

Dept: ECE-BTech (FT) Mapping of COs and Pos

Regulation-2021

Sem	Subject code	Subject name	cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P011	PO12	PSO1	PSO2	PSO3
			CO1:To use appropriate words in a professional context		1	1	1	1	3	3	3	1	3		3	-	2	-
			CO2:To gain understanding of basic grammatic structures and use them in right context.	1	1	1	1	1	3	3	3	1	3	-	3	-	-	-
		Professional English -	CO3:To read and infer the denotative and connotative meanings of technical texts	2	3	2	3	2	3	3	3	2	3	3	3	-	-	-
	21147811		CO4:To write definitions, descriptions, narrations and essays on various topics	2	3	2	3	2	3	3	3	2	3	3	3	-	-	-
-			AVG	1.6	2.2	1.8	2.2	1.5	3	3	3	1.6	3	3	3	-	-	-
			CO1:Use the matrix algebra methods for solving practical problems.	3	3	1	1	0	0	0	0	2	0	2	3	-	-	
		100 N 10	CO2:Apply differential calculus tools in solving various application problems.	3	3	1	1	0	0	0	0	2	0	2	3	-		
		Matrices and	COS Able to use differential calculus ideas on several variable functions.	3	3	1	1	0	0	0	0	2	0	2	3	-		-
		Calculus	CO4:Apply different methods of integration in solving practical problems.	3	3	1	1	0	0	0	0	2	0	2	3	-	-	-
	21148512		COS:Apply multiple integral ideas in solving areas, volumes and other practical problems.	3	3	1	1	0	0	0	0	2	0	2	3	-		
			AVG	3	3	1	1	0	0	0	0	2	0	2	3			
			CO1:Understand the importance of mechanics.	3	3	2	1	1	1		-	-	-	-	+	-	-	
			CO2:Express their knowledge in electromagnetic waves.	3	3	2	1	2	+ 1	-	-	-		-			-	-
		E	CO3:Demonstrate a strong foundational knowledge in oscillations, optics and lasers.	3	3	2	2	2	1	-	-		-	-	1	-	-	-
		Engineering Physics	CO4:Understand the importance of quantum physics.	3	3	1	1	2	1	-	-		-	-	-		-	
	21149S13		CO5:Comprehend and apply quantum mechanical principles towards the formation of energy bands.	3	3	1	1	2	1	-	-	-	-	-	-	-	-	-
			AVG	3	3	1.6	1.2	1.8	1		-	-			1	-	-	-
			CO1:To infer the quality of water from quality parameter data and propose suitable treatment methodologies to treat water.	3	2	2	1	-	1	1	-	-	-	-	1		-	-
			CO2:To identify and apply basic concepts of nanoscience and nanotechnology in designing the synthesis of nanomaterials for engineering and technology applications.	2	-	-	1	-	2	2	-		21		-			
		Chemistry	CO3:To apply the knowledge of phase rule and composites for material selection requirements.	3	1	-	-	-	-	-			-		-	-	-	-
	21149\$14		CO4:To recommend suitable fuels for engineering processes and applications.	3	1	1	-	-	. 1	2	-		-2	-	-	-	-	
			CO5:To recognize different forms of energy resources and apply them for suitable applications in energy sectors	3	1	2	1	-	2	2	-	-	-	-	2	-	-	-
			AVG	2.8	1.3	1.6	1	-	1.5	1.8	-		-	-	1.5		-	-
			CO1: Develop algorithmic solutions to simple computational problems.	3	3	3	3	2	-	-	-	-	-	2	2	3	3	
			CO2: Develop and execute simple Python programs.	3	3	3	3	2	-	-	-	-	-	2	2	3	-	
		Problem Solving and	CO3: Write simple Python programs using conditionals and loops for solving problems.	3	3	3	3	2	÷	-	-	-	-	2	-	3	-	
		Python Programming	CO4: Decompose a Python program into functions.	2	2	(-).	2	2	-			-	-	1	-	3	-	
	21150S15		CO5: Represent compound data using Python lists, tuples, dictionaries etc.	1	2		-	1	-	-	+	-		1	+	2		
I-SEM			CO6: Read and write data from/to files in Python programs	2	2	-	-	2	-	-	-	-		1	-	2		
-		1 75012	AVG	2	3	3	3	2	-			-	-	2	2	3	3	Mr.
	H	Eag OLDE	COT Develop algorithmic solutions to simple computational problems	3	3	3	3	3	-	-		-	-	3	2	3	3	NUL
10	M Dep	Problem Solving and	CO2, Leverop and execute simple Python programs. CO3: Implement programs in Python using conditionals and loops for solving motherms.	3	3	3	3	3		-	-	-	-	3	2	3	- 0	
NP-	Co	Pythen Programming	CO4: Deploy functions to deportmence a Pulhon amoram				0	2						Cole		DD	43.0	-
-	001100110	Laboratory	CO5: Process compound data using Puthon data structures	3	2	-	4	2	-			-	-	201001	of Pa-	-3-50	AN	-
1	21150L16	1) an Hanna	CO6: Utilize Python backages in developing software applications	2	6	-	-	2	-	-		-		Panne	-110	Ageria	0 and	7. 1
	Soit	ance & 190	AVG	2	3	3	3	2		-	-	-	-	Sala	wah !	amoil	3 410	1801
	KANATA	den Doom	an to be the second	4	2	3	3	6	-		-	-	-	CEICIP	Cetan.	- sicile	Y2m !	110

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21/4521 Color operating and region and which an events, industing probanes 1	21147521 CO2-16 starting and report cause and effects in events, industrial processes 3			AVG CO1:To express their opinions effectively in both formal and informal discussions AVG CO1:To compare and contrast products and ideas in technical texts.	3	3	3	3	1	3	3	3	3	3	3	3	-	-	-
1111100000000000000000000000000000000	Integrate in the works format		D. C. J. L. M. M.	CO2:To identify and report cause and effects in events, industrial processes through technical texts	3	3	3	3	3	3	3	3	2	3	3	3	-		
CODE: To chart affective resumes the context of pb search. 3 3 <td>Cost and effective means in the context of pb starch. -</td> <td>21147521</td> <td>– II</td> <td>them in the written format CO4:To present their ideas and opinions in a planned and logical manner</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>2</td> <td>3</td> <td>3</td> <td>3</td> <td>-</td> <td>-</td> <td></td>	Cost and effective means in the context of pb starch. -	21147521	– II	them in the written format CO4:To present their ideas and opinions in a planned and logical manner	3	3	3	3	3	3	3	3	2	3	3	3	-	-	
AVG AVG B B B B B C C C C C C VI-1000000000000000000000000000000000000	Image: Problem in the section of the sectin of the section of the section			CO5:To draft effective resumes in the context of job search.	-	-	-	-		-	-	-	3	3	3	3		-	
2114822 Processing of the properties Cold and properties	Processes Image: Constrained of the second set of the properties of materials and using any second set of the properties of materials and using any second set of the properties of materials and using any second set of the properties of materials and using any second set of the properties of material second se			AVG	3	3	3	3	2.75	3	3	3	2.2	3	3	3	-	-	
Physical and Numerical Media Field of agriculture (CO3Apprecisable the numerical lechniques of inferentiation and integration for engineering opotems. 3 3 1 1 0 0 0 2 0 2 3 - - 2114822 CO3Apprecisable the numerical lechniques of inferential and ordinary differential equations and integration for engineering problems. 3 3 1 1 1 0 0 0 2 0 2 3 - - 2114822 Co3Apprecisable the numerical lechniques of integration for engineering conditions by using certain techniques with engineering applications. 3 3 1 1 1 0 0 0 2 0 2 3 - - Co3Apprecisable contrasting co	21148523 Image: Approximate of agricultum. 3 3 1 1 1 0 0 0 2 0 2 3 - - 21148523 CO3Approximate the numerical techniques of differential quantitation and integration for engineering applications. 3 3 1 1 1 0 0 0 2 0 2 3 - - 21148523 Code Understand the knowledge of various techniques and methods for solving first and second order ordinary differential equations. 3 3 1 1 1 0 0 0 2 0 2 3 - - - Cost show the partial and ordinary differential equations. 3 3 1 1 1 0 0 0 2 0 2 3 - <t< td=""><td></td><td></td><td>If problems. CO2:Apply the basic concepts of classifications of design of experiments in the</td><td>3</td><td>3</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>2</td><td>0</td><td>2</td><td>3</td><td>-</td><td>*</td><td></td></t<>			If problems. CO2:Apply the basic concepts of classifications of design of experiments in the	3	3	1	1	1	0	0	0	2	0	2	3	-	*	
Number of Meeting	Number of the functional sector of the enclose of order instance of order instance of the enclose of th			field of agriculture. CO3:Appreciate the numerical techniques of interpolation in various intervals and	3	3	1	1	1	0	0	0	2	0	2	3	-	-	
21148522 Inst and second order ordinary differential equations. 3 3 1 1 1 0 0 2 0 2 3 - - 21148522 CoS slow the partial and ordinary differential equations. 3 3 1 1 1 0 0 0 2 0 2 3 - - AVG COS slow the partial and ordinary differential equations. 3 3 1 1 1 0 0 0 2 0 2 3 -	21148522 Instand second order ordinary differential equations. 3 3 1 1 1 0 0 2 0 2 3 - - 21148522 COS-Solve the partial and ordinary differential equations. 3 3 1 1 1 0 0 0 2 0 2 3 - - AVG AVG Avg 1 1 1 0 0 0 0 2 0 2 3 - - AVG Avg Avg CoS-Solve the partial and ordinary differential equations. 3 3 1 1 1 0 0 0 2 0 2 3 - <t< td=""><td></td><td>Statistics and Numerical Methods</td><td>apply the numerical techniques of differentiation and integration for engineering problems. CO4:Understand the knowledge of various techniques and methods for enking</td><td>3</td><td>3</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>2</td><td>0</td><td>2</td><td>3</td><td>-</td><td>•</td><td></td></t<>		Statistics and Numerical Methods	apply the numerical techniques of differentiation and integration for engineering problems. CO4:Understand the knowledge of various techniques and methods for enking	3	3	1	1	1	0	0	0	2	0	2	3	-	•	
Physes fr CO3:Solve the partial and ordinary differential equations with initial and boundary 3 3 1 1 1 0 0 0 2 0 2 3 - - AVG Conditions by using certain theining applications. AVG 3 3 1 1 1 0 0 0 0 2 0 2 3 - - Physes fr CO11 know basis of crystallography and its importance for varied materials 3 2 1 2 - 2 - 0	211495238 COS-Solve the partial and ordinary differential equations with initial and houndary applications. 3 3 1 1 1 0 0 0 2 0 2 3 - - V05-Solve the partial and ordinary differential equations with initial and houndary applications. 3 3 1 1 1 0 0 0 2 0 2 3 - - V05-Solve the partial and ordinary differential equations with initial and houndary applications. 3 3 1 1 1 0 0 0 2 0 2 3 - <t< td=""><td>21148822</td><td></td><td>first and second order ordinary differential equations.</td><td>3</td><td>3</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>2</td><td>0</td><td>2</td><td>3</td><td>-</td><td></td><td>_</td></t<>	21148822		first and second order ordinary differential equations.	3	3	1	1	1	0	0	0	2	0	2	3	-		_
AVG AVG 3 3 1 1 1 0 0 0 2 0 2 3 - - Physics for Bectromic Engineering CO1/involvessics of crystallography and its importance for varied materials and feed splications 3 - 1 - 1 - - - - 1 - - -	AVG AVG Coll show basics of crystallography and its importance for varied materials 3 3 1 1 1 0 0 0 2 0 2 3 - - Physes for Electronics Engineering CO2 introv basics of crystallography and its importance for varied materials and their applications 3 2 1 2 - 2 -			CO5:Solve the partial and ordinary differential equations with initial and boundary conditions by using certain techniques with engineering applications.	3	3	1	1	1	0	0	0	2	0	2	3	-		
21149523B Province since of construction of the individual of the indindividual of the individual of the indindividual of the indindiv	21149523B Physics fit applications Col: subset of columning shift and magnetic properties of materials and morking principles of as properties of materials and working principles of as properties of properties of properties of properties of properties of materials and working principles of as properties of propering properties of properis properties of propering fro			AVG	3	3	1	1	1	0	0	0	2	0	2	3	-		
Physics for Bectronics heir applications no.	Physics for Electronics their applications 3 2 1 2 - 2 - <td></td> <td></td> <td>properties CO2;gain knowledge on the electrical and magnetic properties of materials and</td> <td>3</td> <td>-</td> <td>1</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td>•</td> <td>-</td> <td>-</td> <td>-</td> <td></td>			properties CO2;gain knowledge on the electrical and magnetic properties of materials and	3	-	1	-	-	-	-				•	-	-	-	
Engineering Semiconductor devices C L <thl< th=""> L <thl< th=""> L <thl< th=""> L <thl< th=""> <thl< <="" td=""><td>21149523B Engineering Graphine semiconductor devices C C C C</td><td></td><td>Physics for Electronics</td><td>their applications CO3:understand clearly of semiconductor physics and functioning of</td><td>3</td><td>2</td><td>1</td><td>2</td><td>-</td><td>2</td><td>•</td><td>•</td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td>-</td></thl<></thl<></thl<></thl<></thl<>	21149523B Engineering Graphine semiconductor devices C C C C		Physics for Electronics	their applications CO3:understand clearly of semiconductor physics and functioning of	3	2	1	2	-	2	•	•		-	-	-	-		-
Variable optical devices Image: construction of the importance of nanotechnology and nanodevices 3 - 2 1 - 2 -	21154524 Electrical and Instrumentation Engineering 211535258 Electrical and Instrumentation Engineering 211535258 Electrical and Instrumentation Engineering CO2: Construct the conic curves, involutes and expective projections of simple solids 3 1 2 - 2 - 1 - - - - - 1 - - 2 2 3 1 2	21149S23B	Engineering	semiconductor devices CO4:understand the optical properties of materials and working principles of	3	-	1	-	3	2	3		-			- 1	-		
AVG AVG AVG A 1 </td <td>Avg Avg Avg<td></td><td></td><td>CO5:appreciate the importance of nanotechnology and nanodevices</td><td>3</td><td></td><td>2</td><td>1</td><td></td><td>2</td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td>-</td></td>	Avg Avg <td></td> <td></td> <td>CO5:appreciate the importance of nanotechnology and nanodevices</td> <td>3</td> <td></td> <td>2</td> <td>1</td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td>-</td>			CO5:appreciate the importance of nanotechnology and nanodevices	3		2	1		2						1			-
21154S24 CO1:Use BIS conventions and specifications for engineering drawing. 3 1 2 - 2 - - - 3 - 2 2 2 21154S24 Engineering Graphics CO2:Construct the conic curves, involutes and cycloid. 3 1 2 - 2 - - - 3 - 2	21154S24 CO1:Use BIS conventions and specifications for engineering drawing. 3 1 2 - 2 - - 3 - 2 <td>and the second second</td> <td></td> <td>AVG</td> <td>3</td> <td>2</td> <td>1.4</td> <td>1.5</td> <td>2.5</td> <td>2</td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td>	and the second second		AVG	3	2	1.4	1.5	2.5	2	3					1			
21154S24 CO2:Construct the conic curves, involutes and perspective projections of simple solids 3 1 2 - 2 - - 3 - 2 2 2 21154S24 Engineering Graphics CO2:Construct the conic curves, involutes and perspective projections of simple solids 3 1 2 - 2 - - 3 - 2	21154S24 Electrical and histometricand perspective projections of simple and cycloid. 3 1 2 - 2 - - 3 - 2			CO1:Use BIS conventions and specifications for engineering drawing.	3	1	2	-	2		-	-	-	3	-	2	2	2	
21154S24 Engineering Graphics CO4:Draw the orthographic, isometric and perspective projections of simple solids. 3 1 2 - 2 - 3 - 2 2 2 21154S24 Engineering Graphics CO4:Draw the orthographic, isometric and perspective projections of simple solids. 3 1 2 - 2 - - 3 - 2 <	21154S24 Engineering Graphics 3 1 2 - 2 - - 3 - 2			CO2:Construct the conic curves, involutes and cycloid.	3	1	2	-	2	-	-	-	-	3	-	2	2	2	
21154S24 sources	21154S24 sourds.		Engineering Graphics	CO4.50ve practical problems involving projection of lines. CO4.50va the orthographic, isometric and perspective projections of simple	3	1	2	-	2	-		-	-	3	-	2	2	2	-
NO 3 1 2 2 2 3 2 2 2 3 1 2 2 2 3 1 2 2 2 1 3 2	CO1:Use BIS conventions and specifications for engineering drawing. 3 1 2 - - - 3 - 2 2 2 21153S25B Electrical and Instrumentation Engineering Engineering CO2:Construct the conic curves, involutes and cycloid. Image: Co2:Construe the curves the cycloperimeter the cycloperimeter the cycloperim	21154824		Solids. CO5:Draw the development of simple solids	3	1	2	-	2		-	-		3	-	2	2	2	
21153S25B Electrical and Instrumentation Engineering CO2:Construct the convents and spectra problems involving projection of lines. CO3:Draw the orthographic, isometric and perspective projections of simple solids Image: CO3:Draw the orthographic, isometric and perspective projections of simple solids 21153S25B CO3:Draw the orthographic, isometric and perspective projections of simple solids Image: CO3:Draw the orthographic, isometric and perspective projections of simple solids Image: CO3:Draw the orthographic, isometric and perspective projections of simple solids Image: CO3:Draw the orthographic, isometric and perspective projections of simple cO3:Draw the orthographic, isometric and perspective projections of simple solids Image: CO3:Draw the orthographic, isometric and perspective projections of simple cO3:Draw the orthographic, isometric and perspective projections of simple course the orthographic perspective perspective perspective perspective perspective current and node voltage method for analysis of DC and AC circuits. 3 2 1 1 Participation	21153S25B Electrical and Instrumentation Enginoering CO2: Constructive and specifications of simple code: Draw the orthographic, isometric and perspective projections of simple solids Image: Code:			CO1/Use BIS conventions and specifications for engineering drawing	3	1	2	-	2	-	-	-	-	3	-	2	2	2	-
Bitchical and Instrumentation Engineering CO3:Solve practical problems involving projection of lines. Image: Cost of control of cost of c	21153525B Electrical and Instrumentation Engineering CO3:Solve practical problems involving projection of lines. CO4:Draw the orthographic, isometric and perspective projections of simple solids Image: CO3:Solve practical problems involving projection of lines.	- 0		CO2:Construct the conic curves, involutes and cycloid														111	-
Instrumentation Engineering CO4:Draw the orthographic, isometric and perspective projections of simple solids Image: Comparison of the perspective projection of simple solids Image: Comparison of the perspective projection of simple solids Image: Comparison of the perspective projection of simple comparison of the perspective projections of the perspective comparison of the perspective perspective projections of simple comparison of the perspective perspective projections of the perspective comparison of the perspective perspective perspective perspective perspective comparison of the perspective perspective perspective perspective perspective perspective comparison of the perspective perspective perspective perspective comparison of the perspective perspective perspective c	21153S25B Instrumentation Engineering Solids.	No.	Electrical and	CO3:Solve practical problems involving projection of lines.			-									-	1	11.	-
21153S25B Source Source Source CQ5:Draw the development of simple solids Image: Source Image: Source AVG CO1 Apply the basic concepts of circuit analysis such as Kirchoff's laws, mesh current and node voltage method for analysis of DC and AC circuits. 3 2 1 1 Image: Source 1 Point concepts	21153S25B CO5:Draw the development of simple solids	- Pendi	Instrumentation Engineering	CO4:Draw the orthographic, isometric and perspective projections of simple														the	1
AVG1-52 CHM CO1 Apply the basic concepts of circuit analysis such as Kirchoff's laws, mesh current and node voltage method for analysis of DC and AC circuits. 3 2 1 1 1 Pondorota basic current and node voltage method for analysis of DC and AC circuits.		21153S25B	m Or Flan	CO5:Draw the development of simple solids												ETT	ANT		r
CO1 Apply the basic concepts of circuit analysis such as Kirchoff's laws, mesh gurrent and node voltage method for analysis of DC and AC circuits.	AVG IN S CHU	Cana		AVG THE CITY										School	of Car	the second	1 24 4		
Circuit Analysis	Contrary on Circuit Analysis Concepts of circuit analysis such as Kirchoff's laws, mesh 3 2 1 1 1 Ponnetwork Circuit Analysis of DC and AC circuits.	onnalyan	Circuit Analysis	CO1 Apply the basic concepts of circuit analysis such as Kirchoff's laws, mesh current and node voltage method for analysis of DC and AC circuits.	3	2	1	1	-	14	-	1		Ponn	aivah	Ramai	ig and	Tect,	
CO2: Apply suitable network theorems and analyze AC and DC circuits 3 3 3 2 2 1 Science and Constant in Science and Consta	CO2 Apply suitable network theorems and analyze AC and DC circuits 3 3 2 2 1 Science and analyze AC and DC circuits		Circuit Panalysis	CO2: Apply suitable network theorems and analyze AC and DC circuits	3	3	2	2	-	-	-	1		Sicial	nes an	draw	when it	aspitu	DK.

