



## School of Electronics & Communication Engineering

### Program Structure of B.Tech. Four Year Full Time Degree

1 <sup>st</sup> Semester							2 <sup>nd</sup> Semester						
Sl. No.	Course Code	Course Title	L	T	S/P	C	Sl. No.	Course Code	Course Title	L	T	S/P	C
1.	MTL1012	Engineering Mathematics-I	3	0	0	3	1	MTL1026	Engineering Mathematics-II	3	0	0	3
2	ECL 1020	Basic Electrical Engg. (For ELE)	3	0	2	4	2	ECP 1200	Engineering Graphics	0	0	4	2
3	ECL 1010	Basic Electronics (For ECE, CSE, ME)	3	0	2	4	3		PYTHON-I	1	0	4	3
4		Engineering Physics	3	0	2	4	4	ECL 1030	Electronic Circuits and Simulation	3	1	2	5
5	ECL 1021	Introduction to 'C' Programming	2	0	4	4	5	ECL 1022	Network Analysis and Synthesis	3	1	0	4
6	LNL 1411	Communication Skills	2	0	2	3	6	PCL 1067	Discourse of Human Values	2	0	0	2
7	ECL 1001	Introduction to Electronics	1	0	0	1	7	LMP1142	Language Lab	0	0	2	1
8	MEP 1115	Engineering Workshop	0	0	2	1							
		Induction Program											
		NSS (Non-Credit)-UGC				40 Hrs							
<b>Total Credits</b>						<b>20</b>	<b>Total Credits</b>						<b>20</b>
3 <sup>rd</sup> Semester							4 <sup>th</sup> Semester						
Sl. No.	Course Code	Course Title	L	T	S/P	C	Sl. No.	Course Code	Course Title	L	T	S/P	C
1		Environmental Studies	3	0	0	N C	1	ECL 2030	Linear Integrated Circuits and Applications	3	1	2	5
2	PCL 2042	Introduction to Logic	3	0	0	3	2	ECL 2152	Digital Communication Engineering	3	1	2	5
3	ECL 2040	Electromagnetic Field Theory	3	1	0	4	3	ECL 2041	Antenna & Wave Propagation	3	0	2	4
4	ECL 2151	Analog Communication Engineering	3	1	2	5	4	ECL 2060	Microprocessor Systems	3	1	2	5
5	ECL 2070	Digital Electronics	3	1	2	5	5	ECL 2071	Digital System Design using Verilog	3	1	2	5
6	ECP 2201	Electronics Workshop Lab	0	0	2	1	7	ECP1200	MATLAB Programming	1	0	2	2
7.		Data Structure using C++	3	0	2	4							
<b>Total Credits</b>						<b>22</b>	<b>Total Credits</b>						<b>26</b>
5 <sup>th</sup> Semester							6 <sup>th</sup> Semester						
Sl. No.	Course Code	Course Title	L	T	S/P	C	1		Open Elective-I- (Artificial Intelligence)	3	0	0	3
1		Constitutional of India	0	0	0	N C	2	ECE XXXX	School Elective –II	3	0	0	3
2	ECL3180	Signal Processing & Linear Systems	3	1	0	4	3	ECL 3181	IoT (Internet of Things)	3	0	2	4
3	ECL 3090	Control Systems	3	1	0	4	4	ECL 3130	IC Fabrication and VLSI	4	0	2	5
4	ECL3050	Microwave Engineering	3	1	2	5	5	ECL3182	Probability Theory and Stochastic Process	3	1	0	4
5	ECL3091	Embedded Electronics and Microcontroller	3	0	2	4	6	ECD 3991	Minor Project-II Hardware Based Projects	0	0	0	3
6	ECL 3100	Computer Networks and Security	3	0	0	3	7	ECL 3080	Entrepreneurship Management	3	0	0	3
7.	ECD3990	Minor Project-I – Hardware Based Projects	0	0	0	2							
8.	ECE XXXX	School Elective –I	3	0	0	3							
<b>Total Credits</b>						<b>25</b>	<b>Total Credits</b>						<b>25</b>

7 <sup>th</sup> Semester							8 <sup>th</sup> Semester						
Sl. No.	Course Code	Course Title	L	T	S/P	C	Sl. No.	Course Code	Course Title	L	T	S/P	C
1	ECC 4980	Summer Internship Evaluation-	0	0	0	2	1	ECD 4992 / ECC 4982	(Major Project + <b>Open Elective-IV</b> ) (9+3) / Internship (12)				12
2		Open Elective-II	3	0	0	3							
3	ECL 4170	Optical Fiber Communication	3	0	2	4							
4	ECE XXXX	School Elective - III	3	0	0	3							
5	ECE XXXX	School Elective-IV	3	0	0	3							
8	ECP 4202	Project- Phase-I	0	0	0	5							
		Disaster management	0	0	0	N C							
<b>Total Credits</b>						<b>20</b>	<b>Total Credits</b>						<b>12</b>

