Structure of Curriculum

SEMESTER - 1							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
MA101	Differential Calculus and Linear Algebra	Sc/HS	3	1	0	4	None
ME101	Engineering Mechanics	BE	3	0	0	3	None
CY101/ PH101	Chemistry/Physics	Sc/HS	2/3	1	0	3/4	None
CE101	Engineering Drawing	BE	1	0	4	3	None
EE101/ EC101	Basic Electrical Engineering/ Basic Electronics Engineering	BE	2	0	0	2	None
HS101	English Language Skills	Sc/HS	2	0	0	2	None
HS151	English Language Skills Lab	L	0	0	2	1	None
CY151/ PH151	Chemistry/Physics Lab	L	0	0	2	1	None
EE151/ EC151	Basic Electrical Lab/ Basic Electronics Lab	L	0	0	2	1	None
Total Contact Hours – Component wise			13/14	2	10		
Total Contact Hours			25/26			20/21	---

SEMESTER - 2							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
MA102	Integral Calculus and Complex Variables	Sc/HS	3	1	0	4	None
EE101/ EC101	Basic Electrical Engineering/ Basic Electronics Engineering	BE	2	0	0	2	None
PH101/ CY101	Physics /Chemistry	Sc/HS	3/2	1	0	4/3	None
CY102	Environmental Science	Sc/HS	2	0	0	2	None
CS102	Introduction to Computing	Sc/HS	2	1	0	3	None
ME 102	Workshop Practice	L	0	0	4	2	None
EE151/ EC151	Basic Electrical Lab/Basic Electronics Lab	L	0	0	2	1	None
PH151	Physics Lab	L	0	0	2	1	None
CS152	Computing Lab	L	0	0	2	1	None
Total Contact Hours – Component wise			12/11	3	10		
Total Contact Hours			25/24			20/19	---

	SEMESTER - 3							
Course Code	**Course Title**	**Course Type**	**Contact Hours**			**Credit**	**Pre-requisites**
			L	**T**	**P**	**C**	
MA 201	Integral Transforms and PDEs	M	3	1	0	4	None
Professional Core Courses - 1, 2, 3							
EC 201	Electronic Devices	PC	3	1	0	4	EC 101
EC 203	Digital Logic Design	PC	3	1	0	4	None
EC 205	Network Analysis & Synthesis	PC	3	0	0	3	None
Special Course – 1							
ME 291	Safety Engineering	S	2	0	0	2	None
Lab Courses - 1, 2, 3							
EC 251	Electronic Devices Lab	L	0	0	2	1	None
EC 253	Digital Logic Design Lab	L	0	1	2	2	None
EC 255	Network Analysis & Synthesis Lab	L	0	1	2	2	None
Total Contact Hours – Component wise			**14**	**5**	**6**	**22**	
Total Contact Hours			**25**			**22**	---

			SEMESTER - 4					
Course Code	**Course Title**		**Course Type**	**Contact Hours**			**Credit**	**Pre-requisites**
				L	**T**	**P**	**C**	
Professional Core Courses - 4, 5, 6								
EC 202	Signals and Systems		PC	3	1	0	4	None
EC 204	Electronic Circuits		PC	3	1	0	4	EC 101
EC 206	Microprocessors and Microcontrollers		PC	3	0	0	3	None
Professional Elective – 1								
EC 210	Power Electronics		PE	3	0	0	3	None
EC 212	Probability Theory and Stochastic Processes		PE	3	0	0	3	None
EC 214	Python Programming for Electronic Engineers		PE	3	0	0	3	None
Professional Elective – 2								
EC 220	Electronic Measurement & Instrumentation		PE	3	0	0	3	None
EC 222	Data Structures & Algorithms		PE	3	0	0	3	None
EC 224	Computer Architecture		PE	3	0	0	3	None
Open Elective - 1								
EC 272	Operational Amplifiers and Its Applications		OE	2	0	0	2	None
Lab Courses - 4, 5, 6								
EC 252	Signals and Systems Lab		L	0	1	2	2	None
EC 254	Electronic Circuits Lab		L	0	0	2	1	None
EC 256	Microprocessors and Microcontrollers Lab		L	0	1	2	2	None
Total Contact Hours – Component wise				17	4	6	24	
Total Contact Hours				28			24	---

