Course Name:	Electronics Devices & circuits	3EC1A	Course Year:	2017-2018		
ADG1.1		41 .1 .	101	1.1.11		
3EC1.1	CO1: Analyzing diode and its a	pplications i	n rectifier, regulator,	multipliers etc.		
3EC1.2	CO2: Evaluating characteristics and applications of BJT and FET.					
3EC1.3	CO3: Understanding differentia					
Course Name	Data Structures & Algorithms	3EC2A	Course Year:	2017-2018		
3EC2.1	CO1: Understanding data arra	nging techn	iques in linear and	non linear data		
	CO1: Understanding data arranging techniques in linear and non linear data structures and analyzing their complexity.					
3EC2.2	CO2: Evaluating searching and		orithms and other op	erations on data		
	structures.					
3EC2.3	CO3: Applying the data struct	ure that effi	ciently models the i	nformation in a		
	problem.		·			
Course N	Course Name: Digital Electronics 3EC3A Course Year: 2017-2018					
		<u> </u>				
3EC3.1	CO1: Understanding Boolea	an algebra,	, conversions and	minimization		
	techniques.					
3EC3.2	CO2: Creating various combinational and sequential circuits					
3EC3.3	CO3: Understanding different logic families					
3EC3.4	CO4: Creating of circuits using	different mi	nimization technique	es.		
Course Name: Circuit Analysis & Synthesis 3EC4A Course Year: 2017-2018						
3EC4.1	CO1: Understanding various	theorems	and its application	ns in complex		
	networks.					
3EC4.2	CO2: Evaluating the stability of systems by various techniques.					
3EC4.3	CO3: Understanding and creating circuits using network functions.					
3EC4.4 CO4: Understanding resonance conditions in different circuits.						
Course Name: Electromagnetic Properties of 3EC5A Course Year: 2017-2018						
	Materials					
3EC5.1	CO1: Understanding the fabri		= =			
	materials i.e. magnetic, semicone			materials.		
3EC5.2	CO2: Understanding the applica	tions of sons	or motorials			

Mathematics-1					
with boundary conditions. 3EC6.2 CO2: Differentiate and Integrate complex function, Contour Integration a Integrals using residues. 3EC6.3 CO3: Solving circuit differential equations by the help of Laplace transforms. Course Name: Electronic Instrumentation Workshop 3EC7.1 CO1: Analysing various electronic components. 3EC7.2 CO2: Evaluating characteristics of various opto-electronic devices. 3EC7.3 CO3: Creating circuit on PCB.					
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3EC7.2 CO2: Evaluating characteristics of various opto-electronic devices. 3EC7.3 CO3: Creating circuit on PCB.					
3EC7.2 CO2: Evaluating characteristics of various opto-electronic devices. 3EC7.3 CO3: Creating circuit on PCB.					
3EC7.3 CO3: Creating circuit on PCB.					
Course Names Computer Programming Lab L 2EC0A Course Veets 2017 2019					
Course Name: Computer Programming Lab I 2ECOA Course Voom 10017 2016					
Course Name: Computer Programming Lab-I 3EC8A Course Year: 2017-2018					
3EC8.1 CO1: Applying various techniques on linear/non linear data structures to so					
various computing problems.					
3EC8.2 CO2: Analyzing recursive/non recursive functions to perform various operation					
on data structures.					
3EC8.3 CO3: Creating a suitable data structure and algorithm to solve a real world					
problem					
Course Name: Electronics Device Lab 3EC9A Course Year: 2017-2018					
Course Name: Electronics Device Lab SEC9A Course Year: 2017-2018					
3EC9.1 CO1: Understanding devices like multimeter, generator, CRO etc.					
3EC9.2 CO2: Creating the characteristic graph of various diodes, amplifiers, filters and					
rectifiers.					
3EC9.3 CO3: Analysing the behaviour of differential amplifier.					
Course Name: Digital Electronics Lab 3EC10A Course Year: 2017-2018					
2EC10.1 CO1. Explored with table of 1.					
3EC10.1 CO1: Evaluating truth table of basic gates.					
3EC10.2 CO2: Analyzing and designing various combinational and sequential circuits.					
3EC10.3 CO3: Creating small projects.					
Course Name: Business Entrepreneurship 3EC11A Course Year: 2017-201					

3EC11.1	CO1: Understand the fundamentals of entrepreneurship and distinct
	entrepreneurial traits.
3EC11.2	CO2: Analyse the parameters to assess the opportunity and design strategies for
	successful entrepreneur.
3EC11.3	CO3: Understand government policies and Demonstrate the components like
	sales tax, VAT etc.

