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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: MA8352

Subject Name: Linear Algebra and Partial Differential Equations

CO No.	Course Outcome	RBT Level
C201.1	Apply the concepts of linear algebra to model linear systen..	K1, K2, K3
C201.2	Use linear transformations to form linear models in Science and Engineering.	K1, K2, K3
C201.3	Demonstrate competence with the basic ideas of linear algebra including concepts of Inner Product, Orthogonal sets and Inner Product Spaces	K1, K2, K3
C201.4	Able to solve various types of partial differential equations.	K1, K2, K3
C201.5	Classify and solve wave equations and heat equations	K1, K2, K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C201.1	2	2	-	-	-	-	-	-	-	-	-	-	-	-
C201.2	2	2	-	-	-	-	-	-	-	-	-	-	-	-
C201.3	2	2	-	-	-	-	-	-	-	-	-	-	-	-
C201.4	3	2	2	-	-	-	-	-	-	-	-	-	-	-
C201.5	3	2	2	-	-	-	-	-	-	-	-	-	-	-
AVERAGE	2.4	2	2	-	-	-	-	-	-	-	-	-	-	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8393

Subject Name: Fundamentals of Data Structures in C

CO No.	Course Outcome	RBT Level
C202.1	Understanding the concepts of array in C language	K2
C202.2	Understanding the concept of functions, pointers and structures In C	K2
C202.3	Implement linear data structures operation using C	K3
C202.4	Implement nonlinear data structures operation using C	K3
C202.5	Analysis sorting and Searching algorithm for an application	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C202.1	3	1	1	1	1	-	-	-	-	-	-	1	1	-
C202.2	3	1	1	1	-	-	-	-	-	-	-	1	1	-
C202.3	3	1	1	1	-	-	-	-	-	-	-	1	1	-
C202.4	3	1	1	1	-	-	-	-	-	-	-	1	1	-
C202.5	3	1	1	-	-	-	-	-	-	-	-	1	1	-
AVERAGE	3	1	1	1	1	-	-	-	-	-	-	1	1	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8351

Subject Name: Electronic Circuits- I

CO No.	Course Outcome	RBT Level
C203.1	Acquire knowledge of Working principles, characteristics and applications of BJT and FET	K1
C203.2	Frequency response characteristics of BJT	K2
C203.3	Frequency response characteristics of FET	K2
C203.4	Analyse the performance of small signal BJT and FET amplifiers - single stage and multi stage amplifiers	K3
C203.5	Analyze and design of BJT Power supply circuits	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C203.1	3	2	2	-	-	-	-	-	-	-	-	-	-	-
C203.2	3	2	2	1	1	-	-	-	-	-	-	-	-	1
C203.3	3	2	2	1	1	-	-	-	-	-	-	-	-	1
C203.4	3	2	-	-	-	-	-	-	-	-	-	-	-	-
C203.5	3	1	1	-	-	-	-	-	-	-	-	-	-	1
AVERAGE	3	1.8	1.75	1	1	-	-	-	-	-	-	-	-	1

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Subject Code: EC8352

Subject Name: Signals and Systems

CO No.	Course Outcome	RBT
C204.1	Classify the signals & systems according to its properties	K2
C204.2	Apply Laplace transform, Fourier transform, Z transform and DTFT in signal analysis	K2
C204.3	Examine continuous time LTI systems using Fourier and Laplace Transforms	K1
C204.4	Make use of Z transform and DTFT in discrete time signals	K2
C204.5	Analyze the discrete time LTI systems using Z transform and DTFT	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C204.1	3	2	-	-	1	-	-	-	-	-	-	1	1	-
C204.2	3	2	-	-	1	-	-	-	-	-	-	1	1	-
C204.3	3	2	2	2	1	-	-	-	-	-	-	1	-	-
C204.4	3	2	-	-	1	-	-	-	-	-	-	1	-	-
C204.5	3	2	2	2	1	-	-	-	-	-	-	1	-	-
AVERAGE	3	2	2	2	1	-	-	-	-	-	-	1	1	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8392

