

S. Y.
B. Tech in
Electronics and Telecommunication Engineering
Semester - III

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-02	Analog and Digital Communication	3	0	2	1	4	PCC
02	PCC-03	Electronic Devices and Circuits	3	0	2	1	4	PCC
03	PCC-04	Digital System Design	3	0	2	1	4	PCC
04	OEC-01	Microcontrollers & Interfacing	2	0	0	1	2	OE
05	HSMC-01	Indian Language	2	0	0	1	2	HSMC
06	VEC-01	Constitution of India	1	0	0	2	1	VEC
07	CEA-01	Community Engagement Activity (CEA)/Field Project	--	--	--	--	2	CEA
08	HSMC-02	Entrepreneurship	1	0	0	1	1	HSMC
Total			15	00	08	09	20	

Semester -IV

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-05	Electromagnetic Waves and Antenna	2	0	0	1	2	PCC
02	PCC-06	Linear Integrated Circuits	3	0	2	1	4	PCC
03	PCC-07	Microcontroller and Applications	3	0	2	1	4	PCC
04	PCC-08	Control Systems	2	0	0	1	2	PCC
05	VEC-02	Environmental Studies	1	0	0	2	1	VEC
06	OEC-02	Principles of Electronic Communication	2	0	0	1	2	OE
07	MD M-01	Multidisciplinary Minor	3	0	0	1	3	MD M
08	HSMC-03	Design Thinking	--	--	2	1	1	HSMC
09		Economics					2	
Total			16	00	04	08	21	

- Exit option to qualify for Diploma:

- Advanced PCB Design
- Electronic Product Design

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[Level 5, UG Diploma] Lateral Entry Students Semester - III

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-02	Analog and Digital Communication	3	0	2	1	4	PCC
02	PCC-03	Electronic Devices and Circuits	3	0	2	1	4	PCC
03	PCC-04	Digital System Design	3	0	2	1	4	PCC
04	OEC-01	Microcontrollers & Interfacing	2	0	0	1	2	OE
05	HSMC-01	Indian Language	2	0	0	1	2	HSMC
06	VEC-01	Constitution of India	1	0	0	2	1	VEC
07	BS	Matrices, Differential Calculus, and Probability	3	0	0	1	3	BS
08	HSMC-02	Entrepreneurship	1	0	0	1	1	HSMC
Total			18	00	08	10	21	

[Level 5, UG Diploma] Lateral Entry Students Semester - IV

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-05	Electromagnetic Waves and Antenna	2	0	0	1	2	PCC
02	PCC-06	Linear Integrated Circuits	3	0	2	1	4	PCC
03	PCC-07	Microcontroller and Applications	3	0	2	1	4	PCC
04	PCC-08	Control Systems	2	0	0	1	2	PCC
05	VEC-02	Environmental Studies	1	0	0	2	1	VEC
06	OEC-02	Principles of Electronic Communication	2	0	0	1	2	OE
07	MD M-01	Multidisciplinary Minor	3	0	0	1	3	MD M
08	HSMC-03	Design Thinking	--	--	2	1	1	HSMC
09		Economics					2	
10	HSMC	Communication Skills	1	0	2	0	2	HSMC
Total			17	00	06	08	23	

- Exit option to qualify for Diploma:
 - Advanced PCB Design
 - Electronic Product Design

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Semester – V

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-09	Digital Signal Processing	2	0	2	1	3	PCC
02	PCC-10	RTL Design and FPGA Implementation	3	0	2	2	4	PCC
03	PCC-11	Embedded system design	2	0	2	1	3	PCC
04	PEC-01	Program Specific Elective-I: a) Digital Image Processing and Applications b) Information Theory and Coding c) Analog & Mixed Signal IC Design d) Automotive Electronics	3	0	2	1	4	PEC
		e) Introduction to Engineering Measurements and Safety AND PCB Design -I	2	0	4	0	4	
05	OEC-03	IoT & Edge Computing	2	0	0	1	2	OE
06	--	Internship	--	--	--	--	1	Internship/ OJT
07	Project-01	Mini Project	0	0	4	2	3	Project
08	MD M -02	Multidisciplinary Minor	3	0	2	1	4	MDM
Total			14/15	00	14/16	8/9	24	

Semester - VI

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PEC-02	Program Specific Elective-II a) Fiber Optic Communication b) Power Electronic Devices c) Verification using SV d) RTOS using QnX e) IoT	3	0	2	1	4	PEC
		f) PCB Design -II	2	0	4	0	4	
02	PCC-13	Mobile Communication and	2	0	2	1	3	PCC