Course Name: Analog Electronics	4EC1A	Course Year:	2017-2018

3EC4.1	CO1: Understanding concept of feedback and its application in oscillators and amplifiers.
3EC4.2	CO2: Analyzing circuits using equivalent models.
3EC4.3	CO3: Understanding the concepts of Schmitt trigger and 555 timer.

Course Name: Random Variables and	4EC2A	Course Year:	2017-2018
Stochastic Processes			

3EC9.1	CO1: Understand the concept of Probability, Random Variables and apply the conditions of various Probability Distributions on Research related problems.
3EC9.2	CO2: Understand the concept of multiple random variable and Central limit theorem.
3EC9.3	CO3: Understand the concept of Stochastic Process and its applications in Electronics Communication System.

Course Name: Electronic Measurement and	4EC3A	Course Year:	2017-2018
Instrumentation			

4EC3.1	CO1: Understanding the construction, errors and working of electronic instruments i.e. CRO, generators, transducers etc.
4EC3.2	CO2: Generating and analyzing the frequency components of a wave and its distortion
4EC3.3	CO3: Understanding different types of AC bridges (i.e.Maxwell inductance, Anderson bridge) and measurement of inductance, capacitance and frequency.

Course Name: Electromagnetic Field Theory	4EC4A	Course Year:	2017-2018
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4EC4.1	CO1: Remembering about coordinate systems and its conversion.		
4EC4.2	CO2: Evaluating electric and magnetic field of different charge and current		
	configurations.		
4EC4.3	CO3- Analyzing about nature of waves.		
4EC4.4	CO4- Understanding the basic concepts of antennas and its types		

Course Nome						
Course Name:	Optimization Techniques	4EC5A	Course Year:	2017-2018		
l w	CO1: Understanding the problems of optimization, its formulation and LPP with certain techniques.					
p	CO2: Analyzing the concept of optimal solutions of Nonlinear programming problems.					
4EC4.3	CO3: Analyzing certain techniques that will help students to solve problems of electronics engineering with reference to optimization.					
Course Name	e: Advanced Engineering	4EC6A	Course Year:	2017-2018		
	athematics-II	120011	Course Tear.	2017 2010		
4EC6.1	O1 Evaluating numerical m	athods for int	tarnolation numerics	al differentiation		
4EC0.1 a	CO1. Evaluating numerical methods for interpolation, numerical differentiation and integration for differential equations					
4EC6.2 C	CO2. Understanding recurrence relation, generating function, simple properties of Bessel's and Legendre's functions and students can solve simple variational problems using Euler's equation.					
4EC6.3	CO3. Understanding the concept of probability distribution for discrete and continuous random variables.					
4EC6.4	CO4. Analyzing the problems of electronics engineering with the help of such functions.					
Course Names Co	ammutan Dua anammin a Lah II	4EC7 A	Course Voor	2017-2018		
Course Name: Co	omputer Programming Lab-II	4EC7A	Course Year:	2017-2018		
4EC7.1	VO1. II. danstandandandanalaria	Object original	-4 - 1 f4 1 C -			
	CO1: Understand and applying CO2: Analyzing the concept of	•		+ concepts.		
4EC1.2	CO2. Anaryzing the concept of	рогуппогрин	sin and inneritance.			
Course Name	: Analog Electronics Lab	4EC8A	Course Year:	2017-2018		
	CO1: Creating the characteristic graph of various amplifiers, oscillators and filters.					
-	CO2: Analysing the behaviour and applications of op-amp					
Course No	me: Measurement and	4EC9A	Course Year:	2017-2018		
		4LC9A	Course rear.	2017-2016		
Instr	umentation Lab					
	CO1: Analyzing the characterstruments.	eristics of v	various transducers	and measuring		
4EC9.2	CO3: Understanding the conce	ept of earthin	g and grounding with	h applications.		
_		1	T	T		
Course Name	e: Humanities and Social Sciences	4EC10A	Course Year:	2017-2018		
	101 II 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Indian const	titution and society n	roblems		
4EC10.1 C	OI: Understanding history of	mulan const	munon and society b	CO2: Understanding history of Indian constitution and society problems.		
	201: Understanding history of 202: Analyzing Indian econor		inution and society p	rootenis.		
4EC10.2		ny.	· · · · · · · · · · · · · · · · · · ·	iooiems.		