Subject Name: Digital Electronics

CO No.	Course Outcome	RBT
C205.1	Use digital fundamental concept to design simple circuits	K2
C205.2	Construct the combinational circuits for different applications using logic gates	K3
C205.3	Do the analysis and develop the synchronous sequential circuits for particular application	K4
C205.4	Analyze and design asynchronous circuits for different applications.	K3
C205.5	Explain the semiconductor memories and electronic circuits involved in the design of logic gates	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C205.1	3	1	-	-	-	-	-	-	-	-	-	1	-	-
C205.2	3	2	2	2	2	1	-	-	2	2	2	1	1	-
C205.3	3	2	2	2	2	1	-	-	2	2	2	1	1	-
C205.4	3	1	2	1	1	-	-	-	-	-	-	1	-	-
C205.5	3	1	-	-	-	-	-	-	-	-	-	1	-	-
AVERAGE	3.0	1.4	2.0	1.7	1.7	1.0	-	-	2.0	2.0	2.0	1.0	1.0	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8391

Subject Name: Control Systems Engineering

CO No.	Course Outcome	RBT
C206.1	Identify the various control system components and their representations	K3
C206.2	Analyze the various time domain parameters	K4
C206.3	Analyze the various frequency response plots and its system	K4
C206.4	Apply the concepts of various system stability criterions	K3
C206.5	Analyze various transfer functions of digital control system using state variable models	K4

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO 12	PSO1	PSO2
C206.1	3	1	1	-	-	-	-	-	-	-	-	1	1	-
C206.2	3	2	1	1	-	-	-	-	-	-	-	1	1	-
C206.3	3	3	2	2	-	-	-	-	-	-	-	1	1	-
C206.4	3	2	2	2	-	-	-	-	-	-	-	1	1	-
C206.5	3	2	1	1	-	-	-	-	-	-	-	1	1	-
AVERAGE	3	2	1.4	1.5	-	-	-	-	-	-	-	1	1	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8381

Subject Name: Fundamentals of Data Structures in C Laboratory

CO No.	Course Outcome	RBT
C207.1	Write basic and advanced programs in C	k2
C207.2	Implement functions and recursive functions in C	k3
C207.3	Implement linear and non-linear data structures using C	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C207.1	3	1	1	1	1	-	-	-	-	-	-	1	1	-
C207.2	3	1	1	1	1	-	-	-	-	-	-	1	1	-
C207.3	3	1	1	1	1	-	-	-	-	-	-	1	1	-
AVERAGE	3.0	1.0	1.0	1.0	1.0	-	-	-	-	-	-	1.0	1.0	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8361

Subject Name: Analog and Digital Circuits Laboratory

CO No.	Course Outcome	RBT
C208.1	Design and Test rectifiers, filters and regulated power supplies. and analyze the limitation in bandwidth of single stage and multi stage amplifier	K3
C208.2	Design and test the digital logic circuits.	k3
C208.3	Simulate and analyze amplifier circuits using PSpice	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No.	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C208.1	3	1	1	1	1	-	-	-	-	-	-	1	1	-
C208.2	3	1	1	1	1	-	-	-	-	-	-	1	1	-
C208.3	3	1	1	1	1	-	-	-	-	-	-	1	1	-
AVERAGE	3.0	1.0	1.0	1.0	1.0	-	-	-	-	-	-	1.0	1.0	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: HS8381

Subject Name: INTERPERSONAL SKILLS/LISTENING&SPEAKING

CO No.	Course Outcome	RBT Level
C209.1	Listen and respond appropriately.	K1
C209.2	Participate in group discussions	K2
C209.3	Make effective presentations	K1
C209.4	improve general and academic listening skills	K1
C209.5	Participate confidently and appropriately in conversations both formal and informal	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C209.1	-	-	-	-	-	-	-	-	-	1	3	-	-	-
C209.2	-	-	-	-	-	-	-	-	-	1	3	-	-	-
C209.3	-	-	-	-	-	-	-	-	-	1	3	-	-	-
C209.4	-	-	-	-	-	-	-	-	-	1	3	-	-	-
C209.5	-	-	-	-	-	-	-	-	-	1	3	-	-	-
AVERAGE	-	-	-	-	-	-	-	-	-	1	3	-	-	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: MA8451

