

Intake:		2020 onwards		Specialization:		Electronic and Telecommunication Engineering					
Details of the Curriculum				Stream:		-					
Module Code	Module Name	Category C/E/O	Time allocation [Hours/Week]		Credits offered		Norm		Evaluation %		
			Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE	
Semester 1			Specialization requirement			15.0					
CE1023	Fluid Mechanics	C	2	2/4	2.0		15.0		20	80	
CS1033	Programming Fundamentals	C	2	2	3.0				20	80	
EE1040	Electrical Fundamentals	C	2	2/4	2.0				20	80	
MA1014	Mathematics	C	5/2	1	3.0				20	80	
ME1033	Mechanics	C	2	2/4	2.0				20	80	
MT1022	Properties of Materials	C	2	2/4	2.0				20	80	
EL1030	Language Skills Enhancement [S1 & S2]	C	-	2	1.0				100	0	
			Total		15.0	0.0	15.0	0.0			
Semester 2			Specialization requirement			22.0					
MA1024	Methods of Mathematics	C	5/2	1	3.0		22.0		30	70	
EN1014	Electronic Engineering	C	3	2	4.0				40	60	
EN1054	Introduction to Telecommunications Engineering	C	3	2	4.0				50	50	
EN1020	Circuits, Signals, and Systems	C	2	2	3.0				40	60	
EN1094	Laboratory Practice	C	-	4	2.0				100	0	
EN1971	Communication Skills	C	1	2	2.0				100	0	
EL1030	Language Skills Enhancement [S1 & S2]	C	-	2	1.0				100	0	
EN1190	Engineering Design Project	C	1	4	3.0				100	0	
			Total		22.0	0.0	22.0	0.0			
Semester 3			Specialization requirement			21.0					
MA2014	Differential Equations	C	2	-	2.0		18.0		30	70	
MA2024	Calculus	C	2	-	2.0				30	70	
EN2014	Electronic Circuits and Analysis	C	3	-	3.0				40	60	
EN2054	Communication Systems and Networks	C	3	-	3.0				50	50	
EN2031	Fundamentals of Computer Organization and Design	C	2	2	3.0				50	50	
EN2063	Signals and Systems	C	3	-	3.0				40	60	
EN2091	Laboratory Practice and Projects	C	-	4	2.0				100	0	
EN2533	Robot Design and Competition	E	1	4	3.0		3.0		70	30	
BM2210	Biomedical Device Design	E	1	4	3.0				70	30	
EN2130	Communication Design Project	E	1	4	3.0				70	30	
			Total		27.0	0	21.0	0.0			
Semester 4			Specialization requirement			22.0					
MA2034	Linear Algebra	C	2	-	2.0		19.0		30	70	
EN2111	Electronic Circuit Design	C	3	2	4.0				40	60	
EN2074	Communication Systems Engineering	C	3	2	4.0				40	60	
EN2143	Electronic Control Systems	C	2	2	3.0				40	60	
EN2150	Communication Network Engineering	C	2	2	3.0				60	40	
EN2160	Electronic Design Realization	C	2	2	3.0				70	30	
CS2023	Data Structures and Algorithms	E	2	2	3.0				3.0		40
CS2833	Modular Software Development	E	2	2	3.0		50	50			
EE2024	Electrical Machines in Power Systems	E	2	2	3.0		30	70			
ME1823	Fundamentals of Engineering Thermodynamics and Applications	E	5/2	2/2	3.0		30	70			
			Total		31.0	0.0	22.0	0.0			