	1																
		CO4: Analyze the transient response for any RC, RL and RLC circuits and frequency response of parallel and series resonance circuits.	3	3	3	3	-	-	-	1		1	-	-	-		-
		CO5: Analyze the coupled circuits and network topologies	3	3	3	2	-			1		1	-	- 20	-	14	-
		AVG	3	3	3	2			-	1		1	-	-	-	-	-
	Engineering Practices	CO1:Draw pipe line plan: lay and connect various pipe fittings used in common	2	3	-		1	1	-		-	-		2		1	4
	Laboratory	household plumbing work; Saw; plan; make joints in wood materials used in common household wood work.	2	L			1		-					2	2	1	1
		CO2:Wire various electrical joints in common household electrical wire work.	з	2	-	-	1	1	1			-	-	2	2	1	1
21154L27		CO3:Weld various joints in steel plates using arc welding work; Machine various simple processes like turning, drilling, tapping in parts; Assemble simple mechanical assembly of common household equipments; Make a tray out of metal sheet using sheet metal work.	3	2		-	1	1	1	-	-	-	-	2	2	1	1
		CO4:Solder and test simple electronic circuits; Assemble and test simple electronic components on PCB.	3	2	-	-	1	1	1	•		-	•	2	2	1	1
		AVG															
21153L28A	Circuits Analysis	Design PL and PC circuite	3	2	1	1				1	-	1	-	-		-	-
	1. aboratory		3	3	2	2	-			1		1	-	-	-	-	-
		Verify Thevinin & Norton theorem KVL & KCL, and Super Position Theorems															
		To gain hands- on experience in Thevenin & Norton theorem, KVL & KCL, and Superposition Theorems.	3	3	3	3	-		-	1	-	1	-	-		-	-
		To understand the working of RL RC and RLC circuits	3	3	3	3	-			1		1					
		AVG	3 6	a	3	2				1	-	1	-	-	-	-	-
	Communication 1 sh		2	2	0	2	4	-	-	2	-	2	-	-	-		-
	- II	CO1:Speak effectively in group discussions held in formal/semi formal contexts	4	3	3	3	1	3 .	3	3	3	3	3	3		17.	-
		CO2:Discuss, analyse and present concepts and problems from various	2	3	3	3	1	3	3	3	3	3	3	3			
		perspectives to arrive at suitable solutions		-	-	-											
21147L29		cos.vvine emails, letters and effective job applications.	2	2	3	3	1	3	3	3	3	3	3	3	1.7	-	
		CO4:Write critical reports to convey data and information with clarity and precision	3	3	3	3	3	3	3	3	3	3	3	3	0.75	-	
		CO5:Give appropriate instructions and recommendations for safe execution of tasks	3	3	3	3	3	3	3	3	3	3	3	3	17.1	-	-
		AVG	2.4	2.8	3	3	18	3	3	3	3	3	3	3	-		-
10-11-11-11-11-11-11-11-11-11-11-11-11-1	Random Processes	CO1:Explain the fundamental concepts of advanced algebra and their role in	3	3	0	0	0	0	0	0	3	0	0	2	-		
	and Linear Algebra	modern mathematics and applied contexts.	0	-	0	0	0	- 0	0	0	-	-	0	2			
-		CO2:Demonstrate accurate and efficient use of advanced algebraic techniques	a	9	0	0	0	U	U	0	3	0	U	2	-	-	-
		CO3:Apply the concept of random processes in engineering disciplines	2	2	0	0	0	0	0	0	2	0	0	2		-	
21148S31B		CO4:Understand the fundamental concepts of probability with a thorough	3	9	0	0	0	0	0	0	3	0	0	2	-	-	-
		knowledge of standard distributions that can describe certain real-life phenomenon.	U		V	0	U	U	v	U	5	0	0	2			
		CO5: Understand the basic concepts of one and two dimensional random variables and	3	3	0	0	0	0	0	0	3	0	0	2	-	-	-
		AVG	3	3	0	0	0	0	0	0	3	0	0	2	-	-	-
	Control Systems	CO1: Compute the transfer function of different physical systems.	3	3	3	2	2	2	-	-	720	12	2	3	3	3	3
			3	3	3	3	2	3	-	-	120	-	2	2	3	3	3
		CO2: Analyse the time domain specification and calculate the steady state error.													1000		
21152832		CO3: Illustrate the frequency response characteristics of open loop and closed loop system response.	3	2	3	3	2	2	-	-	-		2	3	3	2	3
A STORY STORY		CO4: Analyse the stability using Routh and root locus techniques.	3	3	3	2	2	- 2				2	2	2	3	3	3
		CO5: Illustrate the state space model of a physical system and discuss the	2	2	3	3	2	3	-	-	-	-	2	3	2	2	3
-1		AVC		-	-		-						-	-	-	-	
	C Programming and	CO1:Develop C programs for any real world to the indication	3	3	3	3	2	2	-		-	-	2	3	3	3	3
V	Data Structures	COn Develop C programs for any real wond/technical application.	2	3	1	2	2	1	1	-	1	2	1	3	2	1	3
+ Head	H the Den	to the solution of the solutio	1	2	1	2	2	-	-		1	1	1	2	2	2	2
Denstime	nt Of Elect	COS Work functions to implement linear and non-linear data structure operations.	2	3	1	2	3	-	-	-	1	1	1	2	2	1	2
21152S33	hication Er	CO4:Suggest and use appropriate linear/non-linear data structure operations for solving a given problem.	1	2	î	2	2	1	1	-	1	2	1	3	2	2	3
Dannaluch	Ramaiawa	CQ5;Appropriately use sort and search algorithms for a given application.	2	2	1	2	2	1	1	-	:1	1	1	2	2	W	RT.
Pointaryan	A. Technolo	CO6 Apply appropriate hash functions that result in a collision free scenario for	2	2	1	2	2	1	1	-	1	1	1	2	2	200	vçu
D. BHOR	and the second second second	AVG Lunissesitus	2	2	4	2	2	4	1		4	4	4	2	101	12	2
(institution	*Digital Systems	ka 1959)	3	2	2	2	-	2	-	-	-	-Sc	103 0	Eraoin	3	an ³ T	ct 2
Inter La De La Verse	D 649 463	CON Design algebra and simplification procedures relevant to digital logic.	-		-							F	Charm	1919	1	Sector 18	ULL .
21152C34	-010-000	CO3:Analyse and design synchronous sequential circuits	-	2		-	-	2	-	-	*		2	0.2	2	an3 n.	utidie pt
1 21126034	1	sever manyae and design synchronous sequential circuits	-	3	3	4		2	-			· · · · · ·	PUK IC	e and	10000	Nadul	TOPOT