Course Nam	ne: Signals & Systems	5EC1A	Course Year:	2017-2018
		•		
5EC1.1	CO1: Understanding basic	_		
5EC1.2	CO2: Evaluating periodic Z-transform.	and non peri-	odic signals in Four	ier, Laplace and
5EC1.3	CO3: Understanding the c	oncept of san	npling and its applica	ations.
5EC1.4	CO4: Understanding the co	oncept of deci	imation and interpola	ation
	-			
Course Name:	Linear Integrated Circuits	5EC2B	Course Year:	2017-2018
5EC2.1	CO1: Understanding Op oscillators, convertors, filter	ers etc.	nplifier and its ap	oplications like
5EC2.2	CO2: Analyzing 555 timer	and PLL.		
5EC2.3	CO3: Applying its applicat	tion in conver	tors i.e. D/A to A/D.	
Course Name: 7	Γelecommunication Engg.	5EC3A	Course Year:	2017-2018
5EC3.1	CO1: Understanding trans			
5EC3.2	CO2: Analyzing different	medium for tr	ansmission of signal	S.
5EC3.3	CO3: Understanding mobi	le communica	ation	
Course Name:	Analog Communication	5EC4A	Course Year:	2017-2018
5EC4.1	CO1: Analyze how inform delivery through detailed u	ation is put o	on electronic systems of AM, FM and PM	for storage and
5EC4.1 5EC4.2	CO1: Analyze how inform delivery through detailed u	nderstanding	of AM, FM and PM	for storage and
	delivery through detailed u CO2: Understanding and a	nderstanding nalyzing the	of AM, FM and PM noise performance	
5EC4.2	delivery through detailed u	nderstanding nalyzing the	of AM, FM and PM noise performance	
5EC4.2 5EC4.3	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applic	nderstanding nalyzing the ration of mode	of AM, FM and PM noise performance ulation in mobile cor	
5EC4.2 5EC4.3	delivery through detailed u CO2: Understanding and a	nderstanding nalyzing the	of AM, FM and PM noise performance	nmunication.
5EC4.2 5EC4.3	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applications: Microwave Engg. –I CO1: Analyzing the conc	nalyzing the ration of mode	of AM, FM and PM noise performance ulation in mobile cor	nmunication. 2017-2018
5EC4.2 5EC4.3 Course Name	delivery through detailed understanding and a CO3: Analyzing the applications: Microwave Engg. –I	nalyzing the nation of mode 5EC5A	of AM, FM and PM noise performance ulation in mobile cor Course Year:	mmunication. 2017-2018 GHz frequency
5EC4.2 5EC4.3 Course Name	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applications of the CO1: Analyzing the concurrence co	nalyzing the nation of mode states of transmarameters for	of AM, FM and PM noise performance ulation in mobile cor Course Year: ission lines used at microwave based de	mmunication. 2017-2018 GHz frequency evices.
5EC4.2 5EC4.3 Course Name 5EC5.1 5EC5.2	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applicate: Microwave Engg. –I CO1: Analyzing the concurrence CO2: Evaluating various p	nalyzing the nation of mode states of transmarameters for	of AM, FM and PM noise performance ulation in mobile cor Course Year: ission lines used at microwave based de	mmunication. 2017-2018 GHz frequency evices.
5EC4.2 5EC4.3 Course Name 5EC5.1 5EC5.2 5EC5.3	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applicate: Microwave Engg. –I CO1: Analyzing the concurrence CO2: Evaluating various p	nalyzing the nation of mode states of transmarameters for	of AM, FM and PM noise performance ulation in mobile cor Course Year: ission lines used at microwave based de	mmunication. 2017-2018 GHz frequency evices.
5EC4.2 5EC4.3 Course Name 5EC5.1 5EC5.2 5EC5.3	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applicate: Microwave Engg. –I CO1: Analyzing the concrange CO2: Evaluating various p CO3: Understanding Rada	ation of mode of transmarameters for based device	of AM, FM and PM noise performance ulation in mobile cor Course Year: ission lines used at microwave based desused at microwave	mmunication. 2017-2018 GHz frequency evices. e devices.
5EC4.2 5EC4.3 Course Name 5EC5.1 5EC5.2 5EC5.3	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applicate: Microwave Engg. –I CO1: Analyzing the concrange CO2: Evaluating various p CO3: Understanding Rada	ation of mode standing station of mode station of mode station of transmarameters for based devices station of sub-systems.	of AM, FM and PM noise performance ulation in mobile corrections are recorded at microwave based dees used at microwave Course Year: Course Year:	mmunication. 2017-2018 GHz frequency evices. e devices. 2017-2018
5EC4.2 5EC4.3 Course Name 5EC5.1 5EC5.2 5EC5.3 Course Name: B	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applicate: Microwave Engg. –I CO1: Analyzing the concrange CO2: Evaluating various p CO3: Understanding Rada iomedical Instrumentation CO1: Analyzing human b their diagnosis and therapy CO2: Understanding trans	ation of mode standing nalyzing the nation of mode standing standi	course Year:	mmunication. 2017-2018 GHz frequency evices. e devices. 2017-2018 nervous etc and res and various
5EC4.2 5EC4.3 Course Name 5EC5.1 5EC5.2 5EC5.3 Course Name: B	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applicate: Microwave Engg. –I CO1: Analyzing the concrange CO2: Evaluating various p CO3: Understanding Rada comedical Instrumentation CO1: Analyzing human b their diagnosis and therapy CO2: Understanding transdiagnostic equipments for	ation of mode standing nalyzing the nation of mode standing standi	Course Year: Course Year:	mmunication. 2017-2018 GHz frequency evices. e devices. 2017-2018 nervous etc and res and various
5EC4.2 5EC4.3 Course Name 5EC5.1 5EC5.2 5EC5.3 Course Name: B	delivery through detailed to CO2: Understanding and a CO3: Analyzing the applicate: Microwave Engg. –I CO1: Analyzing the concrange CO2: Evaluating various p CO3: Understanding Rada iomedical Instrumentation CO1: Analyzing human b their diagnosis and therapy CO2: Understanding trans	ation of mode standing nalyzing the nation of mode standing standi	Course Year: Course Year:	mmunication. 2017-2018 GHz frequency evices. e devices. 2017-2018 nervous etc and res and various

