B.TECH. 4 YEAR PROGRAMME

ELECTRONICS AND COMMUNICATION ENGINEERING

SCHEME 2020-21

(1st, 2nd, 3rd, 4th, 5th, 6th, 7th & 8th Semester)

Detailed Scheme for B.Tech. ECE

B.Tech. – ECE (First Semester)

CourseNo.	Subject	Scheme of Studies Periods per Week			Credits
		L	T	P	
MTH 101	Engineering Mathematics I	3	1	-	4
PHY 101	Engineering Physics I	3	1		4
CS 101	Fundamentals of Computer Programming	2	1	2	4
EE 101	Fundamentals of Electrical & Electronics	2	1	2	4
HUM 101	Effective Communication and soft skills	2	1	2*	4
IT 101	Engineering Workshop	-		4	2
*Language Lab Total L=12, T=5, P =10		Total Credit			**22**

B.Tech. – ECE (Second Semester)

CourseNo.	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
MTH 102	Engineering Mathematics-II	3	1	-	4
PHY 102	Engineering Physics-II	2	1	2	4
EG 101	Engineering Graphics	2	1	2	4
CS 102	Data Structures and Algorithms	2	1	2	4
HUM 102	Culture & Human Values	2	1	2	4
IT 102	Programming Lab	-	-	4	2
Total L=11, T=5, P =12		Total Credit			**22**

B.Tech. - ECE (Third Semester)

CourseNo.	Subject	Scheme of Studies Periods per Week			Credits
		L	T	P	
MTH 211	Mathematics III	3	1	-	4
EC 211	Electronic Devices and Circuits	2	1	2	4
EC 212	Digital Logic and Design	2	1	2	4
EC 213	Network Analysis	2	1	2	4
EC 214	Signals and Systems	3	1	-	4
EC 216	Electronic Workshop	-	-	4	2
Total L=12, T=5, P =10		Total Credit			**22**

B.Tech. - ECE (Fourth Semester)

CourseNo.	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
EC 221	Linear Integrated Circuits	3	1	-	4
EC 222	Microprocessors and Microcontrollers	2	1	2	4
EC 223	Analog and Digital Communication	2	1	2	4
EC 224	Database Management System	2	1	2	4
EC 225	Probability Theory and Random Process	3	1	-	4
EC 226	Entrepreneurship Development			4	2
EC 227	Community Services*	-	-	-	S/NS
Total L=12, T=5, P =10		Total Credit			**22**

Community Services*: 15 days (100 Hrs) community services such as Swach bharat Abhiyan etc. to get Satisfactory (S) or Not Satisfactory (NS) Grade.

B.Tech. – ECE (Fifth Semester)

Course No.	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
EC 311	Computer Networks	2	1	2	4
EC 312	Digital Signal Processing	2	1	2	4
EC 313	EM Fields	3	1	-	4
EC 314	Control Systems	2	1	2	4
EC 315	Operating System	3	1		4
Total L=12, T=5,P=6		Total Credit			**20**

B.Tech.- ECE (Sixth Semester)

Course No.	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
EC 321	Introduction to VLSI	2	1	2	4
EC 322	Optical Communication	2	1	2	4
EC 323	Microwave Engineering	2	1	2	4
EC 324	Wireless Communication	3	-	-	3
L-1	EC Elective 1	3	-	-	3
EC 325	Minor Project	-	-	4	2
Total L=12, T=3,P=10		Total Credit			**20**

List of Electives Level -1 (Any one Subject for VI Semester)

Signal Processing Stream		**Communication Stream**		**VLSI & Embedded System Stream**		**Robotics Stream**	
EC 501	Digital Image Processing	EC 502	Artificial Neural Networks	EC 503	Digital System Design	EC 504	Power Electronics

B.Tech.- ECE (Seventh Semester)

Course No.	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
EC 411	Antenna and Wave Propagation	2	1	2	4
OT-1	Open Theory from Science/Math/Humanities/ Management	3	-	-	3
L-2	EC Elective 2	3	-	-	3
L-2	EC Elective 3	3	-	-	3
L-2	EC Elective 4	3	-	-	3
EC 412	Industrial Training	-	-	-	2
EC 413	Major Project (Phase-1)	-	-	4	2
Total L=14, T=1, P =6		Total Credit			20

List of Electives Level -2 (Any three Subject for VII Semester)

Signal Processing Stream		Communication Stream		VLSI & Embedded System Stream		Robotics Stream	
EC-601	Cryptography and Information Security	EC-602	Signal Detection and Estimation Theory	EC-603	VLSI Architecture	EC-604	Introduction to Robotics
EC-605	Adaptive Signal Processing	EC-606	Wireless Sensor Networks	EC-607	Nano Electronics	EC-608	Advanced Machine Learning
EC-609	Statistical signal analysis	EC-610	Big Data Analytics	EC-611	CMOS RF IC Design	EC-612	Electronics and Instrumentation

List of Electives OT-1 (Any One Subject for VII Semester)

Open Theory from Science/Math/Humanities/Management							
EC 701	Environmental Science	EC 702	Technical Communication	EC 703	System Biology	EC 704	Intellectual Property Right

B.Tech.- ECE (Eighth Semester)

Course No.	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
OT-2	Open Theory from Science/Math/Humanities/Management	3	-	-	3
L-2	EC Elective 5	3	-	-	3
L-2	EC Elective 6	3	-	-	3
EC 421	Major Project (Phase-2) /Internship*	-	-	4	11
Total L=9, T=0, P =8		Total Credit			**20**

List of Electives Level -2 (Any two Subject for VIII Semester)

Signal Processing Stream		Communication Stream		VLSI & Embedded System Stream		Robotics Stream	
EC-613	Video Signal Processing	EC-616	Quantum Optical Communication	EC-619	Embedded System	EC-622	AI & Deep Learning
EC-614	Wavelets in Signal Processing	EC-617	Satellite Communication	EC-620	Advanced VLSI Circuits and Systems	EC-623	Mobile Robotics
EC-615	Biomedical Signal Processing	EC-618	Radar Systems	EC-621	Analog & mixed signal design	EC-624	Neuro Fuzzy Techniques

List of Electives OT-2 (Any One Subject for VIII Semester)

Open Theory from Science/Math/Humanities/Management							
EC 705	Principle of Management	EC 706	Engineering Economics	EC 707	Organizational Behavior	EC 708	Project Management