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		CO4: Analyse and design asynchronous sequential circuits.	-	-	-	-	-			-		•	3	2	2	3	-
		COS: Build logic gates and use programmable devices	-	3	3	3	-	-		-	-	-	2	2	3	3	_
	8. 1. 10.	AVG	3	2,6	2.6	2.3	-	2	-	-	-	-	2	2	3	3	_
	Signals and Systems	CO1:determine if a given system is linear/causal/stable	3		3	-	3	2	-	-	-	-	-	3	-	-	
		CO2 determine the frequency components among the a determination	3	-	3	-	-	2		-	-		-	3		3	
		CO2 determine the requency components present in a deterministic signal	-				-			-			-				-
21152C35		domain	3	3			3	2	-	-	-	-	-	3	2	-	
		CO4:characterize discrete LTI systems in the time domain and frequency domain	3	3	-	-	3	2	-	-	-	-		3	•	3	
		CO5 compute the output of an LTI system in the time and fracuency domains	3	3	-	3	3	2		-	•	-		3	-	3	T
		AVG	3	3	2	3	3	2						3	2	3	
	Electronic Devices		3	3	3	3	2	1						1	2	1	+
	and Circuits	CO1: Explain the structure and working operation of basic electronic devices.					-			10		12221			-		
		CO2: Design and analyze amplifiers.	3	2	2	3	2	2				-		1	2	1	+
21152C36		CO3: Analyze frequency response of BJT and MOSFET amplifiers	3	3	3	2	1	2		-	1	-	-	1	2	1	-
		CO4: Design and analyze feedback amplifiers and oscillator principles.	3	3	2	3	2	2				-	-	1	2	1	+
		CO5: Design and analyze power amplifiers and supply circuits	3	2	3	2	2	1		-	-	-	-	1	2	1	-
		AVG	3	3	3	3	2	2		-				1	2	1	-
	C Programming and	CO1:Use different constructs of C and develop applications	2	3	1	2	2	1	1		1	2	1	3	2	1	T
	Data Structures Lab		1	2	1	2	2	-	-		1	1	1	2	2	2	T
		CO2:Write functions to implement linear and non-linear data structure operations															
		CO3:Suggest and use the appropriate linear / non-linear data structure operations	2	3	1	2	3				1	1	1	2	2	1	T
21152L37		for a given problem															
		CO4:Apply appropriate hash functions that result in a collision free scenario for	2	1	-	1	1	-	-		2	1	1	2	2	3	T
		data storage and Retrieval															
		CO5:Implement Sorting and searching algorithms for a given application	1	2	1	2	2	1	1	-	1	2	1	3	2	2	
	171	AVG	2	2	1	2	2	- 1	1	-	1	1	1	2	2	2	
	Electronic Devices	COn:Characteristics of PN Junction Diode and Zener diode.	2	2	3	3	2	1	-	-	-	-	-	1	2	1	
	and Circuits Lab	CO2:Design and Testing of BJT and MOSFET amplifiers.	2	2	3	3	2	1	-	-	-	-		1	2	1	
21152L38		CO3:Operation of power amplifiers.	2	-	2		1	1			-	-	-	1	2	1	
		CO4: Design and analyze feedback amplifiers and oscillator principles.	-	-	04	-	3	1		-				1	2	1	
		COS: Design and analyze power amplifiers and supply circuits	-	+	-	-	2	1	4	-	-	-	-	1	2	1	
	D.C. 1	AVG	2	2	2.6	3	2	1	-			-		1	2	1	
	Professional Development	CO1:Use MS Word to create quality documents, by structuring and organizing content for their day to day technical and academic requirements	1	4	-	-	-	-	-	-	-	-		-	-	-	
011501.20		CO2:Use MS EXCEL to perform data operations and analytics, record, retrieve	-		1.5	-	-		-	-	-	-	-	-	-	-	T
21152L39		data as per requirements and visualize data for ease of understanding															
		CO3:Use MS PowerPoint to create high quality academic presentations by			1.	-	-	-	-	-	120	-	-	-	-	-	+
		including common tables, charts, graphs, interlinking other elements, and using media objects															
	Electromagnetic	CO1: Relate the fundamentals of vector, coordinate system to electromagnetic	2	1	1	1	-	- 2	1	-	1.	1	-	2	-	-	+
		CO2: Analyze the characteristics of Electrostatic field	0	0	2	2	2	2	2			4	4	0			+
		CO3: Interpret the concepts of Electric field in material snace and solve the	2	2	3	2	2	2	4		-	4	4	2	-	-	+
21152C41		boundary conditions	2	-	3	4	2	2						4			1
		CO4: Explain the concepts and characteristics of Magneto Static field in material	2	2	3	2	2	2	1	-		1	1	2	-	-	+
		CO5: Determine the significance of time verying fields			0	0	0	0	4					-		-	+
		AVG	2	2	2	2	2	2	1	-		4		2			+
	Linear Integrated	CO1 : Design linear and nonlinear applications of OP - AMPS	2	2	4	4	4	4	-		-	1	1	2	-	-	-
	Circuits	CO2 : Design applications using applications of OP = Attros	4	2	2	2	-				-		1	-	2	1	+
0		CO3 : Design ADC and DAC using OP - AMPS	4	3	0	2	-		-	-	-	-	-	-	2		+
> 21152C42		CO4 : Generate waveforms using OP - AMP Circuits	1	-		2	-		-	-		-		-	2	1	+
	-	ICOS Analyze special function ICs	4	0	2	2	-		-			-	-	2	2		+
Mand Of:	he Denartin	AVG	1.4	25	3	22	-	-	-		-	-		3	2	11	+
CHEMPSOLI & P.L.	Communication	CO1-Gan knowledge in amplitude modulation techniques	1.9	2.0	3	2.2	-	- 1	-	-	*		1	3	2	1	+
ausriment	Systems	ICO2: Understand the concepts of Random Process to the design of	3	3	3	3	2	1	1			-	1	1	1	11	+
	ation Engine	communication systems		9	0	2	4								6	u	X
-	Carrier and Carrier	CO3: Gain knowledge in digital techniques	3	3	3	3	3	1	1				1	1			f
C 21152C43		and the second se	3	3	3	3	2	4	4			-	1	1			+
21152C43	malavam	CO4: Gain knowledge in sampling and guantization	1000		0		0	<u></u>									4
21152C43	inajayam il	CO4: Gain knowledge in sampling and quantization	3	3	3	2	2 .	1 1 1	1	1	1		4 4 5	1 1			
C 21152C43	echnology (COS: Qain-knowledge in sampling and quantization COS: Understand the importance of demodulation techniques	3	3	3	3	2 2 5	1	1	-			1	1	-	-	+
21152C43	ahajayam u achnology (amagaalaa	CQ3_Cain_knowledge in sampling and quantization CO5:Understand the importance of demodulation techniques AVG	3 3 3	3	3	3	2.5	1	1	-	-	-	1	1	Dib	NT.	+

1		1		-											-			
	21152C44		CO3: Characterize the affects of finite presiding representation on divided file	3	3	2	2	2	2	-	•	-	-	1	1	1	2	
	21152044		CO3. Characterize the effects of finite precision representation on digital filters			-		-	-									-
			CO5: Apply adaptive filters appropriately is semanus entires matures	3	3	2	2	3	1	-	-	-	-	1	1	2	2	
			Avc	3	2	2	2	3	2	1		-	-	1	1	2	2	
-		#Matawarka and	CO1 Evelop the Network Madde Leven and A	3	3	2	2	2	2		-	-	-	1	1	2	2	
/ - Sem		Security*	CO1. Explain the Network Models, layers and functions.	3	3	3	3	2	2	-	-			1	1	3	3	_
		occurry	CO2. Categorize and classify the routing protocols.	3	3	3	3	2	2	() - (-		-	1	1	2	2	
	21152C45		CO3: List the functions of the transport and application layer.	3	3	2	2	2	2	(m)		-	-	1	1	1	2	
			CO4: Evaluate and choose the network security mechanisms.	3	3	2	2	3	- 1	-	-	-	-	1	1	2	2	
			CO5: Discuss the hardware security attacks and countermeasures.	3	2	2	2	3	2		-	-	-	1	1	2	2	
-			AVG	3	3	2	2	2	2	-	-	-	-	1	1	2	2	
		Environmental	CO1:To recognize and understand the functions of environment, ecosystems and	2	1	-		-	2	3					2	-	-	-
		Sciences and	biodiversity and their conservation.															
		Sustainability	CO2:To identify the causes, effects of environmental pollution and natural	3	2	-	1		3	3		-	-		- 2	-	-	-
			disasters and contribute to the preventive measures in the society.													8.00		
			CO3:To identify and apply the understanding of renewable and non-renewable	3	5	1			2	2	-		-		- 2	-	-	-
	21149846		resources and contribute to the sustainable measures to preserve them for future															
			generations.									-						
			CO4: To recognize the different goals of sustainable development and apply them	3	2	1	1		2	2	0.20	-		-	- 2	-		-
			for suitable technological advancement and societal development.															
			CO5:To demonstrate the knowledge of sustainability practices and identify green	3	2	1			2	2	-		1		1	-		-
			materials, energy cycles and the role of sustainable urbanization.				1					1			1 2 1			
			AVG	2.8	1.8	1	1	-	2.2	2.4		-	-		18		-	-
		Linear Integrated	CO1 : Design linear and nonlinear applications of OP - AMPS	2		-	-	-		-	-			1	1.0	2	1	+
		Circuits Laboratory	CO2 : Design applications using analog multiplier and PLL	2	3	3	2							-		2	4	-
	011/07/47		CO3 : Design ADC and DAC using OP - AMPS	1	-		2	-		-			-		-	2		
	21152L47		CO4 : Generate waveforms using OP - AMP Circuits	4			2		-	-	-	-	-	-	-	2		
			CO5 ' Analyze special function ICs	4		2			-			-	-		-	2		-
			AVG	11			3		-	-	-		-	-	3	2	1	-
		Communication	CO1: Gain knowledge in amplitude modulation techniques	1,49	2.0	3	2.2		-	-	-		-	1	3	2	1	-
		Systems Laboratory	CO2: Understand the concents of Pandom Process to the deales of	0	9	3	3	3	3	-		×.	1	1	1	-	-	_
			communication systems	3	3	3	3	3	2	-	-	÷.	1	1	1	-	-	
	211521.48		CO3: Gain knowledge in digital techniques	-	-	-				'								_
	21122670		CO4: Gain knowledge in digital techniques	3	3	3	3	3	2	-	-		1	1	1		-	
			CO4. Gain knowledge in sampling and quantization	3	3	3	3	3	3	-	5 A 2		1	1	1		1.4	
			COS: Understand the importance of demodulation techniques	3	3	3	3	3	2	-	-	-	1	1	1	-		1
		e112 1	AVG	3	3	3	3	3	2.5		2	-	1	1	1	-	-	
		Communication 8	COT: Understand The Concept And Design Of A Cellular System.	3	2	2	3	3	1	- 1		+	-	-	1	3	1	
		communication	CO2: Understand Mobile Radio Propagation And Various Digital Modulation	3	3	2	1	3	2	-	-	-	-	10	-	3	1	T
			reciniques.						-		· · · · · ·							
			CO3: Understand The Concepts Of Multiple Access Techniques And Wireless	3	3	3	3	2	2	- 1		-			1	3	1	
	21152C51		Networks .				ho	A			[]							
				2	3	2	2	2	2	- 1	-	-	1.00	-	1	2	1	
			CO4: Characterize a wireless channel and evolve the system design specifications															
				2	-	3	3	2	1	-		24	1.22	-	1	2	2	
			CO5:Design a cellular system based on resource availability and traffic demands.	4						()	1 /					197215	1.1	
			AVG	3	3	2	2	2	2	- 1		1	-		1	3	1	-
		VLSI and Chip	CO1: In depth knowledge of MOS technology	1	1	-	-	-	-	-	- 1	-	-			3	3	-
		Design	CO2: Understand Combinational Logic Circuits and Design Principles .	3	2	3	2	-	-	- 1	-	-	-	-	1	3	3	-
	21152052		CO3: Understand Sequential Logic Circuits and Clocking Strategies	2	3	2	3	1	1	- 1	- 1			-	2	3	2	-
			CO4: Understand Memory architecture and building blocks	-	-	1	1	-	1	- 1				-	3	3	3	+
1000			CO5: Understand the ASIC Design Process and Testing.	-	12		-	-	2			-		4		3	2	-
sem			AVG	2	2	2	2	1	1.5					-			6	+
		Transmission Lines	CO1: Explain the characteristics of transmission lines and its losses	- 9	2	2	2	2	1.0			-	-	-	2	3	3	-
		and RF Systems	CO2 Calculate the standing wave ratio and input impedance in biob fraquency	0	0	0	2	2		-	-	-				2	1	
			transmission lines	0	: te :	6	2	2		-		1000	1	-	1	2	1	
	21152C53		CO3: Analyze impedance matching by stubs using Smith Charts	2	2	1 2		1										
			CO4: Comprehend the characteristics of TE and TM waves	0	0		2	1	2	-			1		1	2	1	-
			CO5: Design a RE transceives evidem ferminaless another	31	0	2	3	2		-			1	-	1	2	1	-
10	28. 500	L. Thomas	avo	31	2	3	2	2	1	-			1	-	1	2	1	
NP	CI CORCE VILLE	VI SI Laboratorio		3	3	3	3	2	1	-	-	(a)	1		1	2	1	1
1	anomant	va. at Laboratory	COT, write FIDL code for Dasic as well as advanced digital integrated circuit	2	+	-	-	-		-	-	-		-	-	2	B	
6	a balance and	UT LIGUNU	CO2: Import the logic modules into FPGA Boards	3	3	1	1	-	-	-	-	-			-	2	11	
	Cattornation	ation Engl	COS synthesize Place and Route the digital lps	1	2	2	2	-		-	-	-		1	1	2	2	
14	21152L58		CO4: Design, Simulate and Extract the layouts of Digital & Analog IC Blocks using	-	1	3	3	1	-	-	-			1	1	2	1/2/	1.
Pon	naivan Ra	Insis/all	EDA tools 11 O I									_				T /	mu	44
	1.000 1 1	annalage	CO5: Test and Verification of IC design	3	3	3	3	1	-	-	-		-	C.L.	1	2	2	-
	The second se	COLUMN STORY	AVG 1191/	22	2.2	22	22	1	-					00100	1	2	2	1-
				fai fa	link.	darde i												

