

# CURRICULUM

## B. Tech. Electronics and Communication Engineering with specialization in Design and Manufacturing + M. Tech. VLSI & Electronic System Design (EVD) (According to 31<sup>st</sup> Senate meeting held on 1st July 2016)

S.No	Course Name	I	P	C	Category	Code
<b>Semester 1</b>						
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
	<b>Total Credits</b>			<b>23</b>		
<b>Semester 2</b>						
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
	<b>Total Credits</b>			<b>22</b>		
<b>Semester 3</b>						
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
	<b>Total Credits</b>			<b>20</b>		

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	Data Structures and Algorithms Practice	1	3	3	PEC	COM208P
8	Electrical Drives Practice	1	3	3	PEC	ELE220P
9	Digital Signal Processing Practice	0	3	2	PEC	ELE222P
<b>Total Credits</b>				<b>24</b>		
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
<b>Total Credits</b>				<b>22</b>		
Semester 6						
1	Design for Quality and Reliability	2	0	2	DES	DES302T
2	Product Management	2	0	2	HMC	MAN303T
3	Digital IC Design	3	0	3	PEC	ELE318T
4	Electromagnetic Interference and Compatibility	3	0	3	PEC	ELE321T
5	Elective-I	3	0	3	ELE	-
6	Elective-II	3	0	3	ELE	-
7	Electromagnetic Interference and Compatibility Practice	0	3	2	PEC	ELE321P
8	System on Programmable Chip Practice	1	3	3	PEC	ELE322P
9	Product Design Practice	0	2	2	DES	INT303
<b>Total Credits</b>				<b>23</b>		
Semester 7						
1	Data Analytics	2	0	2	HMC	MAN406T
2	Analog IC Design	3	0	3	PEC	ELE408T
3	Digital System Testing and Testable Design	3	0	3	PEC	ELE405T
4	Elective-III	3	0	3	ELE	-
5	Free Elective-I	3	0	3	ELE	-
6	Analog and Digital IC Design Practice	0	3	2	PEC	ELE404P
7	Digital System Testing and Testable Design Practice	0	3	2	PEC	ELE405P
<b>Total Credits</b>				<b>18</b>		

<b>Semester 8</b>						
1	Innovation Management	2	0	2	HMC	MAN407T
2	VLSI System Design	3	0	3	PEC	ELE301T
3	Digital Systems Engineering	3	0	3	PEC	ELE411T
4	Elective-IV	3	0	3	ELE	-
5	Elective-V	3	0	3	ELE	-
6	Free Elective-II	3	0	3	ELE	-
7	Embedded System Design Practice	0	3	2	PEC	ELE412P
8	VLSI System Design Practice	0	3	2	PEC	ELE301P
9	Comprehensive Viva-voce			2	PEC	-
	<b>Total Credits</b>			<b>23</b>		
<b>Semester 9</b>						
1	Elective-VI	3	0	3	ELE	
2	Mechanical Design of Electronic Systems	3	0	3	PEC	INT513
3	Internship			5	PCD	INT511
4	Design Project			6	DES	DES512
	<b>Total Credits</b>			<b>17</b>		
<b>Semester 10</b>						
1	Project			18	PCD	INT512
	<b>Total Credits</b>			<b>18</b>		
				<b>210</b>		