Course Name: E	lectronic Engineering Design	5EC7A	Course Year:	2017-2018			
	Lab						
5EC7.1	CO1: Analyzing op-amp filters, oscillators etc.	and its app	lications i.e. scalar	, differentiator,			
5EC7.2	CO2: Creating circuits on P	Spice.					
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Course Name: M	icrowave Engineering Lab	5EC8A	Course Year:	2017-2018			
		Į.					
5EC8.1	CO1: Analyzing the charact magic tee etc.	eristics of m	icrowave devices i.e	. gunn diode,			
5EC8.2	CO2: Analyzing printed ant	enna input cl	haracteristics.				
Course Name	Communication Lab-I	5EC9A	Course Year:	2017-2018			
5EC9.1	CO1: Creating transmitted a						
5EC9.2	CO2: Creating transmitted a	and received	waveforms of PAM	, PPM.			
Course Name	: Signal Processing Lab	5EC10A	Course Year:	2017-2018			
5EC10.1	CO1: Creating and analyzing						
5EC10.2	CO2: Analyze the concepts and Laplace transform.						
5EC10.3	CO3: Generating random se	quences witl	h arbitrary distributio	ons.			
Course Name:	Professional Ethics and	5EC11A	Course Year:	2017-2018			
Disaste	r Management						
			1 1 6 1	1			
5EC11.1	CO2: Analyzing the import	-	-	values			
5EC11.2	CO2: Analyzing the importa	_	neering.				
5EC11.3	CO3. Evaluating the effect of	of disasters.					
Course Nome	e: Microwave EnggII	6EC1A	Course Year:	2017-2018			
Course Mann	Wherewave EnggII	OLCIA	Course rear.	2017-2018			
6EC1.1							
	CO1: Analyzing the operation and characteristics of microwave diodes.						
6EC1.2	CO2: Analyzing klystrons,						
6EC1.2	CO2: Analyzing klystrons, amplification	magnetrons	etc. for microwave				
	CO2: Analyzing klystrons,	magnetrons	etc. for microwave				
6EC1.2 6EC1.3	CO2: Analyzing klystrons, amplification	magnetrons	etc. for microwave				
6EC1.2 6EC1.3	CO2: Analyzing klystrons, amplification CO3: Understanding application	magnetrons	etc. for microwave	generation and			
6EC1.2 6EC1.3	CO2: Analyzing klystrons, amplification CO3: Understanding application	magnetrons ations of sma	etc. for microwave art antenna. Course Year:	generation and 2017-2018			
6EC1.2 6EC1.3 Course Nat	CO2: Analyzing klystrons, amplification CO3: Understanding applicance: Microprocessors	magnetrons ations of sma 6EC2A ne problems	etc. for microwave art antenna. Course Year: using assembly lange	generation and 2017-2018			
6EC1.2 Course Nat 6EC2.1 6EC2.2	CO2: Analyzing klystrons, amplification CO3: Understanding application re: Microprocessors CO1: Implementing real times	magnetrons ations of sma 6EC2A ne problems	etc. for microwave art antenna. Course Year: using assembly lange	generation and 2017-2018			