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		and IOT Design*	CO2: Develop a model of an embedded system	1 2	1 2	1 2	0	0	-	1		1	-			1	1	_
			CO3: List the concents of real time operating systems		0		2	2			-	-		-	-	3	2	
	21152861		CO4: Learn the architecture and protocols of IoT	3	3	2	2	2		-	-			-	-	2	1	
			CO5: Design an IoT based suctors for any operiodication	3	3	2	2	2	-	-			-	0 I	1. 1.71	3	3	
			Ave	3	3	3	3	3	-	-	-	-	-	-	-	3	3	
VI - sem		10.4 million 1	AVG	3	3	2.6	2.2	2.2		-	-	-		-		2.8	2.2	T
		"Afuncial	CO1: Use appropriate search algorithms for problem solving	3	2	2	3	1	3	2	-	-	-	-	1	3	3	-
		Intelligence and	CO2: Apply reasoning under uncertainty	3	2	2	3	1	3	2	-			-	1	3	3	+
	21152862	Machine Learning*	CO3: Build supervised learning models	1	2	1	3	2	3	2		-	-	-				-
	21152602		CO4: Build ensembling and unsupervised models	4	2	2	4			4		-	-	-		3	3	-
			CO5: Build deep learning neural network models	0	2	3	1	3	3	2	-	-	-	-	1	3	3	
			AVC	2	2	2	7	3	3	2		-		-	1	3	3	
		Linner W.A.		2	2	2	2	2	3	2	-	-	-	-	1	3	3	T
		riuman values and	CO1 : Identity the importance of democratic, secular and scientific values in	3	3 2	2	3	2	1	-		-	1	-	1	2	1	-
		Ethics	harmonious functioning of social life									-				-	1	
			CO2 : Practice democratic and scientific values in both their personal and	3	3	3	2	1	2			-	4		-	-		-
	011 671		professional life.			ý.	~		-			-	1	-		2	1	
	211_5/1		CO3 : Find rational solutions to social nonliems	-			-	-									-	
			CO4 Behave in an ethical manner in society		0 0	2	3	2	1	-	-	-	1		1	2	1	
			COS Dentive in an ethical manner in society	3	2	3	2	2	1	-			1	н.	1	2	1	T
			COS Practice critical thinking and the pursuit of truth.	3	3	3	3	2	. 1	-		-	1		1	2	1	
			AVG	2	-	-	-		-	- 1		-		-		2	2	+
/II - sem		Summer Internship	CO1:System-level design processes, verification and validation techniques.	1	1	-			-									-
			manufacturing and production processes in the firm or research facilities in the								1997			100		0	3	
1			laboratory/research institute															
			CO2: Analysis of industrial / research problems and their solutions	-	-	-	-	-					-		-	-	-	
	21152INT76		CO3: Documentation of sustam specifications, desire web-	3	2	3	2	-	-	+)	-	-	-	-	1	3	3	
	211221111/0		parameters techine commences and and the second and	2	3	2	3	1	1		-	-	-	(+)	2	3	2	T
			parameters, testing parameters and results														Ner I	
				-		1	1			-					3	3	3	+
			CO4: Preparing of technical report and presentation	-	-		-		2					1	-	2		+
			AVG	2	2	2	0	4	4.6		-	-	-		+ -	3	2	+
		Project Work	CO1: Formulate and analyze problem / create a new product/ process	6	4	6	4	1	1.5	-	-	-		1	2	3	3	
		Sector Sector	CO2: Design and conduct experiments to find an here product process.	3	2	2	3	1	3	2	14	-		-	1	3	3	
/111. 50	21160001		coo to de la conduct experiments to find solution	3	2	2	3	1	3	2	-	-	-		1	3	3	T
vine se,	21152P81		CO3: Analyze the results and provide solution for the identified problem, prepare	.1	2	1	3	2	3	2	-		-		1	3	3	+
			project report and make presentation.												107		-	
			AVG	2	1	1	1											+
		Optical	CO1:Realize Basic Elements In Ontical Elbers, Different Modes And	0	-	-	-	-		-	-	-	-	-	1.1	2	3	
		Communication	Configurations	9	3	2	3	3	1	100	-	-	-	2.41	1	2	1	1
		Networks	CO2 Applyze The Transmission Characteristics Associated with the	-								-						
			Deladestics Technic Transmission Characteristics Associated With Dispersion And	3	3	2	1	3	2	-	-	-	-		2	2	2	T
			Polarization Techniques.			and a								1.20			-	1
	21152E54A		CO3:Design Optical Sources And Detectors With Their Use In Optical	3	3	3	3	2	1		-	-			1	0	2	+
			Communication System.													-	2	
				3	3	2	2	2	4			-			-	-		+
			CO4:Construct Fiber Optic Receiver Systems, Measurements And Techniques	1	92	£.	4	2	1	1.00		-	100	10 C.	1	2	1	
			CO5 Design Ontical Communication Systems And Its Metworks	-		-						1						
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-		40.150		3	3	2	3	3	1	-	-		123	-	1	2	1	1
		40750	COT: To understand the evolution of wireless networks,	3	3	2	3	2		-	-	-		-	-	1 1	1 7	1
		Communication	CO2:To learn the concepts of 5G networks.	3	3	3	2	2	-	-		2 0	-			-	1	1
	21152E54B	INCLWORKS	CO3:To comprehend the 5G architecture and protocols.	3	3	2	2	2	-			-			1	-	1	-
	#TTO#LOHD		CO4:To understand the dynamic spectrum management.	6	0		2	2		-		-	-	-	+	+	4 7	4
			COS: To learn the security aspects in 56 networks	0	3	3	3	2		-		*	-	-	•	2	5 7	2
			AV/C	3	2	3	3	2	1	-		-	-	-	-	1 2	2 2	2
F		Software Date 1		3	2.8	2.6	2.6	2	-	-	-		-	-	-	1.8	3 1.6	8
		and the second se	COL Describe the motivation behind SDN and its data plane (K2)	3	3	3	3	3	2	-		-	-	-	1	3	1	3
		Software Defined	and a series of the series of		9	1								1	1	1	1	~
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	211520554	Networks	CO2: Identify the functions of control plane (K3) CO3: Apply SDN to networking applications (K3)	3	3	3	2	2	2	-		-	-	-			-	2
	21152E55A	Networks	CO2: Identify the functions of control plane (K3) CO3: Apply SDN to networking applications (K3) CO4: Apply various operations of network function virtualization	3	3	3	2	2	2			-	-	-	3	3 2	2 3	2
	21152E55A	Networks	CO2: Identify the functions of control plane (K3) CO3: Apply SDN to networking applications (K3) CO4: Apply various operations of network function virtualization CO5: Evaluating various use cases of SDN	3 3 2	3	3	2 3 2	2 1 2	2 2 1	-	-	-	-	-	3	3 2		2 3
	21152E55A	Networks	CO2: Identify the functions of control plane (K3) CO3: Apply SDN to networking applications (K3) CO4: Apply various operations of network function virtualization CO5: Explain various use cases of SDN	3 3 2 3	3 3 3 3 3	3 3 3 2	2 3 2 2	2 1 2 2	2 2 1 1			- - -	-	-	2	3 4	2 1	2 3 1 2
	21152E55A	Networks	CO2: Identify the functions of control plane (K3) CO3: Apply SDN to networking applications (K3) CO4: Apply various operations of network function virtualization CO5: Explain various use cases of SDN AVG	3 3 2 3 3	3 3 3 3 3	3 3 2 3	2 3 2 2 2	2 1 2 2 2	2 2 1 1 2	-		- - - -	-	- - -	2	2 2 2	2 1	2 3 1 2 2
	21152E55A	Massive MIMO	CO2: Identify the functions of control plane (K3) CO3: Apply SDN to networking applications (K3) CO4: Apply various operations of network function virtualization CO5: Explain various use cases of SDN AVG CO1: Understand and explain massive MIMO networks.	3 3 2 3 3 3	3 3 3 3 3 3 2	3 3 3 2 3 1	2 3 2 2 2 2 1	2 1 2 2 2 2	2 2 1 1 2 2	- i - i - i - i - i		- - - -	- - -	-	22	2 2 2	2 1	2 1 2 2
	21152E55A	Massive MIMO Networks	CO2: Identify the functions of control plane (K3) CO3: Apply SDN to networking applications (K3) CO4: Apply various operations of network function virtualization CO5: Explain various use cases of SDN AVG CO1: Understand and explain massive MIMO networks.	3 2 3 3 3 3	3 3 3 3 3 2 3	3 3 3 2 3 1 2	2 3 2 2 2 1 2	2 1 2 2 2 2 2	2 2 1 1 2 2 2 2	- · · · ·		- - - - -	-	-	22	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2 2 2 2 1 2 2 1 2 2	2 3 1 2 2 2
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Valiam, Thaniavar- 810

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Lines Col: Quality Maximum Col: Quality Col: Alabity or operation: Col: Col: Alabity or operation: Col: Col: Col: Col: Col: Col: Col: Col:	2 2		3							3	1						CO2: Ability to apply TQM principles in a selected enterprise.		
111605728 Measures and applyOP, TPAL COL and DPR. 2 3 2 3 2 0 0 3 3 2 0 0 0 3 3 2 0	2								-	-					-	-	CO3: Ability to understand Taguchi's Quality Loss Function, Performance		
211005728 CO-L Ably is any opanization. - -	3 2	3	3				2	3		2	3						Measures and applyQFD, TPM, COQ and BPR.		
Image: biology of the second biology of the various append of Hills 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 2 1 1 1 1							2	3		3			3		-		CO4: Ability to apply QMS and EMS in any organization.	21160S72B	
Lither Coll : Biddents would have gained knowledge on the various as a human resources 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 <td>25 2</td> <td>2</td> <td>3</td> <td></td> <td></td> <td>3</td> <td>2</td> <td>3</td> <td>2.6</td> <td>2</td> <td>3</td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td>AVG</td> <td></td> <td></td>	25 2	2	3			3	2	3	2.6	2	3		3				AVG		
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Part Part Part Part Part Part Part Part	1 1	1	1	1	1	2	1	1		2	2	2	1				CO1: Students would have gained knowledge on the various aspects of HRM		
Part Intern Rev Production Pr									-						-		CO2: Students will gain knowledge needed for success as a human resources		
Imam Base Masses Col. Students wild exels the akike needes the akike needes the akike needes to implement the concepts learned in the oncepts of the sense of the energing concepts learned in the oncepts of the energing concepts learned in the oncepts of the energing concepts is the field of HM. 3 3 3 2 2 2 2 2 2 1 <td>1 2</td> <td>1</td> <td>1</td> <td>2</td> <td>1</td> <td>3</td> <td>2</td> <td>2</td> <td></td> <td>2</td> <td>2</td> <td>3</td> <td>2</td> <td></td> <td></td> <td></td> <td>professional.</td> <td></td> <td></td>	1 2	1	1	2	1	3	2	2		2	2	3	2				professional.		
Magement 2116/STAC Magement Magement (Col: Students would be prepared to implement the concepts formation of the workplace. Solution (Col: Students would be aware of the emerging concepts in the field of HRM Solution (Col: Students would be aware of the emerging concepts in the field of HRM Solution (Col: Students would be aware of the emerging concepts of Disaster, Vulnambility and Disaster Plank Solution (Col: Students would be aware of the emerging concepts of Disaster, Vulnambility and Disaster Plank Solution (Col: Students would be aware of the emerging concepts of Disaster, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment represention and its inclusion (Col: To embrane understanding on Hazards, Vulnambility and Disaster Plank Assessment repr	1 2	1	9	2	1	3	2	2		3	3	3	3				CO3: Students will develop the skills needed for a successful HR manager.		
2116872C workplace CCS: Stademits would be aware of the anerging concepts in the field of HBM 3 3 1 2 2 2 2 2 2 2 2 1 1 1 1 AVG AVG AVG AVG AVG AVG AVG AVG AVG AVG			-	-			-	-			0	2	-				CO4: Students would be prepared to implement the concepts learned in the		
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Visit of the prediction decomposed bill based of Disaster, Vubnerability and Disaster Risk. 3 3 2 3 - 2 2 1.8 1.8 2.4 1 1.4 1 1 Diater Masgingtone States Understanding on Hazards, Vubnerability and Disaster Risk. 3 3 2 3 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 2 2 2 <td< td=""><td>1 1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>2</td><td>2</td><td>2</td><td></td><td>2</td><td>2</td><td>2</td><td>1</td><td>_</td><td></td><td></td><td>CO5: Students would be aware of the emerging concepts in the field of HRM</td><td></td><td></td></td<>	1 1	1	1	1	1	2	2	2		2	2	2	1	_			CO5: Students would be aware of the emerging concepts in the field of HRM		
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CO2: To enhance understanding on Hazards, Waherability and Disaster Risk 3	2 -	2	-	2	-	-	2	2		170	-	3	2		1		CO1: To impart knowledge on the concepts of Disaster, Vulnerability and Disaster Risk reduction (DRR)		
Liketive 21147MC51B Cost: To develop disaster response skills by adopting relevant tools and cover and construct and cover and construct ande	2 -	. 2		2	143	2	1	2		-	-	3	3				CO2: To enhance understanding on Hazards, Vulnerability and Disaster Risk Assessment prevention and risk reduction		
Bit end we have the set of the s	2 -	2	2	4		-	2	2			-	3	3				CO3: To develop disaster response skills by adopting relevant tools and tent technology		
Number Cost <	2 -	. 2	-	2	-	-	1	2		-	-	3	2				CO4: Enhance awareness of institutional processes for Disaster response in the country and	21147MC51B	ective
arg arg <td>3 -</td> <td>. 3</td> <td>-</td> <td>2</td> <td>-</td> <td>12</td> <td>2</td> <td>2</td> <td></td> <td></td> <td>2</td> <td>3</td> <td>2</td> <td></td> <td></td> <td></td> <td>CO5: Develop rudimentary ability to respond to their surroundings with potential</td> <td></td> <td>ourse</td>	3 -	. 3	-	2	-	12	2	2			2	3	2				CO5: Develop rudimentary ability to respond to their surroundings with potential		ourse
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Line CO4:Understand the importance of diet and workouts in maintaining health 3 3 2 3 - - 2 2 2	2 -	2		2		-	1	2		-	-	3	2		1 3		CO3:Learn new techniques to prevent lifestyle health disorders		
21147MCGIE Coll-Understand the basic concept of safety. 3 3 3 3 - - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 2 - 2	3	3		2		-	2	2		-	-	3	2				CO4:Understand the importance of diet and workouts in maintaining health		
21147MC61E Safety in Engineering industry CO2: Obtain knowledge of Statutory Regulations and standards. 3 3 3 3 - - 2 1 - 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - - 2 2 - - 2 2 - - 2 2 - - 2 2 - - 2 2 - - 2 2 - - 2 2 - - 2 2 - - 2 2 - - 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 2 3 3 3 2 3 3 3 2 3 3 3 2 3 3 3 3	2 .	2	-	2		-	2	2		-	-	3	3		1 3		CO1: Understand the basic concept of safety.		
21147MC61E Safety in Engineering industry CO3:Know about the safety Activities of the Working Place. 3 3 3 3 - - 2 2 - - 2 2 - 2 2 - - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2 2 - 2	2 -	2	-	2	-	-	1	2		-	- 2	3	3		3		CO2:Obtain knowledge of Statutory Regulations and standards.		
21147MC61E Engineering industry CO4:Analyze on the impact of Occupational Exposures and their Remedias 3 3 2 3 - - 2 1 - 2 2 C05:Obtain knowledge of Risk Assessment Techniques 3 3 2 3 - - 2 2 - 2 2 2 2	2 -	2				-	2	2		-	-	3	3		1 3		CO3:Know about the safety Activities of the Working Place.		
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Construction Construction<	2	2	. 16	2			2	2	-		-	3	3	-	1 3		avg		
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Satellite Communication CO3:Evaluate the satellite link power budget 3 3 2 1 3 - - - - - 1 3 21152E64B Cod:Identify access technology for satellite Communication God:Identify access technology for satellite applications 3 3 3 2 3 2 3 - - - - 1 3 Ava ava ava ava 3 2 3 2 2 1 - - - 1 3 Cod: To understand the principles of electromagnetic radiation. 3 2 2 3 1 1 - 1 3 Cod: To understand the principles of electromagnetic radiation. 3 2 2 3 1 3 2 - - - 1 3 Protection Item and spheric radiation. 3 2 2 3 1 3 2 - - - 1 3 Cod: To understand the principles of resolution.<	3 2	3	4				-	-		3	2	3	2	-	1		CO2:Analyze the satellite subsystems		
Communication Code identify access technology for satellite Code identify access technology for sat	2 2	3	4		-	-	-	-		3	1	2	3	-	1		CO3:Evaluate the satellite link power budget		
21152E64B CO5: Design various satellite applications 3 2 3 2 2 1 - - - - 1 3 Aug 300 3 3 3 3 3 3 3 2 1 - - - - - 1 3 Aug 300 3 3 3 3 3 3 3 2 2 1 - - - - - - 1 3 Aug 3 3 3 3 3 3 3 3 3 3 2 2 3 1 1 - 1 3 CO1: To understand the principles of electromagnetic radiation. 3 2 2 3 1 3 2 - - 1 3 CO3: To study the laws of planetary motion. 1 2 3 1 3 2 - - - 1 3 CO3: To study the laws of planetary motion. 1 2 3 1	3	3	1			-	-	-	-	3	2	3	2	-	-		CO4:Identify access technology for satellite		
And And Construction	3	3	1		-	-	-	-	-	- 0	2	2	3	-	-	-	CO5:Design various satellite applications	21152E64B	
Department CO1: To understand the principles of electromagnetic radiation. 3 2 2 3 1 3 2 - 1 3 3 P 21152E66 A Remote Sensing CO3: To understand the principles of electromagnetic radiation. 3 2 2 3 1 3 2 - - 1 3 P 21152E66 A Remote Sensing CO3: To study the laws of planetary motion. 1 2 1 3 2 2 3 1 3 2 - - - 1 3 CO3: To study the laws of planetary motion. 1 2 1 3 2 2 3 1 3 2 - - - 1 3 CO4: To classify the different types of resolution. 1 2 3 1 3 3 2 - - 1 3 GO3: To know the concepts of digital interpretation. 2 2 2 2 2 3 3 3 2 <td>3</td> <td>3</td> <td></td> <td>-</td> <td>1</td> <td>-</td> <td>4</td> <td>1</td> <td>-</td> <td>2</td> <td>2</td> <td>3</td> <td>3</td> <td>-</td> <td>1</td> <td>-</td> <td>avg</td> <td>A Ha</td> <td>1</td>	3	3		-	1	-	4	1	-	2	2	3	3	-	1	-	avg	A Ha	1
CO2: To learn the atmospheric radiation interactions. 3 2 2 3 1 3 2 - - 1 3 P 21152E66A CO3: To study the laws of planetary motion. 1 2 1 3 2 - - - 1 3 P 21152E66A CO3: To study the laws of planetary motion. 1 2 1 3 2 - - - 1 3 O 21152E66A CO3: To study the laws of planetary motion. 1 2 1 3 2 - - - 1 3 Memote Sensing CO4: To classify the different types of resolution. 1 2 3 1 3 3 2 - - - 1 3 May 2 2 2 2 2 2 2 3 3 3 2 - - 1 3 May 2 2 2 2 2 2 2	3	3	1			-	1	-	-	2	4	2	2	-	-		CO1. To understand the principles of electromagnetic radiation	>	1
Provide Sensor CO3: To study the laws of planetary motion. 2 2 3 1 3 2 - - 1 3 Provide Sensor CO3: To study the laws of planetary motion. 1 2 1 3 2 - - 1 3 CO3: To study the laws of planetary motion. 1 2 3 1 3 2 - - 1 3 CO4: To classify the different types of resolution. 1 2 3 1 3 2 - - - 1 3 CO5: To know the concepts of digital interpretation. 2 2 2 - - - 1 3 avg CO1: Describe the motivation behind SDN and its data plane (K2) 3 3 3 3 3 2 - - - 1 3 Software Defined CO1: Describe the motivation behind SDN and its data plane (K2) 3 3 3 3 2 - - - 1 3 <td>3 3</td> <td>3</td> <td>1</td> <td>-</td> <td>-</td> <td></td> <td>-</td> <td>4</td> <td></td> <td>3</td> <td>1</td> <td>2</td> <td>2</td> <td>-</td> <td>-</td> <td></td> <td>CO2: To:learn the atmospheric radiation interactions</td> <td>Depart</td> <td>M</td>	3 3	3	1	-	-		-	4		3	1	2	2	-	-		CO2: To:learn the atmospheric radiation interactions	Depart	M
Product Sensing Description 1 2 1 3 2 - - 1 3 Product Sensing CO4: To classify the different types of resolution. 1 2 2 1 3 3 2 - - - 1 3 CO4: To classify the different types of resolution. 2 2 2 - - - 1 3 Gost to know the concepts of digital interpretation. 2 2 2 2 3 3 2 - - - 1 3 avg 2 2 2 2 2 3 3 2 - - - 1 3 Software Definid CO2: Describe the motivation behind SDN and its data plane (K2) 3 3 3 3 2 2 - - - 1 3 Gostware Definid CO2: Identify the functions of control plane (K3) 3 3 3 3 2 2 - -	3 3	3	1		*		•	2	-	3	2	2	4	-	-	-	CO3: To study the laws of planetary motion	·	1
Provide registration 1 2 3 1 3 3 2 - - - 1 3 C05: To know the concepts of digital interpretation. 2 2 2 - 3 3 2 - - - 1 3 avg 2 2 2 2 2 3 3 2 - - 1 3 Softwire Defined CO1: Describe the motivation behind SDN and its data plane (K2) 3 3 3 3 3 2 - - - 1 3 Radio, C02: Identify the functions of control plane (K3) 3 3 3 3 2 2 - - - 1 3 C02: Identify the functions of control plane (K3) 3 3 3 2 2 - - - 1 3	3 3	3	1			-	-	2		3	2	3	1		-	-	COA' To classify the different types of resolution	LOFFIL	1
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Operation COL: Describe the motivation bening SUN and its data plane (K2) 3 3 3 3 2 -	3 3	3	N	-	•	-	-	2	-	3	2	2	2	-	-	2	CO1 Describe the pathetics babied OD1	Singer	H
3 3 3 2 2 2	3 3-	3	AV	-25-44	Intinal	-	-	-		2	3	3	3	-			COT Describe the motivation benind SDN and its data plane (K2)	a nets sta	
	3 2	1 3	43 /	-	unite Al	-		-		2	2	2	3		1	13	UU21/pedury,the tunctions of control plane (K3)	annue.	1