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Semester 5				Specialization requirement				18.0			
EN3880	Engineer and Society [S5 & S6]	C	-	2	1.0		5.0	8.0	100	0	
EN3580	Electromagnetics	C	3	2	4.0				50	50	
EN3551	Digital Signal Processing	E	2	2	3.0				40	60	
EN3013	Analog Circuit Design	E	2	2	3.0				50	50	
EN3021	Digital System Design	E	2	2	3.0				50	50	
EN3533	Electronic Instrumentation	E	2	2	3.0				50	50	
EN3150	Pattern Recognition	E	2	2	3.0				70	30	
EN3160	Image Processing and Machine Vision	E	2	2	3.0				40	60	
EN3251	Internet of Things	E	2	2	3.0				100		
EN3230	Wireless Networks	E	2	2	3.0				50	50	
EN3563	Robotics	E	2	2	3.0				50	50	
EE2074	Electric Motors in Industry	E	2	2	3.0				30	70	
MA3014	Applied Statistics	E	2	-	2.0				2.0	30	70
MA3024	Numerical Methods	E	2	-	2.0					30	70
MA3030	Operations Research	E	2	-	2.0		30	70			
MN3043	Business Economics and Financial Accounting	E	3	-	3.0		3.0	30	70		
MN3053	Industrial Management and Marketing	E	3	-	3.0			30	70		
				Total		47.0	0.0	18.0	0.0		
Industrial Training				Specialization requirement				6.0			
EN3993	Industrial Training	C				6.0		6.0	100		
				Total		0.0	6.0	0	6		
Semester 6				Specialization requirement				9.0			
EN3880	Engineer and Society [S5 & S6]	C	1	2	2.0		4.0		100	0	
EN3901	Seminar and Technical Presentations	C	1	2	2.0				100	0	
HM-1	Humanities Elective I	E	2	-	2.0		2.0		100	0	
EN3260	Industrial Electronics and Automation	E	2	2	3.0		3.0		50	50	
EN3111	Introduction to Semiconductor Physics	E	3	2	4.0				50	50	
EN3224	Electronic Manufacturing Systems	E	2	2	3.0				50	50	
EN3270	Internet of Things Systems Engineering	E	2	2	3.0				50	50	
EN3330	Introduction to Engineering Optimization	E	2	2	3.0				70	30	
EN3340	Random Signals and Processes	E	2	2	3.0				50	50	
EN3350	Software Design Competition	E	-	6	3.0				100	0	
EN3211	Self Initiated Innovation	E	-	6	3.0				100	0	
				Total		31.0	0.0	9.0	0.0		
Semester 7				Specialization requirement				14.0			
EN4203	Project [S7 & S8]	C	-	8	4.0		6.0		100	0	
EN4933	Technical and Scientific Writing	C	1	2	2.0				100	0	
EN4604	Digital IC Design	E	2	2	3.0		6.0		40	60	
EN4214	Power Electronics	E	2	2	3.0				50	50	
EN4440	Embedded Systems Engineering	E	2	2	3.0				100	0	
EN4460	Communication Circuit Design	E	2	2	3.0				70	30	
EN4324	Photonic Communication Components	E	2	2	3.0				50	50	
EN4470	Probabilistic System Analysis	E	2	2	3.0				60	40	
EN4394	Applied Information Theory	E	2	2	3.0				40	60	
EN4314	Telecommunication Core Networks	E	2	2	3.0				70	30	
EN4384	Wireless and Mobile Communications	E	2	2	3.0				50	50	
EN4640	Statistical Signal Processing	E	2	2	3.0				60	40	
EN4554	Deep Learning for Vision	E	2	2	3.0				60	40	
EN4594	Autonomous Systems	E	2	2	3.0				50	50	
EN4923	Research Project [S7 & S8]	E	-	6	3.0				100	0	
BM4302	Medical Image Processing	E	2	2	3.0				70	30	
BM4112	Medical Electronics and Instrumentation	E	2	2	3.0		50	50			
MN4063	Organizational Behaviour and Management	E	2	-	2.0		2.0	30	70		
MN4133	Consumer and Industrial Marketing	E	2	-	2.0			30	70		
				Total		55.0	0.0	14.0	0.0		

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Semester 8				Specialization requirement				11.0			
EN4203	Project [S7 & S8]	C	-	12	6.0			3.0	6.0	100	0
EN4021	Advanced Digital Systems	E	2	2	3.0					100	0
EN4650	Computer Systems Architecture	E	2	2	3.0					70	30
EN4480	Advanced Power Electronic Design	E	2	2	3.0					50	50
EN4660	Advanced Electronic Control Systems	E	2	2	3.0					60	40
EN4670	Photonic Communication Networks	E	2	2	3.0					50	50
EN4334	Microwave Engineering	E	2	2	3.0					50	50
EN4354	Radar and Navigation	E	3	-	3.0					60	40
EN4364	Microwave Communications	E	2	2	3.0					50	50
EN4421	Advanced Signal Processing	E	2	2	3.0					50	50
EN4563	Traffic Engineering	E	2	2	3.0					70	30
EN4054	Digital Communication	E	2	2	3.0					60	40
EN4680	Telecommunication Technology Management	E	3	-	3.0					70	30
EN4720	Security in Cyber-Physical Systems	E	2	2	3.0					100	0
EN4574	Advanced Pattern Recognition	E	2	2	3.0					60	40
EN4730	Convex Engineering Design	E	2	2	3.0					70	30
EN4584	Advances in Computer Vision	E	2	2	3.0					60	40
EN4431	Analog IC Design	E	2	2	3.0			50	50		
EN4923	Research Project [S7 & S8]	E	-	4	2.0			100	0		
MN4123	Human Resource Management and Industrial Relations	E	2	-	2.0			2.0		30	70
MN4043	Technology Management	E	2	-	2.0					30	70
MN4151	Project Management	E	2	-	2.0					30	70
MN4093	Management Skills Development	E	2	-	2.0					30	70
MN4113	Production and Operations Management	E	2	-	2.0					30	70
				Total		69	0	11.0	0.0		
				Grand Total		297.0	6.0	132.0	6.0		

Total credit requirement for the Specialization		138.0
Faculty/Specialization Electives beyond the specialization requirements [refer faculty electives table]*		12.0
TOTAL CREDIT REQUIREMENT FOR GRADUATION		150.0

Service modules									
Code	Module Name	Semester	Time allocation [Hours/Week]		Credits		Offered to	Evaluation %	
			Lecture	Lab / Tute	GPA	NGPA		CA	WE
EN1803	Basic Electronics for Engineering Applications	2,3	2	2	3.0			40	60