6EC3.1		CO1: Understanding different semiconductor power devices and their applications							
6EC3.2		CO2: Analyzing various te	chniques to c	ontrol the speed of n	notors				
6EC3.3		CO3: Analyzing mitigation factors for parameters affecting the performance of power systems							
Course	e Name:	Digital Communication	6EC4A	Course Year:	2017-2018				
6EC4.1		CO1: Analyzing analog to like PCM,DM,ADM and M	_	_	and Line Coding				
6EC4.2		CO2: Evaluating different	digital modu	lation techniques lil	ke ASK, BPSK,				
		QPSK and Information the			n Techniques.				
6EC4.3		CO3: Application of digita	l communica	tion i.e. CDMA					
Co	urse Nar	ne: Control Systems	6EC5A	Course Year:	2017-2018				
6EC5.1		CO1: Understanding the an	alogy between	en electromechanical	systems.				
6EC5.2		CO2: Evaluating system st	ability by fol	lowing methods i.e.	Routh Hurwitz,				
		Root Locus, Nyquist, Bode	etc.	_					
6EC5.3		CO3: Analyzing different	system in tim	e domain and state v	ariable model				
					<u> </u>				
Course N	ame: Op	tical Fiber Communication	6EC6.3A	Course Year:	2017-2018				
6EC6.3		Understanding optical famunication systems.	ibre techno	ology for sophist	icated modern				
6EC6.3		analyzing fundamental behateractions with other devices			ual components,				
6EC6.3	CO3: U	Inderstanding photonic base	d devices.						
Cours	e Name:	Communication Lab-II	6EC7A	Course Year:	2017-2018				
6EC7.1	CO1: C	reating transmitted and rece	ived wavefor	rms of TDM, PAM, 7	ГDM-РСМ.				
6EC7.2	CO2: C	creating digitally modulated	and demodul	ated waveforms of A	ASK, PSK				
6EC7.3	CO3: A	Analyzing optical fibre comr	nunication						
	•								
Cour	rse Name	: Microprocessor Lab	6EC8A	Course Year:	2017-2018				
			1						
6EC8.1		CO1: Creating assembly la	anguage prog	rams for real time pr	oblems.				
6EC8.1 6EC8.2		CO1: Creating assembly la							
6EC8.2	rse Nam								
6EC8.2	rse Nam	CO2: Understanding codin	g and interfac	cing of microcontrol	ler.				

6EC9.2 Creating simple microstrip patch antenna design.										
Course Name:	Industrial Electronics Lab	6EC10A	Course Year:	2017-2018						
6EC10.1		CO1: Evaluate the characteristics of different Semiconductor Power devices								
	i.e. SCR, DIAC, TRIAC et									
6EC10.2		CO2: Analyze different power electronic convertors, choppers and motor								
drivers.										
Course Name: Personality Development & 6EC11A Course Year: 2017-2018										
	· ·	6EC11A	Course Year:	2017-2018						
Gei	neral Aptitude									
6EC11.1	CO1: Understanding princi	iples, process	ses and practices of	human resource						
CEC11.2	management.	. 1	1	. 1						
6EC11.2	CO2: Applying HR cond	-	echniques in strateg	gic planning to						
	improve organizational per	formance.								
Course Nan	ne: Antenna and Wave	7EC1A	Course Year:	2017-2018						
		/LCIA	Course Tear.	2017-2016						
Г	Propagation									
7EC1.1	CO1. Understanding the he	oi o alrilla maa	wined for deciening a	vvida vomiatv of						
/EC1.1	CO1: Understanding the bar practical antennas and anter	-	ulred for designing a	i wide variety of						
7EC1.2	CO2: Analyzing the prop		the wave in differe	ant atmospheric						
/LC1.2	medium, ionosphere, tropos	_		aumospheric						
7EC1.3	CO3: Creating and analyzing			ructures						
/LC1.5	203. Creating and unaryzing	ig the defect	s introduced in the st	ructures.						
Course Name:	Digital Signal Processing	7EC2A	Course Year:	2017-2018						
	Digital Digital 1 Tocobbing	,20211	Course I cui.	2017 2010						
7EC2.1	CO1: Analyzing of filters	i.e. FIR. IIR								
7EC2.2	CO2: Use of transform		al analysis, charac	cterization and						
,202.2	manipulation		ar anarysis, chara							
7EC2.3	CO3: Understanding adapt	ive signal pro	ocessing and auto cre	oss correlation						
,			<u>8</u>							
Course Name:	Digital Image Processing	7EC3A	Course Year:	2017-2018						
7EC3.1	CO1: Analyze image, its or	peration and t	filtering.							
7EC3.2	CO2: Evaluation of image			e compression.						
7EC3.3	CO3: Understanding of		<u> </u>							
	stegnography.		<i>J</i>							
<u>.</u>										
Course Name:	Wireless Communication	7EC4A	Course Year:	2017-2018						
		1	ı							
7EC4.1	CO1: Understanding mobile	ile radio pro	pagation, fading, di	versity concepts						
L	<u>, </u>	1	<u> </u>	· 1						