Variante and the second

		CO3: Apply SDN to networking applications (K3)	1 0	1			-									
21152E64A		CO4: Apply various operations of patwork functions with olications	3	3	3	3	1	2	-	-		-		3	2	3
		CO5: Explain various use cases of SDN	2	3	3	2	2	1	-		-		-	2	2	1
		ava	3	3	2	2	2	1		-	-	-	-	2	2	2
	Wearable Devices	CO1: Describe the concents of warmhile surters	3	3	3	2	2	2	-	-	-			2	2	2
	in culuble include	CO2: Explain the energy bas extractions is used by the	3	2	1	1	2	-	-	1	-	-	-	-	1	
		CO2. Lise the second of DAAL is the Warable device.	3	2	1	1	2	-	-	1		-	-	-	1	-
21152E65B		CO3. Use the concepts of BAN in health care.	3	2	1	1	2 -		-	1	-	-		-	1	-
		CO5. Comment the concept of smart textile	3	2	1	1	2		-	1	-	-	-	-	1	
		cos. compare the various wearable devices in healthcare system	3	2	1	1	2	-	-	1	-	1.47	-	-	1	
	Unimum Assist	avg	3	2	1	1	2			1	-	(w)	-	-	1	
	Devices	COn Explain the principles and construction of artificial heart	3	3	3	3	3	2	-	-	-	-		3	3	1
		technology	3	3	3	2	2	3	-	-	•	-	-	2	2	2
21152E66B		CO3:Explain the functioning of the membrane or filter that cleanses the blood.	3	3	3	3	3	2	-	-	-	-	-	3	3	3
		CO4:Describe the tests to assess the hearing loss and development of wearable devices for the same.	3	3	1	1	3	2	-	-	-		2	2	3	1
		CO5:Analyze and research on electrical stimulation and biofeedback techniques in rehabilitation and physiotherapy	3	3	3	3	3	3	-	-	-	-	-	2	3	3
		avg	3	3	2.6	2.4	2.8	24						24	0.0	-
	MEMS Design	CO1: Understand the basics of MEMS design aspects.	3	3	2	2	2	2				-		2.4	2.8	2
		CO2: Apply the knowledge in the development of electro static sensors and actuators.	3	3	3	2	2	2	-	-		-	-	2	3	2
21152E66C		CO3: Apply the knowledge in the development of thermal sensors and actuators.	3	3	3	2	2	2	-	-			-	2	3	2
		CO4: Apply the knowledge in the development of piezoelectric sensors and actuators.	3	3	3	2	2	2	-	-	-		-	2	3	2
		CO5: Apply the knowledge in the development of magnetic sensors and actuators.	3	3	3	2	2	2	-	-	-	-	-	2	3	2
		avg	3	3	2.8	2	2	0								
	Fundamentals of Nanoelectronics	CO1: Understand the basics of nano electronics including quantum wires, dots and wells	3	3	2	2	2	1		-	-	-	-	1.8	3	2
		CO2: Use the mechanism behind quantum electronic devices	3	3	2	2	2	0	-							
21152E65C		CO3 : Analyze the key performance aspects of tunneling and superconducting nano electronic devices	3	3	3	2	2	2		-	-	-	-	2	3	1
		CO4: Apply the knowledge in the development of nanotubes and nanostructure devices	3	3	3	3	3	3	-	-	-	-	-	2	3	1
		avg	3	3	26	22	2.2	2								
	Avionics Systems	CO1:Explain the principles and construction of artificial heart	3	3	2.0	3	2.2	4	-	-	-	-	-	2	2.8	1
		CO2:Understand various mechanical techniques that improve therapeutic technology	3	3	3	2	2	3	-	-	•	-	-	3	3	1
21152E54C		CO3:Explain the functioning of the membrane or filter that cleanses the blood	3	3	3	3	3	2	-	-	-		-	3	3	3
211026040		CO4:Describe the tests to assess the hearing loss and development of wearable devices for the same.	3	3	1	1	3	2	-	-	-	-	-	2	3	1
		CO5:Analyze and research on electrical stimulation and biofeedback techniques in rehabilitation and physiotherapy	3	3	3	3	3	3		-	-	-	-	2	3	3
		avg	3		26	2.4	0.0									
				0 7	0.5	2.4	2.0	14						24	29	2

Weed Of the Department Department Of Electronics and Contraction Engineering Ponnalyar Remajayam Institute of Science & Technology (PRIST) (Institution Germed to be University 3 of the UGC Act. 1958) THANJAVUR - 613 403, TAMIL NADU.

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DEAN School of Engineering and Teck. Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Deemed to be University Vallam, Thanjavur-613,403.



2022 regulation- UG (PT)

Sem	Course Code	Title of the Course	COs						I	POS					
				PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
I	22148S11BP	Transforms and Partial Differential Equations	 Be capable of mathematically formulating certain practical problems in terms of partial differential equations, solve them and physically interpret the results. Have gained a well founded knowledge of Fourier series, their different possible forms and 	>	✓	✓	>	►						*	~
	22152H12P	Electromagnetic Theory	 analyze fields a potentials due to static changes evaluate static magnetic fields understand how materials affect electric and 	✓	*	~	✓	~	~					~	~



		magnetic fields • understand the relation between the fields under time varying situations • understand principles of prop										
22152H13P	Digital Electronics	 introduce number systems and codes introduce basic postulates of Boolean algebra and shows the correlation between Boolean expressions introduce the methods for simplifying Boolean expressions outline the formal procedures for the analysis and des 	~	~	~	✓	✓	✓			~	✓
22152H14P	Electronic Circuits - I	 The methods of biasing transistors Design of simple	~	~	~	~	~	~			~	~



		amplifier circuits • Mid – band analysis of amplifier circuits using small - signal equivalent circuits to determine gain input impedance and output impedance • Method of calculating cutoff fre										
22152H15P	Signals and Systems	 To study the properties and representation of discrete and continuous signals. To study the sampling process and analysis of discrete systems using z-transforms. To study the analysis and synthesis of discrete time 	~	~	~	~	*	•			*	✓



			systems.• To study the properties										
Π	22148S21P	Numerical Methods	 The roots of nonlinear (algebraic or transcendental) equations, solutions of large system of linear equations and eigenvalue problem of a matrix can be obtained numerically where analytical methods fail to give solution. When huge amounts of experimen 	*	*	*	✓	✓				*	*
	22152S22P	Electrical Engineering and Control Systems	 To understand the operation of Electrical machines and transformers To understand the open loop and closed loop 	~	~	✓	*	✓	~			~	~



		 (feedback) systems To understand time domain and frequency domain analysis of control systems required for stability analysis. To unde 										
22152H23P	Linear Integrated Circuits	 To introduce the basic building blocks of linear integrated circuits. To teach the linear and non-linear applications of operational amplifiers. To introduce the theory and applications of analog multipliers and PLL. To teach the theory of ADC and 	~	✓	✓	✓	✓	~			✓	~
22152H24P	Electronic Circuits - II	• The advantages and method of analysis of feed	1	✓	✓	~	✓	~			✓	1



		 back amplifiers Analysis and design of RC and LC oscillators, tuned amplifiers, wave shaping circuits, multivibrators, blocking oscillators and time based generators. The advantages and method of analysi 										
22152H25P	Transmission Lines and Waveguides	• To become familiar with propagation of signals through lines • Understand signal propagation at Radio frequencies• Understand radio propagation in guided systems• To become familiar with resonators • To become	*	*	>	*	*	~			*	~



			familiar with propagation of sig										
Ш	22148S31BP	Probability and Random Processes	 Have a fundamental knowledge of the basic probability concepts. Have a well – founded knowledge of standard distributions which can describe real life phenomena. Acquire skills in handling situations involving more than one random variable and funct 	*	✓	✓	*	✓				*	*
	22152H32P	Microprocessor Interfacing and Applications	 To introduce the architecture and programming of 8085 microprocessor. To introduce the interfacing of peripheral devices with 8085 	*	*	•	*	*	*			*	*



Dept: ECE- BTech (FT)

		 microprocessor. To introduce the architecture and programming of 8086 microprocessor. To introduce the applications, 										
22152H33P	Digital Signal Processing	 To study DFT and its computation To study the design techniques for digital filters To study the finite word length effects in signal processing To study the non-parametric methods of power spectrum estimations To study the fundamentals of digit 	~	✓	~	✓	✓	✓			•	*
22152H34P	Communication Theory	• To provide various Amplitude modulation and demodulation	✓	✓	✓	√	✓	✓			~	✓



Dept: ECE- BTech (FT) Mapping of COs and Pos

		 systems. To provide various Angle modulation and demodulation systems. To provide some depth analysis in noise performance of various receiver. To study some basic information theory with so 										
22152L35P	Digital Signal Processing and Microprocessor Lab	 Carryout basic signal processing operations Design and Implement the FIR and IIR Filters in DSP Processor for performing filtering operation over real-time signals Interface different I/Os with processor Generate waveforms using 	✓	1	~	✓	~	✓			✓	✓



			Microprocessors •										
IV	22152H41P	Digital Communication	 To study pulse modulation and discuss the process of sampling, quantization and coding that are fundamental to the digital transmission of analog signals. To learn baseband pulse transmission, which deals with the transmission of pulse-amplitude, modu 	✓	*	*	*	*	~			•	•
	22152H42P	Antenna and Wave Propagation	 To study radiation from a current element. To study antenna arrays To study aperture antennas To learn special antennas such as frequency 	✓	✓	*	✓	✓	~			✓	✓



Dept: ECE- BTech (FT)

		 independent and broad band antennas. To study radio wave propagation. To study radiation from a current e 										
22152H43P	Computer Networks	 To introduce the students the functions of different layers. To introduce IEEE standard employed in computer networking. To make students to get familiarized with different protocols and network components. To introduce the students the functions o 	*	*	*	*	*	*			•	*
221_E44_P	Elective-I											



22152E44AP	High Speed Networks	 Students will get an introduction about ATM and Frame relay. Students will be provided with an up-to-date survey of developments in High Speed Networks. Enable the students to know techniques involved to support real-time traffic and congestion cont 	~	V	~	✓	~	*			*	•
22152E44BP	Advanced Digital Signal Processing	 To study the parametric methods for power spectrum estimation. To study adaptive filtering techniques using LMS algorithm and to study the applications of adaptive filtering. To study 	~	V	v	~	v	✓			*	V



