Dual Degree (B.Tech & M.Tech) Curriculum
Signal Processing and Communication
For B.Tech 2017 Batch

SEMESTER - I

S.No	Course No	Course Name	Category	L-T-P-C
1.	CS1100	Computational Engineering	BET	2-0-3-4
2.	CY1010	Chemistry – I (Physical and Theoretical)	SCY	2-1-0-3
3.	ID1100	Concepts in Engineering and Design	BET	3-0-0-3
4.	MA1010	Mathematics-I	SMA	3-1-0-4
5.	ME1120	Engineering Drawing	BES	1-0-3-3
6.	PH1010	Physics-I	SPH	2-1-0-3
7.	PH1030	Physics Laboratory	SPH	0-0-3-2
8.	WS1010	Workshop-I	BES	0-0-3-2
			Total	**24**

SEMESTER - II

S.No	Course No	Course Name	Category	L-T-P-C
1.	AM1100	Engineering Mechanics	BET	3-1-0-4
2.	CY1020	Chemistry – II (Organic and Inorganic)	SCY	2-1-0-3
3.	CY1030	Chemistry Laboratory	SCY	0-0-3-2
4.	GN1100	Life skills	BES	2-0-0-2
5.	ID1200	Ecology and Environment	BET	2-0-0-2
6.	MA1020	Mathematics-II	SMA	3-1-0-4
7.	ME1100	Thermodynamics	BET	2-1-0-3
8.	PH1020	Physics – II	SPH	2-1-0-3
9.	WS1020	Workshop – II	BES	0-0-3-2
			Total	**25**

SEMESTER - III

S.No	Course No	Course Name	Category	L-T-P-C
1.	EE1001	Electric Circuits and Networks	PMT	3-1-0-4
2.	EE2002	Signals and Systems	PMT	3-1-0-4
3.	EE2001	Digital Systems	PMT	3-1-0-4
4.	EE2702	Digital Circuits Laboratory	PML	0-0-3-2
5.	BT1010	Life Sciences	SLS	2-0-0-2
6.	MAE1	Mathematics Elective 1	SMA	3-0-0-3
7.	HSE1	Humanities Elective 1	HSS	3-0-0-3
			Total	**22**

SEMESTER - IV

S.No	Course No	Course Name	Category	L-T-P-C
1.	EE2003	Solid State Devices	PMT	3-1-0-4
2.	EE2004	Digital Signal Processing	PMT	3-1-0-4
3.	EE2005	Electrical Machines	PMT	3-1-0-4
4.	EE2006	Communication Systems	PMT	3-1-0-4
5.	EE2701	Electrical Machines Laboratory	PML	0-0-3-2
6.	MAE2	Mathematics Elective 2	SMA	3-0-0-3
7.	HSE2	Humanities Elective 2	HSS	3-0-0-3
			Total	**24**

SEMESTER – V

S.No	Course No	Course Name	Category	L-T-P-C
1.	EE3001	Electromagnetic Fields	PMT	3-1-0-4
2.	EE3002	Analog Circuits	PMT	3-1-0-4
3.	EE3003	Power Systems	PMT	3-1-0-4
4.	EE3004	Control Engineering	PMT	3-1-0-4
5.	EE3701	Microcontroller and DSP Laboratory	PML	0-0-3-2
6.	EE3702	Analog Circuits Lab	PML	0-0-3-2
7.	FRE1	Free Elective 1	FRE	3-0-0-3
			Total	**23**

SEMESTER - VI

S.No	Course No	Course Name	Category	L-T-P-C
1.	EE3005	Power Electronics	PMT	3-0-0-3
2.	EE3006	Principles of Measurement	PMT	3-1-0-4
3.	DPE1	Department Elective 1	PMT	3-0-0-3
4.	DPE2	Department Elective 2	PMT	3-0-0-3
5.	EE3703	Electrical CAD Laboratory	PML	0-0-3-2
6.	FRE2	Free Elective 2	FRE	3-0-0-3
7.	FRE3	Free Elective 3	FRE	3-0-0-3
8.	EE3020	Industrial/Research Internship	PIT	- - - 2
			Total	**23**

SEMESTER - VII

S.No	Course No	Course Name	Category	L-T-P-C
1.	EE5101	Advanced Signal Analysis and Processing	PMT	3-0-0-3
2.	EE5103	Wireless Communication	PMT	3-0-0-3
3.	IL4101	Industrial Lecture	PMP	1-0-0-1
4.	DPE5	Department Elective 3	PMT	3-0-0-3
5.	FRE4	Free Elective 4	FRE	3-0-0-3
6.	HSE3	Humanities Elective 3	HSS	3-0-0-3
7.	EE4701	Control and Automation Laboratory	PML	0-0-3-2
8.	EE5191	Advanced Signal Analysis and Processing Laboratory	PML	0-0-3-2
9.	EE5193	Wireless Communication Laboratory	PML	0-0-3-2
			Total	**22**

SEMESTER – VIII

S.No	Course No	Course Name	Category	L-T-P-C
1.	EE5202	Communication Networks	PMT	3-0-0-3
2.	EE5206	Statistical Signal Processing	PMT	3-0-0-3
3.	DPE4	Department Elective 4	PMT	3-0-0-3
4.	DPE5	Department Elective 5	PMT	3-0-0-3
5.	EE5292	Communication Networks Laboratory	PML	0-0-3-2
6.	EE5294	Image Processing Laboratory	PML	0-0-3-2
7.	HS4202	Professional Ethics	HPE	2-0-0-2
			Total	**18**

SEMESTER – IX

S.No	Course No	Course Name	Category	L-T-P-C
1.	DPE6	Department Elective 6	PMT	3-0-0-3
2.	EE6110	Seminar	PMT	- - - 1
3.	EE6150	Project Phase I	PMP	- - - 10
			Total	**14**

SEMESTER – X

S.No	Course No	Course Name	Category	L-T-P-C
1.	EE6250	Project Phase II	PMP	- - - 15
			Total	**15**

Total Credits 210

Department Electives:

1) EE5022 Wireless Networks
2) EE5023 MOS Device Modeling and Characterization
3) EE5024 Machine Learning for Image Processing
4) EE5025 Information Theory and Coding
5) EE5026 Multivariable Feedback Control
6) EE5027 Linear Integrated Circuits Theory and Applications
7) EE5028 CAD for VLSI Systems
8) EE5029 Medical Imaging
9) EE5030 Transducers
10) EE5032 Modeling and Control of Cyber-Physical Systems
11) EE5033 Compound Semiconductor Devices
12) EE5034 Speech Signal Processing
13) EE5038 Nanoelectronic Devices
14) EE5039 Physics and Modeling of Semiconductor Devices
15) EE5040 Probabilistic Graphical Models
16) EE5102 Linear Dynamical Systems
17) EE5103 Deep Learning for Computer Vision
18) EE5104 Non-Linear Control Systems
19) EE5105 Optimal Control
20) EE5106 Pattern Recognition and Machine Learning
21) EE5107 High Speed Devices and Circuits
22) EE5111 Advanced Signal Analysis and Processing
23) EE5113 Computer Vision
24) EE6021 Deep Learning: Theory and Applications
25) EE6022 Network Information Theory
26) EE6023 Robotics and Automation
27) EE6024 Queueing Theory