LIST OF SCHOOL ELECTIVES I,II,III,IV						
S. No.	Course Code	Course Title	L	T	S	C
1	ECE 3101	Introduction to Wireless Networks	3	0	0	3
2	ECE 4191	Speech Processing	3	0	0	3
3	ECE 4192	Image & Video Processing	3	0	0	3
4	ECE 4190	Multimedia Communications	3	0	0	3
5	ECE 4140	Introduction to MEMS Design	3	0	0	3
6	ECE 4171	Optoelectronic Devices	3	0	0	3
7	ECE 425B	Object Oriented Programming	3	0	0	3
8	ECE 4082	Advanced Embedded Systems	3	0	0	3
9	ECE 4160	Satellite Communication	3	0	0	3
10	ECE 3100	Pervasive Computing & WSN	3	0	0	3
11	ECE 4161	Radar & Navigational Guides	3	0	0	3
12	ECE 3091	Virtual Instrumentation using LABView	3	0	0	3
13.	ECE 404B	Digital Integrated Circuits	3	0	0	3
14.	ECE4193	Digital Signal Processing	3	0	0	3
15.	ECE4194	Deep learning	3	0	0	3
16.	ECE3091	Electronic Measurement and Instrumentation	3	0	0	3

Minor I and II	Assignment 1&II	Major	Total
40 (20 each)	10	50	100

### M.TECH. (ECE)

1 <sup>st</sup> Semester						
Sl. No.	Course Code	Course Title	L	T	S / P	C
	<b>ECL 6150</b>	<b>Advanced Digital Communications</b>	3	1	0	4
	ECL 6182	Signal Processing Techniques & Applications	3	1	2	5
	ECL 6221	Integrated Circuit Design	3	0	2	4
	ECL 6110	Wireless Networks & Protocols	3	1	2	5
	BUL 7	Research Methodology	4	0	0	4
						<b>22</b>

2 <sup>nd</sup> Semester						
Sl. No.	Course Code	Course Title	L	T	S / P	C
	ECL 6051	Microwave Circuit Design	3	0	2	4
	ECL 6170	Optical Switching & Networks	3	0	2	4
	ECL 6070	Synthesis & Optimization of Digital Circuits	3	0	0	3
	ECE XXXX	School Elective-I	3	0	0	3
	ECE XXXX	School Elective-II	3	0	0	3
	PCL 1067	Discourse on Human Virtues (Non-Credit/Audit)	3	0	0	0
<b>Total Credits</b>						<b>17</b>

3 <sup>rd</sup> Semester							4 <sup>th</sup> Semester						
Sl. No.	Course Code	Course Title	L	T	S / P	C	Sl. No.	Course Code	Course Title	L	T	S/ P	C
		Open Elective-I				3		ECD 7991	Project-Dissertation (Phase-II)				20
	ECE XXXX	School Elective-III	3	0	0	3							
	ECL 7084	Embedded System Design	3	0	2	4							
	ECC 7981	Seminar				3							
	ECD 7990	Project-Synopsis (Phase-I)				8							
<b>Total Credits</b>						<b>21</b>	<b>Total Credits</b>						<b>20</b>

<b>Elective -I</b>	<b>Elective -II &amp; III</b>
ECE 6193 Audio & Video Processing	EECE 201P Artificial Materials
ECE 6110 Wireless Sensor Networks & Applications.	ECE 6082Real Time Embedded Systems
ECE 6150 Advanced Wireless Communications	ECE 6121 Wireless Networks & Security Issues
ECE 6195 Pattern Recognition	ECE 6065 Advanced Digital Signal Processors & its Applications
ECE 6194 Audio Engineering	ECE 6052 Microwave Antenna Design
ECE 6112 Advanced Computer Networks	EECE 6142 NEMS Design
ECE 6211 ASIC Design & FPGA	ECE 6160 Terahertz Electronics
ECE 6010 Semiconductor Device Modeling	ECE 6222 Digital integrated Circuits
ECE 6141MEMS Design	ECE 6161 RFIC Design
ECE 6063 Advanced Computer Architecture	ECE 7170 Photonics Networks & switching
EECE 105P Detection & Estimation	ECE 7111 Advanced Wireless Sensor Networks
	ECE 6210P Mixed Signal Testing
	ECE 6230 Advanced CMOS VLSI Design