302	Signals & Systems	3	0	0	3	40	60	100
3	13040303	Network Theory	3	0	0	3	40	60	100
4	13040304	Micro Electronics	3	0	0	3	40	60	100
5	13040305	Engineering Mathematics III	3	1	0	4	40	60	100
6	13040306	Industrial Economics and Management	2	0	0	2	40	60	100
7	13040307	Constitution of India	2	0	0	0	40	60	100
8	13040310	Digital Electronics & Computer Organization Lab	0	0	2	1	20	30	50
9	13040311	Network Theory Lab	0	0	2	1	20	30	50
10	13040312	Circuit Simulation with PCB design Lab	0	0	4	2	20	30	50
11	13040315	Minor Project phase-I	0	0	2	1	20	30	50
12	13040316	Industrial Training –I	0	0	0	1	20	30	50
Total			19	1	10	24	380	570	950
			30						

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CURRICULUM- 2019-2020
B. Tech. -ECE– IV Semester

Sr. No.	Subject Code	Course title	Schedule				Mark		
			L	T	P	C	Int.	Ext.	Total
1	13040401	Analog Integrated Circuit	3	0	0	3	40	60	100
2	13040402	Electromagnetic Theory	3	0	0	3	40	60	100
3	13040403	Analog Communication	3	0	0	3	40	60	100
4	13040404	Interfacing with μP & μC	3	0	0	3	40	60	100
5	13040405	Numerical Method	3	1	0	4	40	60	100
6		VA Course-I	2	0	0	0	40	60	100
7	13040409	Integrated Circuit Lab	0	0	2	1	20	30	50
8	13040410	Analog Communication Lab	0	0	2	1	20	30	50
9	13040411	Interfacing with μP & μC Lab	0	0	2	1	20	30	50
10	13040413	Major Project phase- I	0	0	4	2	20	30	50
Total Contact Hours			17	1	10	21	320	480	800
			28						

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CURRICULUM- 2019-2020
B. Tech. -ECE– V Semester

Sr. No.	Subject Code	Course title	Schedule				Mark		
			L	T	P	C	Int.	Ext.	Total
1	13040501	Antenna Wave propagation	3	0	0	3	40	60	100
2	13040502	Digital Communication	3	0	0	3	40	60	100
3	13040503	DSP with simulation	3	0	0	3	40	60	100
4		Program Elective-I	3	0	0	3	40	60	100
6		Open Elective -I	3	0	0	3	40	60	100
7	13040514	Essence of Indian knowledge Traditional	2	0	0	0	40	60	100
8	13040517	Antenna Design & Simulation Lab	0	0	2	1	20	30	50
9	13040518	Digital Communication Lab	0	0	2	1	20	30	50
10	13040519	DSP with Simulation	0	0	2	1	20	30	50
11	13040520	Manor Project phase -II	0	0	2	1	20	30	50
12	13040521	Industrial Training-II	0	0	0	1	20	30	50
13	13040522	General Lab -I	0	0	2	1	20	30	50
Total			17	0	10	21	360	540	900
			27						

Program Elective 1:	
13040504	Instrumentation & Measurement

13040505	Embedded system
13040506	Power Electronics
13040507	Sensor & Architecture Interfacing

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CURRICULUM- 2019-2020
B. Tech. –ECE- VI Semester

Sr. No.	Subject Code	Course title	Schedule				Mark		
			L	T	P	C	Int.	Ext.	Total
5		Microwave & Radar	3	0	0	3	40	60	100
6		VLSI Design	3	0	0	3	40	60	100
7		Program Elective-II	3	0	0	3	40	60	100
8		Program Elective-III	3	0	0	3	40	60	100
5		Open Elective- II	3	0	0	3	40	60	100
6		VA Course-II	2	0	0	0	40	60	100
7		Microwave & Radar Lab	0	0	2	1	20	30	50
8		VLSI Design Lab	0	0	2	1	20	30	50
9		Major Project phase -II	0	0	4	2	20	30	50
10		GL-II	0	0	2	1	20	30	50
11		GL-III	0	0	2	1	20	30	50
Total			17	0	12	21	340	510	850
			29						

Program Elective II		Program Elective III	
	Bio-Medical Instrumentation		Control System

	Digital Processor		ARM Processor
	Scientific Computing		Speech processing & Recognition
	Information Theory & Coding		Wireless sensor Network
			DSD with programmable logic

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CURRICULUM- 2019-2020
B. Tech. -ECE– VII Semester

Sr. No.	Subject Code	Course title	Schedule				Mark		
			L	T	P	C	Int.	Ext.	Total
1		Wireless Communication	3	0	0	3	40	60	100
2		Program Elective-IV	3	0	0	3	40	60	100
3		Open Elective III	3	0	0	3	40	60	100
4		Open Elective IV	3	0	0	3	40	60	100
5		Professional Ethics for Electronics Engineers	2	0	0	2	40	60	100
6		Review Article Phase-I	0	0	6	3	20	30	50
7		Wireless Communication Lab	0	0	2	1	20	30	50
9		Industrial Training – III	0	0	0	1	20	30	50
10		GL-IV	0	0	2	1	20	30	50
Total Contact Hours			14	0	10	20	280	420	700
			24						

	Program Elective-IV
	Computational Electromagnetic
	DIP with simulation

	IoT Architecture
	RF VLSI

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CURRICULUM- 2019-2020
B. Tech. -ECE– VIII Semester

Sr. No.	Subject Code	Course title	Schedule				Mark		
			L	T	P	C	Int.	Ext.	Total
1		Program Elective-V	3	0	0	3	40	60	100
2		Program Elective-VI	3	0	0	3	40	60	100
3		Review Article phase-II	0	0	6	3	20	30	50
4		General Lab-V	0	0	2	1	20	30	50
5		General Lab-VI	0	0	2	1	20	30	50
Total Contact Hours			6	0	10	11	140	210	350
			16						

Program Elective-V	
	Microwave in MIC's
	Optical Communication
	Arduino Programming & Introduction to Raspberry Pi
	Verilog Programming

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Program Elective-VI	
	Satellite communication
	RF component Design: Simulator Approved
	Modern Comm. Technologies
	High Speed Electronics