

CURRICULUM

B. Tech. Electronics and Communication Engineering with specialization in Design and Manufacturing + M. Tech. Signal Processing & Communication System Design (ESD)

(According to 31st Senate meeting held on 1st July 2016)

S.No	Course Name	I	P	C	Category	Code
Semester 1						
1	Calculus	3	0	3	BSC	MAT104T
2	Engineering Mechanics	3	0	3	BSC	PHY108T
3	Computational Engineering/ Basic Electrical and Electronics Engineering	3	0	3	BEC/ BEC	COM105T / ELE103T
4	Concepts in Engineering Design/ Science and Engineering of Materials	3	0	3	DES/ BEC	DES101T / INT108T
5	English for Communication	2	0	2	HMC	INT107T
6	Earth, Environment & Design/ Professional Ethics for Engineers	2	0	P/ F	DES/ HMC	DES103T / MAN102T
7	Engineering Skills Practice	0	3	2	BEC	INT110P
8	Computational Engineering Practice/ Measurement & Data Analysis Practice	0	3	2	BEC/ BSC	COM105P / INT111P
9	Materials & Mechanics Practice	0	3	2	BSC	PHY109P
10	Engineering Graphics	1	3	3	BEC	INT109P
Total Credits				23		
Semester 2						
1	Differential Equations	3	0	3	BSC	MAT105T
2	Engineering Electromagnetics	3	0	3	BSC	PHY107T
3	Basic Electrical and Electronics Engineering/ Computational Engineering	3	0	3	BEC/ BEC	ELE103T / COM105T
4	Science and Engineering of Materials/ Concepts in Engineering Design	3	0	3	BEC/ DES	INT108T / DES101T
5	Design History	2	0	2	DES	DES102T
6	Professional Ethics for Engineers/ Earth, Environment & Design	2	0	P/ F	HMC/ DES	MAN102T / DES103T
7	Engineering Electromagnetics Practice	0	3	2	BSC	PHY107P
8	Measurement & Data Analysis Practice/ Computational Engineering Practice	0	3	2	BSC/ BEC	INT111P / COM105P
9	Industrial Design Sketching	0	3	2	DES	DES104P
10	Design Realization	0	3	2	DES	DES105P
Total Credits				22		
Semester 3						
1	Linear Algebra	3	0	3	BSC	MAT204T
2	Systems Thinking for Design	2	0	2	DES	DES201T
3	Engineering Economics	2	0	2	HMC	MAN201T
4	Digital Logic Design	3	0	3	PEC	ELE217T
5	Signals and Systems	3	0	3	PEC	ELE218T
6	Analog Circuits	3	0	3	PEC	ELE223T
7	Digital Logic Design practice	0	3	2	PEC	ELE217P
8	Analog Circuits Practice	0	3	2	PEC	ELE223P

	Total Credits			20		
Semester 4						
1	Probability Theory	3	0	3	BSC	MAT205T
2	Designing Intelligent Systems	2	0	2	DES	DES203T
3	Sociology of Design	2	0	2	HMC	MAN202T
4	Control Systems	3	0	3	PEC	ELE221T
5	Digital Signal Processing	3	0	3	PEC	ELE222T
6	Power Electronics	3	0	3	PEC	ELE219T
7	Electrical Drives Practice	1	3	3	PEC	ELE220P
8	Data Structures and Algorithms Practice	1	3	3	PEC	COM208P
9	Digital Signal Processing Practice	0	3	2	PEC	ELE222P
	Total Credits			24		
Semester 5						
1	Sustainable Design	2	0	2	DES	DES301T
2	Entrepreneurship and Management Functions	2	0	2	HMC	MAN301T
3	Information Theory and Coding	3	0	3	PEC	ELE319T
4	Microprocessors and Computer Architecture	3	0	3	PEC	ELE315T
5	Analog and Digital Communication	3	0	3	PEC	ELE313T
6	Sensing and Instrumentation Practice	0	3	2	PEC	ELE314P
7	Microprocessors and Microcontrollers Practice	0	3	2	PEC	ELE315P
8	Analog and Digital Communication Practice	0	3	2	PEC	ELE313P
9	Electronic Manufacturing and Prototyping	1	3	3	PEC	ELE302A
	Total Credits			22		
Semester 6						
1	Design for Quality and Reliability	2	0	2	DES	DES302T
2	Product Management	2	0	2	HMC	MAN303T
3	Advanced Digital Signal Processing	3	0	3	PEC	ELE317T
4	Data Communication Networks	3	0	3	PEC	ELE316T
5	Elective-I	3	0	3	ELE	-
6	Elective-II	3	0	3	ELE	-
7	Advanced Digital Signal Processing Practice	0	3	2	PEC	ELE317P
8	Data Communication Networks Practice	0	3	2	PEC	ELE316P
9	Product Design Practice	0	3	2	DES	INT303
	Total Credits			22		
Semester 7						
1	Data Analytics	2	0	2	HMC	MAN406T
2	Advanced Digital Communications and Coding	3	0	3	PEC	ELE403T
3	RF and Microwave Circuit Design	3	0	3	PEC	ELE407T
4	Elective-III	3	0	3	ELE	-
5	Free Elective-I	3	0	3	ELE	-
6	Advanced Digital Communications and Coding Practice	0	3	2	PEC	ELE403P
7	RF and Microwave Circuit Design Practice	0	3	2	PEC	ELE407P
	Total Credits			18		

Semester 8						
1	Innovation Management	2	0	2	HMC	MAN407T
2	Detection and Estimation Theory	3	0	3	PEC	ELE409T
3	Wireless Communication	3	0	3	PEC	ELE518
4	Elective-IV	3	0	3	ELE	-
5	Elective-V	3	0	3	ELE	-
6	Free Elective-II	3	0	3	ELE	-
7	Wireless Communication Practice	0	3	2	PEC	ELE518P
8	DSP System Design Practice	1	3	3	PEC	ELE410A
9	Comprehensive Viva-voce			2	PEC	-
	Total Credits			24		
Semester 9						
1	Elective-VI	3	0	3	PEC	-
2	Mechanical Design of Electronic Systems	3	0	3	PEC	INT513
3	Internship			5	PCD	INT511
4	Design Project			6	DES	DES512
	Total Credits			17		
Semester 10						
1	Project			18	PCD	INT512
	Total Credits			18		
				210		