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	**T**	**P**	**C**	
SEMESTER - 5							
Professional Core Courses - 7, 8, 9							
EC 301	Analog and Digital Communication	PC	3	1	0	4	None
EC 303	Electromagnetic Waves and Radiating Patterns	PC	3	1	0	4	None
EC 305	Digital Signal Processing	PC	3	0	0	3	None
Professional Elective - 3							
EC 311	Embedded Systems	PE	3	1	0	4	None
EC 313	Sensors and Transducers	PE	3	1	0	4	None
EC 315	Biomedical Instrumentation	PE	3	1	0	4	None
Professional Elective – 4							
EC 321	Linear Integrated Circuits	PE	3	0	0	3	None
EC 323	Image Processing	PE	3	0	0	3	None
EC 325	Statistical Communication Theory	PE	3	0	0	3	None
Open Elective – 2							
EC 371	Micro-Sensor Technology	OE	2	0	0	2	None
Lab Courses - 7, 8, 9							
EC 351	Analog and Digital Communication Lab	L	0	1	2	2	None
EC 353	Electromagnetic Waves and Radiating Patterns Lab	L	0	1	2	2	None
EC 355	Digital Signal Processing Lab	L	0	0	2	1	None
Total Contact Hours – Component wise			17	5	6	25	
Total Contact Hours			28			25	---

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
SEMESTER - 6							
Professional Core Courses – 10, 11							
EC 302	Digital and Analog Integrated Circuits	PC	3	1	0	4	None
EC 304	RF & Microwave Engineering	PC	3	1	0	4	None
Professional Elective – 5							
EC 310	Artificial Neural Networks & Applications	PE	3	1	0	4	None
EC 312	Fundamentals of Microwave Antenna &Propagation	PE	3	1	0	4	None
EC 314	Data Communication and Networks	PE	3	1	0	4	None
Professional Elective – 6							
EC 320	Control Systems	PE	3	0	0	3	None
EC 322	Advanced Digital Signal Processing	PE	3	0	0	3	None
EC 324	DSP Systems & Architectures	PE	3	0	0	3	None
Open Elective – 3							
EC 372	Basics of Communication systems	OE	2	0	0	2	None
EC 374	Designing IoT Platform with Arduino & Pi	OE	2	0	0	2	None
Special HS Course – 2							
HS 392	Corporate Communication	S	2	0	0	2	None
Lab Courses – 10, 11							
EC 352	Digital and Analog Integrated Circuits Lab	L	0	1	2	2	None
EC 354	RF & Microwave Engineering Lab	L	0	1	2	2	None
EC 382	Term Paper	T	0	0	2	1	None
Total Contact Hours – Component wise			**16**	**4**	**6**	**24**	
Total Contact Hours			**26**			**24**	**---**

Course Code	Course Title	Course Type	Contact Hours L	T	P	Credit C	Pre-requisites

SEMESTER – 7

Course Code	Course Title	Course Type	L	T	P	C	Pre-requisites
EC 401	Project – I	P	0	0	10	5	None
Professional Elective –7							
EC 411	VLSI Design	PE	3	0	0	3	None
EC 413	Biomedical Image Processing	PE	3	0	0	3	None
EC 415	Wireless Communication	PE	3	0	0	3	None
EC 417	High Band Gap Device Modelling	PE	3	0	0	3	None
Professional Elective –8							
EC 421	VLSI Signal Processing	PE	3	0	0	3	None
EC 423	Machine Learning and Speech Technology	PE	3	0	0	3	None
EC 425	CAD for VLSI Design	PE	3	0	0	3	None
EC 427	Satellite Communication	PE	3	0	0	3	None
Open Elective –4							
EC 473	Fundamentals of Image and Video Processing	OE	2	0	0	2	None
EC 475	Basics of VLSI	OE	2	0	0	2	None
Special Course –3							
CE491	Disaster Management	S	2	0	0	2	None
Lab Courses – 12							
EC 451	Computing & Simulation Lab	L	0	1	2	2	None
EC 481	Summer Internship	I	0	0	0	1	
Total Contact Hours – Component wise			**10**	**1**	**12**	**18**	
Total Contact Hours			**23**			**18**	---

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
		SEMESTER - 8					
EC 402	Project - II	P	0	0	18	9	None
Professional Elective –9							
EC 410	Introduction to MEMS	PE	3	0	0	3	None
EC 412	Wideband Communication	PE	3	0	0	3	None
EC 414	Radar Engineering	PE	3	0	0	3	None
EC 416	Digital Arithmetic Circuits	PE	3	0	0	3	None
EC 418	Pattern Recognition and Applications	PE	3	0	0	3	None
Professional Elective –10							
EC 420	Advanced Semiconductor for RF and Power Application	PE	3	0	0	3	None
EC 422	Low Power VLSI	PE	3	0	0	3	None
EC 424	Internet of Things	PE	3	0	0	3	None
EC 426	Fiber Optics Communication	PE	3	0	0	3	None
EC 428	Statistical Signal Analysis	PE	3	0	0	3	None
EC 440	Information Theory and Coding	PE	3	0	0	3	None
Special Course –4							
HS 492	Entrepreneurship	S	2	0	0	2	None
Total Contact Hours – Component wise			8	0	18	17	
Total Contact Hours			26			17	---