

## B.Tech (Electronics & Communication Engineering) Program

### General Structure (2022-26)

Year	Course Code	Semester-I	L	P	U	Course Code	Semester-II	L	P	U	
I		Mathematics-I	3	0	3		Mathematics-II	3	0	3	
		English Language Skills	2	2	3		Physics	3	2	4	
		Introduction to Electrical & Electronics Sciences	3	2	4		Environment Sciences & SDGs	2	0	2	
		Chemistry	3	2	4		Digital Signal Processing	3	0	3	
		Introduction to DS and AI	3	0	3		Professional Communication	3	0	3	
		Computer Programming	3	2	4		Digital Fabrication	0	6	3	
		Audit Course	2	0	0		Data Structures	2	4	4	
<b>Total No of Credits</b>			19	8	21	<b>Total No of Credits</b>			16	12	22
II	<b>Semester-III</b>					<b>Semester-IV</b>					
		Introduction to IoT	3	0	3		Microprocessor Programming & Interfacing	3	2	4	
		Object Oriented Programming Concepts	2	4	4		Speech Processing	3	0	3	
		Mathematics-III	3	0	3		Web enabled Technology	3	0	3	
		Circuit Theory	2	0	2		Industry coding practice (Python and R)	2	2	3	
		Control Systems	3	0	3		Hardware modelling using Verilog	3	2	4	
		Principles of Managerial Economics	3	0	3		Analog Electronics	2	2	3	
		Electronic Devices	3	0	3		Digital Humanities Elective1	3	0	3	
		CRT	0	2	1		CRT	0	2	1	
<b>Total No of Credits</b>			19	6	22	<b>Total No of Credits</b>			19	10	24
<b>SUMMER INTERNSHIP PROGRAM I (for Internship option only)</b>										<b>5</b>	
<b>Semester-V</b>					<b>Semester-VI</b>						

III		Computer Organization and Architecture	3	0	3		ASIC Design	3	0	3	
		Analog and Digital Communication (Core)	3	2	4		Embedded systems	3	0	3	
		Digital VLSI Design (Core)	3	0	3		Autonomous vehicles	3	0	3	
		ML Based Signal Processing	3	0	3		RF & Microwave Engineering	3	2	4	
		Computer Networks	3	0	3		CMOS Analog Integrated Circuit Design	3	0	3	
		Electromagnetic Fields Waves (Core)	3	0	3	-	Special Project / TIP/Capstone Project	0	6	3	
		Audit Course	0	0	0		CRT	0	2	1	
		CRT	0	2	1						
<b>Total No of Credits</b>			18	4	20	<b>Total No of Credits</b>			12	10	20
<b>Semester-VII</b>						<b>Semester-VIII</b>					
IV	IP401/	Internship Program II /				IP401/	Internship Program II /				
	TS401	Thesis & Seminar				TS401	Thesis & Seminar				
	-	Electives (4)+ Professional/Discipline				-	Electives (4)+ Professional/Discipline				
	-	Humanities Electives (1)				-	Humanities Electives (1)				
<b>Total No of Credits</b>			<b>20/18</b>			<b>Total No of Credits</b>			<b>20/18</b>		
<b>Total No of Credits</b>											<b>172</b>

Digital Humanities Electives I (VI Semester)				
Course Code	Course Title	L	P	U
	Social Innovation	3	0	3

#### Specialization Electives (VII/VIII Semester)

Communication Electives				
Course Code	Course Title	L	P	U
	Optical Communications	3	0	3
	Wireless Communication Networks	3	0	3
	Satellite Communications	3	0	3
	Mobile Communication	3	0	3

Microwave Electives				
Course Code	Course Title	L	P	U
	Antenna and wave propagation	3	0	3
	Radar Systems	3	0	3
	RF & Microwave Communication circuits and systems	3	0	3
	Smart Antennas for Mobile Communication	3	0	3

VLSI Electives				
Course Code	Course Title	L	P	U
	Low power VLSI Design	3	0	3
	Digital Systems	3	0	3
	CPLD & FPGA	3	0	3
	IC Applications	3	0	3

Embedded Electives				
Course Code	Course Title	L	P	U
	Bio-Medical Electronics	3	0	3
	DSP Processors and Architecture	3	0	3
	Microcontrollers & Applications	3	0	3

Design Electives				
Course Code	Course Title	L	P	U
	Computer Vision	3	0	3
	Sensors & Actuators	3	0	3
	Information Theory & Coding	3	0	3

Humanities Electives				
Course Code	Course Title	L	P	U
	Dynamics of Social Change	3	0	3
	Introduction to Psychology	3	0	3
	Heritage of India	3	0	3
	Modern Political Science	3	0	3
	Public Administration	3	0	3
	Professional Ethics	3	0	3

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