and the channel modeling. 7EC4.2 CO2: Analyzing wireless communication systems with key 3G (e.g., CDMA) and 4G (OFDM) technologies 7EC4.3 CO3: Understanding satellite communication 7EC4.4 CO4: Understanding adhoc networks Course Name: VLSI Design 7EC5A Course Year: 2017-2018 7EC5.1 CO1: Understanding modes, types, characteristics and fabrication of MOS 7EC5.2 CO2: Creating combinational and sequential digital circuits and layouts using CMOS technology. 7EC5.3 CO3: Understanding CMOS Design rules via advanced Tanner Tools. Course Name: VHDL 7EC6.3A Course Year: 2017-2018 7EC6.3.1 CO1: Understanding the design flow of different integrated circuits. 7EC6.3.2 CO2: Understanding the fundamentals, advantages of VHDL and writing code for combinational and sequential circuits. Course Name: Signal & Image Processing 7EC7A Course Year: 2017-2018 TEC7.1 CO1: Implementing various DSP Algorithms using MATLAB Software package. 7EC7.2 CO2: Analyzing and observing magnitude and phase characteristics (Frequency response Characteristics) of digital FIR, IIR Butterworth and Chebyshev filters. Course Name: Wireless Communication Lab 7EC8A Course Year: 2017-2018 7EC8.1 CO1: Evaluate antenna return loss, gain, radiation characteristics, and polarization. 7EC8.2 CO2: Understanding and analyzing RADAR, satellite, CDMA-DSSS, and GPS trainer. Course Name: Practical Training & Industrial 7EC9A Course Year: 2017-2018 TEC9.1 CO1: Applying the applications of electronics and communication engineering concepts and principles learned in classroom.									
CDMA) and 4G (OFDM) technologies 7EC4.3									
TEC4.3 CO3: Understanding satellite communication	7EC4.2								
Course Name: VLSI Design TEC5A Course Year: 2017-2018									
Course Name: VLSI Design 7EC5A Course Year: 2017-2018	7EC4.3	CO3: Understanding satellite communication							
TEC5.1 CO1: Understanding modes, types, characteristics and fabrication of MOS	7EC4.4	CO4: Understanding adhoc networks							
TEC5.1 CO1: Understanding modes, types, characteristics and fabrication of MOS									
TEC5.1 CO1: Understanding modes, types, characteristics and fabrication of MOS TEC5.2 CO2: Creating combinational and sequential digital circuits and layouts using CMOS technology. TEC5.3 CO3: Understanding CMOS Design rules via advanced Tanner Tools. Course Name: VHDL TEC6.3A Course Year: 2017-2018 TEC6.3.1 CO1: Understanding the design flow of different integrated circuits. TEC6.3.2 CO2: Understanding the fundamentals, advantages of VHDL and writing code for combinational and sequential circuits. Course Name: Signal & Image Processing Lab TEC7.1 CO1: Implementing various DSP Algorithms using MATLAB Software package. TEC7.2 CO2: Analyzing and observing magnitude and phase characteristics (Frequency response Characteristics) of digital FIR, IIR Butterworth and Chebyshev filters. Course Name: Wireless Communication Lab TEC8A Course Year: 2017-2018 TEC8.1 CO1: Evaluate antenna return loss, gain, radiation characteristics, and polarization. TEC8.2 CO2: Understanding and analyzing RADAR, satellite, CDMA-DSSS, and GPS trainer. Course Name: Practical Training & Industrial TEC9A Course Year: 2017-2018 TEC9.1 CO1: Applying the applications of electronics and communication engineering concepts and principles learned in classroom.	Course N	ame: VLSI Design	7EC5A	Course Year:	2017-2018				
Tecs.2 CO2: Creating combinational and sequential digital circuits and layouts using CMOS technology.		<u> </u>	l						
Tecs.2 CO2: Creating combinational and sequential digital circuits and layouts using CMOS technology.	7EC5.1	CO1: Understanding modes	s, types, char	acteristics and fabric	cation of MOS				
using CMOS technology.									
TEC5.3 CO3: Understanding CMOS Design rules via advanced Tanner Tools.	,			[
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7EC8.1 CO1: Evaluate antenna return loss, gain, radiation characteristics, and polarization. 7EC8.2 CO2: Understanding and analyzing RADAR, satellite, CDMA-DSSS, and GPS trainer. Course Name: Practical Training & Industrial TEC9A Course Year: 2017-2018 Visit CO1: Applying the applications of electronics and communication engineering concepts and principles learned in classroom.		Chebyshev filters.							
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Course Name: Practical Training & Industrial 7EC9A Course Year: 2017-2018 Visit 2017-2018 TEC9.1 CO1: Applying the applications of electronics and communication engineering concepts and principles learned in classroom.	7200.2	_	inary zinig Tu	ibini, satemie, ez	ini Boos, and				
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7EC9.1 CO1: Applying the applications of electronics and communication engineering concepts and principles learned in classroom.	Course Manie, 11a	<u>-</u>		Course I cui.	2017 2010				
engineering concepts and principles learned in classroom.		VISIt							
engineering concepts and principles learned in classroom.	7 F.CO. 1		11	0 1	• .•				
	7EC9.1				communication				
7EC9.2 CO2: Analyzing awareness of the engineering and technological aspects in	-								
	7EC9.2				ogical aspects in				
the electronics and communication industries.									
7EC9.3 CO3: Improving interpersonal skill by communicating directly with	7EC9.3	CO3: Improving interper	sonal skill	by communicating	g directly with				
industrial personnel.	į.								