		Networks						
03	PCC-14	Data Communication and Networking	2	0	2	1	3	PCC
04	PCC-15	Digital IC design	3	0	2	1	4	PCC
05	Project-02	Minor Project	0	0	6	2	6	Project
06	MD M-03	Multidisciplinary Minor	3	0	2	1	4	MDM
Total			12/13	00	16/18	6/7	24	

- Exit option to qualify for B. Voc.:
 - Internship of 8 Weeks

B.
Tech.

Electronics and Telecommunication Engineering

Semester - VII

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-16	Mobile Communication and Networks	2	0	2	1	3	PCC
02	PCC-17	Next Generation Computer Architecture	2	0	2	1	3	PCC
03	PEC-03	Program Specific Elective III: a) ASIC Physical Design b) Digital Audio Processing c) Microwave Theory and Techniques	3	0	0	1	3	PEC
04	RM	Research Methodology	2	0	0	0	2	RM
05	--	Internship	-	-	-	-	1	Internship/ OJT
06	Project	Project Stage-III	0	0	10	2	5	Project
07	MD M-04	Multidisciplinary Minor	3	0	0	1	3	MD M
Total			12	00	14	6	20	

Semester - VIII

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PEC-06	MOOC/EMS Vertical Course	3	0	0	0	3	PEC
02	PEC-07	MOOC/ EMS Vertical Course	3	0	0	0	3	PEC
03	PEC-08	MOOC/ EMS Vertical Course	3	0	0	0	3	PEC
04	Project-03	Internship cum Capstone project	0	0	6	2	3	Project
Total			09	00	06	02	12	

Multidisciplinary Minor
BIS Standards for AI

Sr. No.	Semester	Course Code	Course Title	L	T	P	S	Cr
01	IV	MD M-01	Standardization – Basic Concepts	3	0	0	1	3
02	V	MD M-02	Artificial Intelligence – Basic Concepts	3	0	2	1	4
03	VI	MD M-03	Challenges for standards formation in AI	3	0	2	1	4
04	VII	MD M-04	National and International standards in AI	3	0	0	1	3
Total				10	00	08	05	14

Interdisciplinary Minor
AI and ML in Signal Processing

Sr. No.	Semester	Course Code	Course Title	L	T	P	S	Cr
01	III	ID M-01	Signal Transforms	3	0	0	1	3
02	IV	ID M-02	Image and Video processing	3	0	2	1	4
03	V	ID M-03	Introduction to AI & ML techniques	3	0	2	1	4
04	VI	ID M-04	Computer vision and Pattern Recognition	3	0	2	1	4
05	VII	ID M-05	Deep learning algorithms for Signal processing	3	0	0	1	3
Total				13	00	10	05	18

Honors

Wireless Communication and Next Generation Networks

Sr. No.	Semester	Course Code	Course Title	L	T	P	S	Cr
01	III	H-01	Random Signal and Stochastic Process	3	0	0	1	3
02	IV	H-02	Advance in Digital Communication	3	0	2	1	4
03	V	H-03	Cognitive Radio	3	0	2	1	4
04	VI	H-04	Software Defined Networks	3	0	2	1	4
05	VII	H-05	Next Generation Technologies	3	0	0	1	3
Total				13	01	08	05	18

MOOCs Identified – NPTEL - PEC - 04, 05, 06

- An Introduction to Artificial Intelligence
- Advanced Computer Architecture
- Introduction to Machine Learning
- Discrete Mathematics
- Reinforcement Learning
- Deep Learning
- Advanced Computer Networks
- Cloud Computing
- Natural Language Processing
- Hardware Security
- Foundations of Cyber Physical Systems
- Understanding Incubation and Entrepreneurship
- Power Management Integrated Circuits

EMS Vertical Courses

Semester	Course Name	No. of contact hours/week			Total Hours		Credits		
		L	T	P	TH	LAB	TH	LAB	Total
V	Introduction to Engineering Measurements and Safety	1	--	2	15	30	1	1	2
	PCB Design Fundamentals (PCB Design - 1)	1	--	2	15	30	1	1	2
VI	Advanced PCB Design & Compliance (PCB Design - 2)	2	--	4	30	60	2	2	4
VII	Surface Mount Technology – Processes and Equipment (SMT Assembly Line - 1)	2	--	2	30	30	2	1	3
VIII	SMT Inspection, Testing and Quality Assurance (SMT Assembly Line -2)	1	--	4	15	60	1	2	3
	Electronic Product Pre-Compliance and Power Quality Standards (Electronic Product Compliance – 1)	2	--	2	30	30	2	1	3
	EMI/EMC Fundamentals and Compliance Testing (Electronic Product Compliance – 2)	1	--	4	15	60	1	2	3
	Project	--	--	6	--	90	--	3	3
Total		10	--	26	150	390	10	13	23
		36			540		23		