Dept: ECE- BTech (FT)

		multirate signalprocessingfundamentals.To study theanalysis									
22152E44CP	Speech Processing	 To introduce the models for speech production To develop time and frequency domain techniques for estimating speech parameters To introduce a predictive technique for speech compression To understand speech recognition, synthesis and speaker ident 	✓	•	~	✓	~	✓			✓
22152E44DP	Fuzzy Logic and Neural Networks	 To introduce the ideas of fuzzy sets, fuzzy logic and use of heuristics based on human experience To become 	~	~	~	~	~	~			√



		familiar with neural networks that can learn from available examples and generalize to form appropriate rules for inferencing systems • To prov											
22152E	44FP Digital Audio Engineering	 Analyze the type of dither. Analyze the recording and transmission principles in digital audio. Analyze the various compression techniques. Design and analyze the digital audio editing. Analyze the various application of digital audio. 	*	v	*	~	*	V	~	V	~	¥	*



	22152L45P	Networks and Communication Lab	• Communicate between two desktop computers• Implement the different protocols• Implement and compare the various routing algorithms• Use the simulation tool.• Simulate & validate the various functional modules of a communication system• Apply variou	*	*	*	*	*	*			*	*
V	22152H51P	Optical Communication and Networks	 To learn the basic elements of optical fiber transmission link, fiber modes configurations and structures. To understand the different kind of losses, signal distortion in 	V	~	*	•	~	✓			•	•



Dept: ECE- BTech (FT) Mapping of COs and Pos

		optical wave guides and other signal degradation factors. Design optimization o										
22152H52P	Microwave Engineering	 To study passive microwave components and their S-Parameters. To study Microwave semiconductor devices & applications. To study Microwave sources and amplifiers. To study passive microwave components and their S-Parameters. T 	1	✓	•	~	✓	✓			•	✓
22152H53P	VLSI Design	 To learn the basic CMOS circuits. To learn the CMOS process 	~	~	~	~	✓	~			~	~



	221_E54_P	Elective II	 technology. To learn techniques of chip design using programmable devices. To learn the concepts of designing VLSI subsystems. To learn the concepts of modeling a digital system using H 									
-	22149E54AP	Environmental Science and Engineering	 Public awareness of environmental is at infant stage. Ignorance and incomplete knowledge has lead to misconceptions Development and improvement in standard of living has lead to serious 	~	~	✓	•	•	✓		•	✓



		environmental disasters• Public awareness of environmental is a												
22152E54BP	Optoelectronic Devices	 To know the basics of solid state physics and understand the nature and characteristics of light. To understand different methods of luminescence, display devices and laser types and their applications. To learn the principle of optical detection me 	V	*	*	1	*	*					*	*
22152E54DP	Digital Image Processing	 To study the image fundamentals and mathematical transforms necessary for image processing. To study the image enhancement 	V	¥	V	¥	¥	¥	¥	¥	¥	¥		¥



	 techniques To study image restoration procedures. To study the image compression procedures. To study the image segmentati 										
22152E54EP Engineering Acoustics	 To provide mathematical basis for acoustics waves To introduce the concept of radiation reception absorption and attenuation of acoustic waves. To present the characteristic behaviour of sound in pipes, resonators and filters. To introduce the pro 	✓	✓	~	•	V	¥			*	•



22152E54FP	Software Engineering	 Identify the key activities in managing a software project. Compare different process models. Concepts of requirements engineering and Analysis Modeling. Apply systematic procedure for software design and deployment. Compare and contrast the 	*	*	*	*	*	*	*	•		*	•
22152L55P	Optical Communication and Microwave Lab	 Analyze the performance of simple optical link. Test microwave and optical components. Analyse the mode characteristics of fiber Analyse the 	*	✓	*	✓	V	~				*	✓



			radiation of pattern of antenna.• Analyze the performance of simple optical link. • Test microwave and op										
VI	22152H61P	Mobile and Wireless Communication	• It deals with the fundamental cellular radio concepts such as frequency reuse and handoff. This also demonstrates the principle of trunking efficiency and how trunking and interference issues between mobile and base stations combine to affect the overal	*	✓	*	*	*	✓			✓	✓
	22152H62P	Medical Electronics	 To study the methods of recording various biopotentials To study how to measure biochemical and 	✓	✓	✓	*	•				✓	✓



		various physiological information • To understand the working of units which will help to restore normal functioning • To understand the use of radiation f										
22152H63P	Micro Controller and Embedded systems	 To study 8051 architecture To write assembly language programming To study the embedded architecture and real time applications. To study 8051 architecture To write assembly language programming To study the embedded architecture and 	~	✓	~	✓	~	✓			•	✓



Dept: ECE- BTech (FT)

		real time												
221E64_P	Elective III													
22160E64AP	Principles Of Management	Upon completion of the course, students will be able to have clear understanding• Managerial functions like planning, organizing, staffing, leading & controlling and have same basic knowledge on international aspect of management• Upon completion of t						~	✓	1		•	•	~
22152E64BP	Satellite Communication	 Overview of satellite systems in relation to other terrestrial systems. Study of satellite orbits and 	✓	V	✓	✓	√	√	✓	✓	✓	~		*



		launching. • Study of earth segment and space segment components • Study of satellite access by various users. • Study of DTH and compression standar											
22152E64CP	Robotics	 The course has been so designed to give the students an overall view of the mechanical components and mathematics associated with the same. Actuators and sensors necessary for the functioning of the robot. The course has been so designed to give the 	✓	*	✓	*	•	✓	✓	✓	✓	•	•



22152E64DP	Remote sensing	 Principles of Remote Sensing and GIS Analysis of RS and GIS data and interpreting the data for modeling applications Principles of Remote Sensing and GIS Analysis of RS and GIS data and interpreting the data for modeling applications 	✓	~	~	*	*	V			*	•
22150E64FP	Transducer Engineering	• to model and analyze transducers	~	~	~	~	✓	~			~	√
22152L65P	VLSI and Embedded systems Lab	 Write HDL code for basic as well as advanced digital integrated circuit Import the logic modules into FPGA Boards Synthesize Place and Route the digital IPs Write programs 	✓	*	~	✓	✓	1			~	✓



Dept: ECE- BTech (FT)

			in ARM for a specific Application • Interface memory, A/D and D/A convertor											
VII	22160S71P	Total Quality Management	• The student would be able to apply the tools and techniques of quality management to manufacturing and services processes.						*	*	~	✓	✓	✓
	22152H72P	Wireless Networks	 To understand physical as wireless MAC layer alternatives techniques. To learn planning and operation of wireless networks. To study various wireless LAN and WAN concepts. To understand WPAN and geo- location systems. 	✓	*	*	*	*					*	•



22152H73P	Telecommunication Switching and Networks	 To introduce the concepts of Frequency and Time division multiplexing. To introduce digital multiplexing and digital hierarchy namely SONET / SDH To introduce the concepts of space switching, time switching and combination switching, example of a sw 	V	~	*	✓	V				~	~
221E74_P	Elective IV											
22152E74AP	Power Electronics	 To study about power electronic circuits for voltage and current control and protection. To learn the switching characteristics of transistors and 	~	~	*	•	~	~			•	✓



Dept: ECE- BTech (FT)

		 SCRs. Series and parallel functions of SCRs, Programmable triggering methods of SCR. To learn controll 										
22152E74BP	Advanced Microprocessors	 To introduce the concepts in internal programming model of Intel family of microprocessors. To introduce the programming techniques using MASM, DOS and BIOS function calls. To introduce the basic architecture of Pentium family of processors. To in 	*	1	*	~	✓	~			*	✓
22152E74CP	Electromagnetic Interference and Compatibility	• To understand EMI Sources, EMI problems and their solution methods in PCB level /	~	~	~	✓	✓	~			✓	~


		Subsystem and system level design. • To measure the emission. immunity level from different systems to couple with the prescribed EMC standards										
22152E74DP	Solid State Electronic Drives	 To learn crystal structures of elements used for fabrication of semiconductor devices. To study energy band structure of semiconductor devices. To understand fermi levels, movement of charge carriers, Diffusion current and Drift current. To study 	~	•	✓	~	~	✓			✓	✓



22152E74FP	Space TimeWireless Communication	 Design and analyze the channel characterization. Analyze the capacity of random MIMO channel. Design and analyze the order diversity and channel variability. Analyze the multiple antenna coding and receivers. Analyze the MIMO multi user detectio 	~	*	✓	~	~	~				*	*
22152P75P	Project Work & Viva Voce	• apply fundamental and disciplinary concepts and methods in ways appropriate to their principal area of study.•	~	*	✓	~	~	~	✓	✓	✓	~	*



	demonstrate skill					
	and knowledge of					
	current					
	information and					
	technological					
	tools and					
	techniques					
	specific to the					
	professional field					
	of study.•					



2022 regulation- PG (FT)

										POS					
Sem	Course Code	Title of the Course	COs	PO 1	PO 2	РО `3	РО 4	PO5	PO 6	PO 7	PO 8	РО 9	PO 10	PO 11	PO12
1	22248S11B	Applied Mathematics for Electronics Engineering	• The primary aim of this course is to demonstrate various analytical skills in applied mathematics and extensive experience with the tactics of problem solving and logical thinking applicable in communication engineering.	*	*	.*	*	*	~	*	*	*	*	*	
Punnuty Punnuty (Control) (Control) THANJA	1 C22271C12 ment Of Electron munication Engli an Rameloyam ce & Technology on Deemas to be 3 of the UGC Ac VUR - 613 403, T	Advanced Digital Signal Processing (PRIST) University 1958) MIL NADU.	The student is conversant with important theorems and algorithms. • The student learns relevant figures of merit such as power, energy, bias and consistency. The student is familiar with	1	1	✓	1	1	S Pes	✓ Analys cience Deen (aliam	h Ran and Ta hed to , Thar	all chnolo be Ui javur	1 gy (Pi niversi -613 4	Moof IST) ty 103.	*

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		prediction and filtering concepts and techniques. • Apply various techniques in solving differential equations.			-						
22271C13 Adv Con	vanced Digital mmunication Techniques	 The students will gain knowledge on the basics of properties of matter and its applications, The students will acquire knowledge on the concepts of waves and optical devices and their applications in fibre optics, The students will have adequate knowledge on the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers 	~	*		*	-		Ma	~	
Ponnaryan Roman (Institution Operation (Institution Operation Latities (Institution Operation	Department Electronics and in Engineering loyam Institute of nology (PRIST) o to be University GC Act 1958) 401 TAMA NAOU	 The students will get knowledge on advanced physics concepts of quantum theory and its applications in tunneling microscopes, and 						School of Pornais Science Dee Valiar	DTA Engineering ah Raman and Techn med to be n, Thanjav	N and Tect, yam Institute ology (PRIS University ur-613,403	of T) 3.

S.

		School: ENGINEERINGAN Dept: EC Mapping of COs a	oise ND TE E and	POS-TA	PSC	GY								
		• The students will understand the basics of crystals, their structures and different crystal growth techniques.												
22271C14	Optical Networks	• The knowledge gained on engineering materials, fuels, energy sources and water treatment techniques will facilitate better understanding of engineering processes and applications for further learning.	~	~	× .	1			~					
22271C15 d Of the Department Of Ele- and Remains and R	Advanced Radiation Systems partment ctronics and inginesting am institute of logy (PRIST) o be University	 Familiarize with the fundamentals and standards of Engineering graphics Perform freehand sketching of basic geometrical constructions and multiple views of objects. Project orthographic projections of lines and 	*	~	•	*	*	*	✓ Sch Pi	ool of E onnaiya cience	- All	Y UUU AN ayang ayang	- Instituty V (PR	L ite of IST)

		The second se	chool: ENGINEERINGAN Dept: EC Mapping of COs a	ind ind	Pos-	BE TED OLO	GY							
			 Draw projections and solids and development of surfaces. Visualize and to project isometric and perspective sections of simple solids. 											
	22271E16_	Elective-I				<u> </u>				I				
	22271L17	Communication Systems Lab	 Develop algorithmic solutions to simple computational problems Read, write, execute by hand simple Python programs. Structure simple Python programs for solving problems. Decompose a Python program into functions. 	~	~	-	~	~		~		M		~
Puman	od Of the Detecto ment Of Electro municistion Endi ar Ramajayam ce & Technology	ment nos and naering Institute of, (PRIST) University,	 Represent compound data using Python lists, tuples, dictionaries. Read and write data from/to files in Python Programs. 							F.c. Scie D Va	a Can nce an eeme lam, 1	the second and transie varm d to be Um hanjavur -	Tot. Institute of (PRIST) iversity 613,403.	
T NIA	22271E16A AC	AMIL NADU	 Write, test, and debug simple Python 	1	~	1	~		1		1			

		School: ENGINEERINGAN Dept: EC Mapping of COs	G1340 ND TE CE and	Pos-	BE THE MILP OLO	GY			
	Multimedia	 programs. Implement Python programs with conditionals and loops. Develop Python programs step-wise by defining functions and calling them. Use Python lists, tuples, dictionaries for representing compound data. Read and write data from/to files in Python. 							
222 Mutha Ponney and Sonce a	271E16B 271E16B	Upon completion of the course, the students will be able to apply principles of elasticity, optics and thermal properties for engineering applications. • To make the student to acquire practical skills in the determination of water quality parameters through volumetric and instrumental analysis.	~	~		~	Schoo Pon Schoo	I of Engineen nairah Rama and and ioo	Mund AN AN Instruction Instruction

fort

			Dept: EC Mapping of COs	and	Pos	-PS(0		Т			E	I		
			 To acquaint the students with the determination of molecular weight of a polymer by viscometery. 												
the	22271E16C	ASER Communication	 To learn about philosophy of Life and Individual qualities To learn and practice social values and responsibilities To learn and practice mind culture, forces acting on the body To learn more of Responsibilities and Rights as Professional and facing Global Challenges Emerge as responsible citizen with clear conviction to be a role- model in the society. 	*	~		~	~	*	✓ School	✓ I of Er	✓ Mu DE	, un	✓ ✓	
Ĥej- onna	22271C21	Nobile Communication Vetworks	 Read technical texts and write area- specific texts effortlessly. Listen and comprohend lectures 	2	2	-	2	~	~	1	1	→	-	1	

		S.	chool: ENGINEERINGAN Dept: EC Mapping of COs	And	Pos-	BE TED MILN OLOO	GY GY								
			 and talks in their area of specialisation successfully. Speak appropriately and effectively in varied formal and informal contexts. Write reports and winning job applications. 			-									
Bus	22271C22	Advanced Microwave Systems riment onics and ginaering n Institute of, py (PRIST) be University, ct. 1955	 Eigenvalues and eigenvectors, diagonalization of a matrix, Symmetric matrices, Positive definite matrices and similar matrices. Gradient, divergence and curl of a vector point function and related identities. Evaluation of line, surface and volume integrals using Gauss, Stokes and Green's theorems and their verification. Analytic functions, 	~	*		~	~	~	Sci F	tool of Entronativations and the pre-	DEA Mult DEA gindening c Ramajeyy nd Techno a to be Thanjavi	nd Tect. ministrution (FF Universite ar-613)	ute of siST) ity 403.	