CO4: Analyzing the roles a	nd ethics of e	engineers in related in	ndustries.					
CO5: Analyzing the imp	CO5: Analyzing the impact of industrial processes on health, safety,							
environment and society.								
Name: IC Technology	8EC1A	Course Year:	2017-2018					
	al, its defects	s, operation and diffe	erent techniques					
<u> </u>	ns of MOS IO	C technology						
203. Chacistanding crysta	i structure un	ia nover devices						
: Radar and TV Technology	8EC2A	Course Year:	2017-2018					
CO1: Understanding the ch	aracteristics	and applications of ra	adar.					
<u> </u>								
CO3: Understanding the rea	al life applica	ations of RADAR sys	stems.					
			_					
MEMS and Nanotechnology	8EC3A	Course Year:	2017-2018					
	acteristics, fa	abrication and patter	ning techniques					
CO3: Understanding sensor	rs like pressu	re, nano etc.						
			_					
Microcontroller and Embedded	8EC4.3A	Course Year:	2017-2018					
Systems								
CO1: Implementing real tin	ne problems	using assembly lang	1906					
	interracing of	innerocontroller with	3,					
	inctioning of	PIC and ARM micro	ocontroller					
Cos. Chaorstanding the re								
me• RE Fahrication Lah	8EC5A	Course Veer	2017-2018					
mic. Ni i aoncanon Lau	OLCJA	Course rear.	2017-2010					
CO1: Implement planar trai	nsmission lin	e, couplers and filter	S.					
CO2: Analyze methods to devices.	letermine cir	cuit properties of mic	crowave					
I								
e: Industrial Economics and Management	8EC6	Course Year:	2017-2018					
	CO5: Analyzing the impenvironment and society. Name: IC Technology CO1: Understanding crystato make it high quality. CO2: Analyzing application CO3: Understanding the checcost Understanding the architectory. CO1: Understanding the architectory the constant of the con	CO5: Analyzing the impact of induenvironment and society. Name: IC Technology CO1: Understanding crystal, its defects to make it high quality. CO2: Analyzing applications of MOS IG CO3: Understanding crystal structure and Endowment and TV Technology Radar and TV Technology REC2A CO1: Understanding the characteristics CO2: Analyzing the architecture and fear CO3: Understanding the real life applications. MEMS and Nanotechnology REC3A CO1: Analyzing the characteristics, far of nanotechnology. CO2: Understanding nano electronics applications i.e. electrical, magnetic, me CO3: Understanding sensors like pressure CO3: Understanding sensors like pressure CO3: Understanding sensors like pressure CO3: Understanding the functioning of sensors. CO3: Understanding the functioning of Sensors. CO3: Understanding the functioning of Sensors. CO4: Implement planar transmission line CO2: Analyze methods to determine circular devices.	Name: IC Technology 8EC1A Course Year:					

8EC6.1	CO1: Understand the role of economic principles in the organisational
	structure and how to sketch the cash flow diagram, as applied to engineering
	firms
8EC6.2	CO2: Analyse and evaluate the various new industrial policies to calculate
	common capital appraisal techniques.
8EC6.3	CO3: Evaluate and implement functions of management with emerging
	managerial tools to be a successful entrepreneur.

Course Name: VLSI Design and Optical Fiber	8EC7A	Course Year:	2017-2018
Lab			

8EC7.1	CO1: Creating and simulating various combinational and sequential circuits.
8EC7.2	CO2: Evaluating propagation losses in optical fiber.
8EC7.3	CO3: Evaluating characteristics of optical sources i.e. LED, LASER

Course Name: Project	8EC8A	Course Year:	2017-2018
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8EC8.1	CO1: Understand and review the available literature on the chosen problem
8EC8.2	CO2: Apply the methodology to solve the identified problem
8EC8.3	CO3: Analyze the principles and tools for the problem.
8EC8.4	CO4: Create the technique to solve the problem.
8EC8.5	CO5: Prepare and present project report

3.1.2. CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3^{rd} to 8^{th} semester) (05)

Note: Enter correlation level s1, 2 or 3 as defined below: 1: Slight(Low) 2: Moderate(Medium) 3: Substantial(High) If there is no correlation, put 1

	Electronic Devices & Circuits											
POs Cos	1	2	3	4	5	6	7	8	9	10	11	12
1	Н	L	-	-	-	-	-	-	-	-	-	-
2	H	H	L	-	L	-	-	-	-	-	-	-
3	M	M	-	-	L	-	-	-	-	-	-	-
				Data S	Structur	es & Al	gorithm	ıs				
POs Cos	1	2	3	4	5	6	7	8	9	10	11	12
1	M	M	-	L	M	-	-	-	-	-	-	-
2	M	M	-	L	M	-	-	-	-	-	-	-
3	L	M	-	M	M	-	-	-	-	-	-	-
					Digital 1	Electron	ics					

D												
Pos Cos	1	2	3	4	5	6	7	8	9	10	11	12
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2	Н	M	Н	-	-	-	-	-	-	-	-	-
3	L	L	-	-	-	-	-	-	-	-	-	-
4	Н	Н	Н	-	M	L	L	-	L	-	L	L
				Circu	iit Anal	ysis & S	ynthesis	5				
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Cos	1	2	3	4	5	6	7	8	9	10	11	12
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3	M	M	-	-	-	-	-	-	-	-	-	-
4	M	L	L	L	-	-	-	-	-	-	-	-
			Ele	ctroma	gnetic P	ropertie	s of Ma	terials				
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Cos] 1	2	3	4	5	6	/	8	9	10	11	12
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2	Н	M	M	-	-	L	L	-	L	L	-	L
			Ac	dvanced	Engine	ering M	athema	tics-1				
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3	M	L	L	-	-	-	-	-	-	-	-	L
			El	ectronic	Instrui	nentatio	n Work	kshop				
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			·		lectroni	c Device	Lab	•		·		
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						Di	gital Ele	ectronic	s Lab					
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POs COs		1	,	2	3	4	5	6	7	8	9	10	11	12
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POs COs		1	2	3		4	5	6		7	8	9	1	0	11	12
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2		M	L	L		L	-	-		-	-	_	<u> </u>		-	L
3		M	L	L	,	-	-	-		-	-	-		-	-	L
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COs	COs Image: Cos of the cost															
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D O	Measurement and Instrumentation Lab															
POs COs	Os 1 2 3 4 5 6 7 8 9 10 11 12															
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	I			_1	Н	lumani	ties an	d Soc	ial S	cience	es	ı	L			
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						Analo	og Ele	ctror	nics	Lab						
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