		S	chool: ENGINEERINGAN Dept: EC Mapping of COs a	GII340 ND THE	To BEDI 03-TA CCHN POS-	BE TED MILL OLO	ADU GY					
			conformal mapping and complex integration. • Laplace transform and inverse transform of simple functions, properties, various related theorems and application to differential equations with constant coefficients.									
Punnatydr + ncc & r-anjavur + ncc & of T-anjavur	22271C23 If the Departm in Of Electronic templayam in Technology (semad to be 0 the UGC Act. - 613 403, TA	Electromagnetic Interference and Compatibility enti- cs and pering istitute of PRIST) Intersity 956) IL NADU,	 Gain knowledge on classical and quantum electron theories, and energy band structuues, Acquire knowledge on basics of semiconductor physics and its applications in various devices, Get knowledge on magnetic and dielectric properties of materials, Have the necessary understanding on the functioning of optical materials for optoelectronics, 	~			*	*	S part of Port	Ohu	nd Ted. In Institute of Conversity United Strong	~



2227	E24A	 Explain the V-1 characteristic of diode, UJT and SCR Describe the equivalence circuits of transistors Operate the basic electronic devices such as PN junction diode, Bipolar and Field effect Transistors, Power control devices, LED, LCD and other Opto- electronic devices 	*	~	•	~	*	*	~	*	~	~	*	
2227	E24B Include and Programming E24B Include and Include	 Fabricate carpentry components and pipe connections including plumbing works. Use welding equipments to join the structures. Carry out the basic machining operations Make the models using sheet metal works Illustrate on centrifugal pump, Air 	4	~	·	~	*		✓ Scho Po Si	ol of E	DE	ung AN ajayam	Tech Institut	e of ST) U J3;

		School: ENGINEERINGAN Dept: EC Mapping of COs a of smithy, foundary and fittings • Carry out basic home electrical works and appliances • Measure the electrical quantities • Elaborate on the components, gates,	And	Pos	-PS(GY							
22271E24C	Digital Speech Processing	 soldering practices. Analyze the characteristics of basic electronic devices Design RL and RC circuits Verify Thevinin & Norton theorem KVL & KCL, and Super Position Theorems 	~	~	•	~		*		×	*		
Political of the Depar Department of Electro Political ran Remaining Soler co & Leonolog (Institut on 22271C31) b 3 of the UGC Ac 7 - INCOVER - 613 403, 1	tment onics and institute of (PRIST) Wireless Sensor Networks (1958) Mic Hardy,	 Identify the various control system components and their representations. Analyze the various 	~	~	*	~	~		P. Scienc Dec Valla	Freineeffr e and Tecr amed to b m, Thanja	Mun g and f g y a f g	ect. stitute of (PRIST) fraity 3 403,	~



	22271E32_	Elective – IV	time domain parameters. • Analysis the various frequency response plots and its system. • Apply the concepts of various system stability criterions. • Design various transfer functions of digital control system using state variable models.							
	22271E33_	Elective – V								
	22271E34_	Elective – VI								
Polinary Polinary TeaNJA	22271E25A	Digital Communication Receivers	 Implement linear and non-linear data structure operations using C Suggest appropriate linear / non-linear data structure for any given data set. Apply hashing concepts for a given 	*	~	*	*	School of Engine Ponnatyah Ra Science and Doemed Vaitam, Th	KAN ering and T majayam tr fechology to be Univ anjavur-6	ect. istitute of (PRIST) ersity 13,403.

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		The second se	School: ENGINEERINGAN Dept: EC Mapping of COs a	international states and	Pos-	BE TEC MILP OLO	GY GY								
			 problem Modify or suggest new data structure for an application Appropriately choose the sorting algorithm for an application 												
Mitte	22271E25B	Soft Computing Techniques	 Use digital electronics in the present contemporary world Design various combinational digital circuits using logic gates Do the analysis and design procedures for synchronous and asynchronous sequential circuits Use the semiconductor memories and related technology Use electronic circuits involved in the design of logic gates 	~	~	•	~		×	chicol (Pome Scien	f English	V Mu amajayan Techapio	Mul d'Teck, i lastitute gy PRIS		
Ponne 	22271E25C	Communication Network Security	• To be able to determine if a given	1	~	~	~	4		Vall	am, Th	ianjevur	<u>-613,40</u>	3	~

	School: ENGINEERINGAN Dept: EC Mapping of COs a	GI340 ND TE E and	Pos-	EEE FED DLOO PSC	TADU GY			
	linear/causal/stable Capable of determining the frequency components present in a deterministic signal Capable of characterizing LTI systems in the time domain and frequency domain To be able to compute the output of an LTI system in the time and frequency domains							
22271E32A 22271E32A	 Acquire knowledge of o Working principles, characteristics and applications of BJT and FET o Frequency response characteristics of BJT and FET amplifiers Analyze the performance of small signal BJT and FET amplifiers - single stage and multi stage 	~	*	•	*	*	School Ponne Soler Co Val	DEAN DEAN Strang and Tech Strang Tech Strang Strang Tech Sology (PRIST) Served to be University and Tech Sology (PRIST) Served to be University and Tech Sology (PRIST)



Dept: ECE Mapping of COs and Pos-PSO

			amplifiers • Apply the knowledge gained in the design of Electronic circuits							50				
	22271E32B	Satellite Communication	 To understand and implement basic data structures using C To apply linear and non-linear data structures in problem solving. To learn to implement functions and recursive functions by means of data structures To implement searching and sorting algorithms 	*	*		~			*				~
Ponnal	22271E32C an remain and a second to be a set the USCA with a 513 403,	CDMA Systems ment nics and nesring institute of (PRIST) e University st.1958) AMIL NADU.	 Design and Test rectifiers, filters and regulated power supplies. Design and Test BJT/JFET amplifiers. Differentiate cascode and cascade amplifiers. Analyze the limitation in bandwidth of single 	4	*	*	~	~	*	* 05	hool of Engli portrativah F Science and Deamed Vallam, T	DIAN bering at majaya Technolo Ito be U nanjayan	d Tect. m Institute pay (PRIS Iniversity 618,40	of IT) 3.

	S	chool: ENGINEERINGAN Dept: EC Mapping of COs	ACCI 6134 ND TE CE and	Pos-	BE FED MILNA DLOG				
		stage and multi stage amplifier • Measure CMRR in differential amplifier • Simulate and analyze amplifier circuits using PSpice. • Design and Test the digital logic circuits.							
22271E33A	Wavelets and Multi Resolution Processing	 Equip students with the English language skills required for the successful undertaking of academic studies with primary emphasis on academic speaking and listening skills. Provide guidance and practice in basic general and classroom conversation and to engage in specific academic speaking activities. improve general and academic listening skills Make effective presentations. 	~		-	~	~	P- Der Valla	Allung med to be University m, Thanjavur - 613,403,



High Performance Understand the **Communication** Networks fundamental knowledge of the concepts of probability and have knowledge of standard distributions which can describe real life phenomenon. Understand the basic concepts of one and two dimensional random variables and apply in engineering applications. 1 1 1 \checkmark 1 1 1 • Apply the concept random processes in engineering disciplines. Understand and apply the concept of correlation and spectral 12 densities. • The students will have mariment an exposure of various ectronics and distribution functions yarn institute of Deemed to be Unive rsity and help in acquiring Vallam, Thanjavur-613,403, skills in handling situations involving more than one variable. Able to analyze the

22271E33B

attulion Deemed to be University < 3 of the UGC Act.1956) THANJAVUR - 613 403, TAMIL NADU.



			response of random inputs to linear time invariant systems.								
	22271E33C	Advanced Microprocessors and Microcontrollers	 Analyze different types of amplifier, oscillator and multivibrator circuits Design BJT amplifier and oscillator circuits Analyze transistorized amplifier and oscillator circuits Design and analyze feedback amplifiers Design LC and RC oscillators, tuned amplifiers, wave shaping circuits, multivibrators, power amplifier and DC convertors. 	*	~	~			✓ □	Mung	~
the	Pontice 22271P41 Science of the DG (Institution Doemed THANJAVUR - 613 44	Project Phase – II	 Design AM communication systems Design Angle modulated communication systems Apply the concepts of Random Process to the design of 	~	~	 ~	1	1	School of Engine Ponnaiyah Ran Sdience and T Deemed b Vallam, The	bing and Tork belayam Institute of achinology (PRIST) be University njavur-613.403.	

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	Tour A	School: ENGINEERINGAN Dept: EC Mapping of COs a	6134 ND TE E and	RS BEDI DI 3- TA CCHN Pos-	BE TED MILN OLOG	IADU GY							
		Communication systems Analyze the noise performance of AM and FM systems Gain knowledge in sampling and quantization 			4								
Sp Co	ace Time Wireless mmunication	 Display an understanding of fundamental electromagnetic laws and concepts Write Maxwell's equations in integral, differential and phasor forms and explain their 			•								
22271E34A	id guine of ST) unsuly	 Physical meaning Explain electromagnetic wave propagation in lossy and in lossless media Solve simple problems requiring estimation of electric and magnetic field quantities based on these concepts and laws 	~	~		~	~	Sa	✓ Ponnaivah I Science an Deeme Vailam, T	DEAD intering a Samajaya d Technol d to be C hanjaya	Ind Test m Inst ogy (P Iniversi-613)	tute of RIST) sity 403.	~
22271E34B Me	edical Imaging	• Design linear and non linear applications of OP	~	1	√	1		1	1		~		

			School: ENGINEERINGAN Dept: EC Mapping of COs a	and	Pos-	BE TED MILY OLO	GY								
			 AMPS Design applications using analog multiplier and PLL Design ADC and DAC using OP – AMPS Generate waveforms using OP – AMP Circuits Analyze special function Ics 												
brutte	22271E34C	Mobile ADHOC Networks	One will obtain knowledge on the following after completing the course. • Public awareness of environmental is at infant stage. • Ignorance and incomplete knowledge has lead to misconceptions • Development and improvement in standard of living has lead to serious environmental disasters	~	~	•	*	Schoo	d of E malya dence Deer yallam	L T Rem and Te hed to I, That	A li sievan chnolo be Ut hjavur	Lung Lung Lot Linsilik By (PR Lot3)	te of IST) ty 403.	~	

THANJAVUR - 313 403, TAMIL NAOU,

DEEMED TO BE ERSI ACCREDITED ANJAVUR-613403-TAMILNADU School: ENGINEERINGAND TECHNOLOGY **Dept: ECE** Mapping of COs and Pos-PSO M. Tech - PT _ REGULATION - 2022 • Be capable of mathemati cally formulatin g certain practical problems in terms of partial differentia 1 equations, Transforms and solve Partial them and 22148S11BP 1 1 1 \checkmark 1 1 Differential physically Equations interpret the results. • Have gained a well founded knowledg e of Fourier series, their different possible forms and stitute of DICT discussion Operated to be University (of the UGC Act. 1956)

MINUL - 513 403, TAMIL NADU.



• analyze fields a potentials due to static changes • evaluate static magnetic fields . understan d how materials affect electric Electromagnetic 22152H12P and 1 1 1 \checkmark 1 1 1 Theory magnetic fields • understan d the relation between the fields under time varying situations onics and . d Tech understan n institute of d Technology (PRIST) y (PRIST) d Deemed to be University tion Deemed to be University s 3 of the UGC Act.1958) AVLID 513 403, TAMIL NABU. principles Vallam, Thanjavu -613 403 of prop THANJAVE



. introduce number systems and codes 0 introduce basic postulates of Boolean algebra and shows the correlation between Digital Boolean 22152H13P \checkmark 1 1 1 1 \checkmark 1 Electronics expression S . introduce the methods for simplifyin g Boolean expression S • outline School of En the formal tment Po nics and procedure s for the Institute of analysis (PRIST) and des of the UGC Act.1956) THANJAVUR - 618 403, TAMIL NADU.





• To study the properties and representa tion of discrete and continuou s signals. • To study the sampling process and Signals and analysis of 22152H15P \checkmark 1 1 \checkmark 1 \checkmark \checkmark Systems discrete systems using ztransforms • To study the analysis M and synthesis of discrete and Tart time and Technology (PRIST) ned to be University Thanjarur-943 402 systems.• d Of the Department To study of Electronics and the Vasiani properties Remeievant institute of

3 of the UGC Act.1956) T - IMLIAVUR - 613 403, TAMIL NADU.

An-Hoution Ocemed to be University



Π • The roots of nonlinear (algebraic or transcende ntal) equations, solutions of large system of linear equations and eigenvalue Numerical 22148S21P problem 1 1 \checkmark 1 1 \checkmark Methods ofa matrix can be obtained numericall y where analytical methods fail to give solution. DEA • When School of Engineering and Tect ennaiyah Ramajayam Institute huge Science and Technology (PRIST) of amounts Deemed to be University Valiam, Thanjavur - 613 401 of experimen

(testitution Ocemed to be University 3 of the UGC Act.1956) THANJAVUR - 613 403, TAMIL NADU,





Ant	22152H23P	Linear Integrated Circuits	 To introduce the basic building blocks of linear integrated circuits. To teach the linear and non- linear applicatio ns of operationa 1 amplifiers. To introduce the theory and applicatio ns of analog multipliers and PLL. To teach the theory of ADC and 	*	~	*	School of Er Ponnaiyah	DEAN	und Tech In Institute		*
Ponnaty	 A feanulayam A feanulagy Common to be 	(PRIST) University	and				Science a Deem Valiana	nd Technolo ed to be U Theniavur	gy (PRIST niversity 613 403	5	

3 of the UGC Act.1956) THANJAVUR - 613 403, TAMIL NADU.







III	22148S31BP	Probability and Random Processes	 Have a fundament al knowledg e of the basic probabilit y concepts. Have a well – founded knowledg e of standard distributio ns which can describe real life phenomen a. Acquire skills in handling situations involving more than one random variable 	~	*	*	~	-	Schoo	TENNIS TENNIS	d Tect.	-
anialy monthful	an Renne Byan o S. Teonnology in Decimed to br of the UGC Ad	(PRIST) (University (1056)	variable and funct						Schoo	of Engineering an olyan Ramajayor orac and Technolo	d Tech n Institute of gy (PRIST) riversity	

THAN LAVUR - 613 403,

allanth, Thanjayur-013 403



• To introduce the architectur e and programm ing of 8085 microproc essor. • To introduce the interfacing of peripheral Microprocessor devices 22152H32P Interfacing and with 8085 1 1 1 1 \checkmark 1 1 Applications microproc essor. • To introduce the architectur un e and programm ing of 8086 microproc liayam institute of iyah Ran ronics and Science and Technology PRIST) essor. Deemed to be University Vallam, Thanjavur-613,403, • To in Institute of introduce OV (PRIST) the ition Casmed to be University 3 of the UGC Act. 1986) applicatio THAN AVUR - 613 403, TAMIL NADU. ns,




• To provide various Amplitude modulatio n and demodulat ion systems. • To provide various Angle modulatio n and demodulat Communication ion 22152H34P 1 1 \checkmark 1 1 1 \checkmark Theory systems. • To . provide some depth analysis in noise performan ce of various receiver. School of E • To study Ponnaiyah Ramajayam Institute of some Science and Technology (PRIST) Deemed to be University Vallam, Thanjavur-613 403; basic informatio rom institute of n theory with so 401 19561

TY INGLASIO NO. TAMIL NADU.



• Carryout basic signal processing operations • Design and Implement the FIR and IIR Filters in DSP Processor **Digital Signal** for Processing and performin 22152L35P 1 1 1 \checkmark 1 \checkmark 1 Microprocessor g filtering Lab operation over realtime signals • Interface different I/Os with processor • Generate EAN waveform ering and Tech School of Engli 0 s using Pornaiyah Ramajayam Of the Department. Science and Technology (PRIST) TYCE Of Electronics and Microproc Deemed to be University essors Vallam, T nstitute of . PRIST) THANJAVUR - 613 403, TAMIL NADU,



IV • To study pulse modulatio n and discuss the process of sampling, quantizati on and coding that are . fundament al to the digital Digital 22152H41P 1 1 transmissi 1 \checkmark 1 1 1 Communication on of analog signals. • To learn baseband any pulse transmissi on, which deals with the of Engir transmissi mont stitute of aiyah Ramajayam Ir on of Ponr ronics and Science and Technology pulse-Deemed to be University Vallam, Thanjavur-6 3,403, in institute of amplitude, modu the still the state of the stat

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THANDAVUR - 613 403, TAMIL NAUU.





221 E44 P **Elective-I** • Students will get an introducti on about ATM and Frame relay. • Students will be provided with an up-to-date survey of developm High Speed 22152E44AP ents in 1 1 1 1 1 1 1 Networks High Speed Networks. • Enable the students to hu know techniques involved to support DEAN real-time School of Engineering and Tech traffic and Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) congestion Deemed to be University to be University cont Vallam, Thanjavur-613 403. * 3 of the UGC Act. 1954 THA

	School: ENG Mappin	PREED T DEFEMBED T DEFEMBED T DEFE DEFE DEFT: ECE ng of COs and Po	STITY DITED TAMILNADU INOLOGY S-PSO	
22152E44BP Advan Signal	 To study the parametric methods for power spectrum estimation To study adaptive filtering techniques using LMS algorithm and to study the applicatio ns of adaptive filtering. To study multirate signal processing fundament als. To study the analysis 			DEAN School of Engineering and Teck. Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Deemed to be University Vallam, Thanjayur-613,403.



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butto	22152E44CP	Speech Processing	 To introduce the models for speech production To develop time and frequency domain techniques for estimating speech parameter s To introduce a predictive technique for speech compressi on To understan d speech recognitio n, 	-			*	DEAN School of Engineering and Tect. Ponnaiyah Remajayam Institute of Science and Technology (PRIST)	*
	Commune Ponnaiyah R Ponnaiyah R Ponnaiyah R (Institution Os Bot u Ponastavilis -	esten Engineering umnisyam institute lecthology (PRIST) amse to be bound the UCO on some ana 495, Decuments	n, Synthesis and Speaker ident			•		Science and Technology (PRIST) Decmost to be University Vallam, Thanjavur-613 #03.	













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bur	22152H51P	Optical Communication and Networks	 To learn the basic elements of optical fiber transmissi on link, fiber modes configurat ions and structures. To understan d the different kind of losses, signal distortion in optical wave guides and other signal degradatio n factors. Design optimizati on o 		~	*		Scho	DE ol of Engineer nnaiyah Rama cience and Ter Deemest te /aliam, Than	AN ing and Teo jayam Inst chnology (P be Univer javur - 613	titute of RIST) sitv 193,	

the UGC Ac. 1978) THANJAVUR - 613 403, TANAL MACU.



THANJAVUR - 813 400, From mend.

			S	School: ENC Mappin	P UNA THANAGE SINEERI De ng of C	WUR-61 NGAND pt: ECE COs ar	CRED 3403 - TO TECHN d Pos	BE TED MILNAI TOLOGY -PSO		
	22152H53P	VLSIDesign	 To learn the basic CMOS circuits. To learn the CMOS process technolog y. To learn techniques of chip design using programm able devices. To learn the concepts of designing VLSI subsystem s. To learn the 		~		~		~	DEAN School of Engineering and Tect,
1	Ponnalyar Sevence of (Institution THANJAVO	Antiparticiparti	modeling a digital system using H							Science and Technology (PRIST) Deemad to be University Valiam, Thanjavur-613,403.

221_E54_P Elective II



• Public awareness of environme ntal is at infant stage. . Ignorance and incomplet e knowledg e has lead to misconcep Environmental tions 22149E54AP Science and 1 1 1 1 1 1 1 0 Engineering Developm ent and improvem ent in standard un of living has lead to serious environme DEAN ntal Department School of Engineering and Test, disasters. Ponnaiyah Ramajeyam Institute of Public Science and Technology (PRIST) awareness Deemed to be University Vallam, Thenjavur-613 403. ESTIMA of environme USC AD 195M ntal is a HAV UNC - ONS 400, TAMIL MADY

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t	the	22152E54BP	Optoelectronic Devices	 To know the basics of solid state physics and understan d the nature and characteris tics of light. To understan d different methods of luminesce nce, display devices and laser types and their applicatio ns. To learn the principle of optical detection me 				*		School of Engineering and Ted, Ponnaivah Ramajevem Institute of Science and Technology (PHIST) Deemed to be University Vallam, Thanjavur-613 403.	



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			mathemati												
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		Processing	techniques					15							
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			procedure									N			
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/		all institute ri													
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3 of the UGC Act 1956) J. BUANLIR - B13 403, TAMIL NADM



• To provide mathemati cal basis for acoustics waves • To introduce the concept of radiation reception absorption and 23 Engineering attenuatio 22152E54EP 1 1 1 \checkmark 1 \checkmark 1 Acoustics n of acoustic waves. • To present the characteris tic behaviour of sound DEAN in pipes, chool of Engineering and Fonaiv resonators Ramaiavam Instit Science and Technology (PE and filters. Dec ned to be Univers • To Thania ur-613 103 Vallan institute of introduce the pro THANJAVUR - 818 402, TAML NALW.





• Analyze the performan ce of simple optical link. • Test microway e and optical componen ts. • Analyse the mode Optical characteris Communication tics of 22152L55P 1 1 1 \checkmark 1 \checkmark 1 and Microwave fiber Lab • Analyse the radiation of pattern M of antenna.• Analyze the DEA performan chool of Engineering and lacr. ce of uvan Ramajayam Institute of Pen Science and Technology (PRIST) simple Ceemed to be University valiam, Thanjavur-\$13,403. optical link. • Test microway e and op JGC Act 1956 MANJAVUR - 613 403, TAMIL NADU



VI • It deals with the fundament al cellular radio concepts such as frequency reuse and handoff. This also demonstra tes the Mobile and principle 1 22152H61P Wireless of 1 1 1 1 \checkmark 1 Communication trunking efficiency and how trunking and interferenc e issues between mobile DEAL and base nal of F noning . stations Tarl They's h - naiavan n Institu combine ience ar d Technol to affect Deemed to be University Vellam, Thanjavur- 613 40: the overal in institute It-stretter Ocemed to be University 3 of the UGC Act. 1956) 1. AMJAVUR - 613 403, TAMIL NADU.



· ·	22152H62P	Medical Electronics	 To study the methods of recording various biopotenti als To study how to measure biochemic al and various physiologi cal informatio n To understan d the working of units which will help to restore normal functionin To 		~		Schoel of Engineering and Tech. Ponnaiyah Ramajayah Inaith Science and Technelogy (PE Deemed to be Universit	Jte af IIST) ty
for the	Duporment (Communes Official you Ref	in Electronics and too Engineeting logisyam Institute of	• To understan d the use				Deemed to be Universit Vallam, Thanjavur-613	iy .93.
	Science & Te Institution Ocer 5 of the	chinology (PRIST) ned to be University UGC Act.1654)	of radiation f					

THANJAVUR - 813 403, TAME JOU.

	School	: ENGINEER D pping of	IRC INGAND TI ept: ECE COs and	Pos-PSO	
22152H63P Micro Controlle and Embedded systems 221_E64_P Elective III	 To study 8051 architectur e To write assembly language programm ing To study the embedded architectur e and real time applicatio ns. To study 8051 architectur e To write assembly language programm ing To study the embedded architectur e 				Chnel of Lighter y and test Pennaiyan Ramajavam Institute of Science and Technology (CPIST) Dermed to be University Vallam, Thanjavur-513(403,



22160E64AP Principles Of Management	 Upon completio n of the course, students will be able to have clear understan ding Manageria I functions like planning, organizing, organizing, staffing, leading & controllin g and have same basic knowledg e on internation al aspect of manageme nt Upon completio p of t 		Many of Engineering and Set. Second and Parameters of Second Seco
Por naiyah nama yan lostiluta ofi cience & Technology (PRIST) mulian Deamer to be University	• Upon completio n of t	-	vallatti,



Overview of satellite systems in relation to other terrestrial systems. • Study of satellite orbits and launching. • Study of Satellite earth 22152E64BP 1 1 1 1 \checkmark 1 1 1 1 1 Communication segment and space segment componen ts • Study of satellite access by DEAN various School of Engineering and Tech. Pennaiyah Ramajayam Institute of Science and Tachnology (PRIST) users. • Study of Deemed to be University Vallam, Thanjavur-613 403. DTH and compressi on standar 3 of the UGC Act. 1956) A WUR - 613 403, TAML MICH.



THANJAVUR - 613 403, TAMIL NADU,



0 Principles of Remote 14 Sensing and GIS • Analysis of RS and GIS data and interpretin g the data for modeling applicatio ns 22152E64DP Remote sensing 1 ~ ~ 1 1 \checkmark \checkmark 0 Principles of Remote Sensing and GIS • Analysis of RS and GIS data and interpretin g the data 40 DEA for School of Engineering and Tect. Pennaiyah Ramajayam Institute of modeling Science and Technology (PRIST) applicatio Deemed to be University Vallam, Thanjavur-613 403. ns

's 3 of the UGC ADT 1956) THANJAVUR - 613 403, TAMIL NADU,



	22150E64FP	Transducer Engineering	• to model and analyze transducer s	~	~	~	~	-	*					~	1
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Head Of the Department Department Of Electronics and Communication Engineering Ponnalyan Reinajayam Institute of Science & Technology (PRIST) (Institution Deemed to be University 3 of the UGC Act, 1956) THAN JANUR - 613 403, TAMIL NADU.

Mung

DEAN School of Engineering and Tack Ponnaiyah Ramatayam Institute of Science and Technology (PRIST) Deemed to be University Vallam, Thaniavur-613 403.





VII	22160S71P	Total Quality Management	• The student would be able to apply the tools and techniques of quality manageme nt to manufactu ring and services processes.		•	*	*	~	~	~	*

(Institution Operated to be University Bot the UGC Act. 1954)

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DEAN Schoel of Engineering and Teck. Pennaiyah Ramajayam Institute of Science and Technology (PRIST) Dearned to be University Vellam, Thanjayur-613 403.



• To understan d physical as wireless MAC layer alternative S techniques • To learn planning and Wireless operation 22152H72P 1 1 1 1 \checkmark 1 Networks of 1 wireless networks. • To study various wireless LAN and DEAN WAN School of Engineering and Ted Pennaiyah Ramajayam Institute of Science and Technology (PRIST) Decimed to be University Vallam, Thanjavur-613 403, concepts. • To understan d WPAN and geolocation systems. DICT

(Institution Dublicon, SP University 3 of the UGC + 1958) THANJAVUR - 813 403, TAMIL NADU.





221 E74 P **Elective IV** • To study about power electronic circuits for voltage and current control and protection. • To learn the switching 22152E74AP **Power Electronics** 1 \checkmark 1 1 1 1 \checkmark characteris tics of transistors and SCRs. Series and parallel functions of SCRs, DEA School of Engineering and Tech Programm Ponnaiyah Ramajayam Institute of able Science and Technology (PRIST) triggering Deemed to be University methods Vallam, Thanjavur-613 403. Cullinary as of SCR. lance a fuchny • To learn dinstitution Deemad to be University controll - 3 of the UGC Act 1958) THANJAVUR - 613 403, TAMIL NADU.





School: ENGINEERINGAND TECHNOLOGY Dept: ECE

with	22152E74CP	Electromagnetic Interference and Compatibility	 To understan d EMI Sources, EMI problems and their solution methods in PCB level / Subsystem and system level design. To measure the emission. immunity level from different systems to couple with the prescribed EMC standards 	*	*		*	Schoo of Engine Ponnalyan Ra Science and T Deemad H Valiam, Tha	EAN ering and Teck majayam Institute of echnology (PRIST) o be Universitie mjavur - b to a	*	
	In a Martin a Dee	med to be Universite UGC Act. 16641									



Dept: ECE Mapping of COs and Pos-PSO

22152E	74DP Solid State Electronic Drives	 To learn crystal structures of elements used for fabrication of semicondu ctor devices. To study energy band structure of semicondu ctor devices. To understan d fermi levels, movement of charge carriers, Diffusion current and Drift current. To study 		~	~	*			DEAN School of Engineering and Text. Ponnaiyah Ramajeyam Institute of Science and Technology (FRIST) Deemed to be Ursiversity Vallem, Thanjavur-613 473.	-
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Dept: ECE Mapping of COs and Pos-PSO

 Design and analyze the channel characteri zation. • Analyze the capacity of random MIMO channel. • Design and Space analyze TimeWireless 22152E74FP 1 1 \checkmark \checkmark 1 \checkmark \checkmark the order Communication diversity and channel variability. • Analyze the DEAN multiple School of Engineering and Ted. Ponnaiyah Ramajayam Institute of Science and Technology (PRIST) Deemed to be University Vallam, Thanjayur-613 #03. antenna coding Flood Of the Department, and Deue tmem Of Electronics and receivers. Communication Engineering Analyze unnuivat Ramajayam Institula the MIMO - Tener & Tachaningvindist multi user to admittant to company in the lynness of a set of an analy detectio and a gradient



Mapping of COs and Pos-PSO

A cut	22152P75P	Project Work & Viva Voce	 apply fundamen tal and disciplinar y concepts and methods in ways appropriat e to their principal area of study. demonstr ate skill and knowledg e of current informatio n and technologi cal tools and technique s specific 	*		*	School o Ponna Scien	t Engineeri iyah Rama ana Tec amed to b	N ng and Tech. jayam Institu hnology (PH be University or 13	vite of KIST)	
	Jeos ment Of F Commonicatio In Jly an Dema Canolic A Tach Internet A Tach	evan teatiluis evan teatiluis ectoay (PRIS a to the Unit	to the profession al field of study.				Vana	m, thanji	AVUI - U IS		

and a second