Subject Name: PROBABILITY AND RANDOM PROCESSES

CO NO	Course Outcome	RBT Level
C210.1	Identify the functions of Discrete & Continuous Random variables, Moments and Moment Generating Functions.	K1, K2, K3
C210.2	Apply the concepts of Standard distributions which can describe real life phenomena and interpret the concepts of covariance, correlation and regression.	K1, K2, K3
C210.3	Determine the process is either SSS or WSS and classify the TPM of Markov chain process	K1, K2, K3
C210.4	Analyze the Autocorrelation between two random variables and find the Power Spectral Density	K1, K2, K3
C210.5	Compute the system transfer function and solution of Auto Correlation functions of LTI systems.	K1, K2, K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C210.1	3	2	-	-	-	-	-	-	-	-	-	-	-	-
C210.2	3	2	-	-	-	-	-	-	-	-	-	-	1	-
C210.3	3	2	2	1	-	-	-	-	-	-	-	-	1	-
C210.4	3	2	-	1	-	-	-	-	-	-	-	-	-	-
C210.5	3	2	-	-	-	-	-	-	-	-	-	-	-	-
AVERAGE	3	2	2	1	-	-	-	-	-	-	-	-	1	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8452

Subject Name: ELECTRONIC CIRCUITS II

CO No.	Course Outcome	RBT Level
C211.1	Analyze the various feedback amplifiers.	K3
C211.2	Design various types of RC and LC oscillators	K3
C211.3	Examine the performance of tuned amplifiers.	K2
C211.4	Demonstrate the different types of multivibrators.	K1
C211.5	Explain the working of blocking oscillators and time base generator.	K1

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C211.1	3	2	2	-	1	-	-	-	-	-	-	-	1	1
C211.2	3	2	2	-	1	-	-	-	-	-	-	-	1	-
C211.3	3	2	1	-	1	-	-	-	-	-	-	-	1	-
C211.4	3	2	1	-	1	-	-	-	-	-	-	-	1	-
C211.5	3	2	2	-	1	-	-	-	-	-	-	-	1	1
AVERAGE	3	2	1.6	-	1	-	-	-	-	-	-	-	1	2

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Subject Code: EC8491

Subject Name: COMMUNICATION THEORY

CO No.	Course Outcome	RBT Level
C212.1	Design AM communication systems	K3
C212.2	Design Angle modulated communication systems	K3
C212.3	Apply the concepts of Random Process to the design of Communication systems	K3
C212.4	Analyze the noise performance of AM and FM systems	K4
C212.5	Gain knowledge in sampling and quantization	K1

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C212.1	3	-	2	1	1	-	-	-	-	-	-	-	1	-
C212.2	3	-	2	1	1	-	-	-	-	-	-	-	1	1
C212.3	3	1	1	1	1	-	-	-	-	-	-	-	1	-
C212.4	3	1	2	1	1	-	-	-	-	-	-	-	1	1
C212.5	3	-	2	1	1	-	-	-	-	-	-	-	1	1
AVERAGE	3	1	1.8	1	1	-	-	-	-	-	-	-	1	1

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8451

Subject Name: ELECTROMAGNETIC FIELDS

CO No.	Course Outcome	RBT Level
C213.1	Apply vector calculus to electric-magnetic fields in different configurations	K2
C213.2	Apply the fundamental electromagnetic laws and concepts in electric fields	K3
C213.3	Calculate electric and magnetic field quantities based on the concepts and laws	K5
C213.4	Apply Maxwell's equations in integral, differential and phasor forms and explain their physical meaning	K3
C213.5	Analyze the electromagnetic wave propagation in lossy and loss less media	K4

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C213.1	3	2	-	-	-	-	-	-	-	-	-	-	1	-
C213.2	3	2	-	-	-	-	-	-	-	-	-	-	1	-
C213.3	3	2	-	-	-	-	-	-	-	-	-	-	1	-
C213.4	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C213.5	3	2	1	-	-	-	-	-	-	-	-	-	1	-
AVERAGE	3	2	1	-	-	-	-	-	-	-	-	-	1	-

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Subject Code: EC8453

Subject Name: LINEAR INTEGRATED CIRCUITS

CO No.	Course Outcome	RBT Level
C214.1	Illustrate the concept of linear Integrated circuits.	K2
C214.2	Design the linear and non-linear applications of op-amp and special application IC.	K3
C214.3	Analyze the Multivibrators and used to control the device in industrials.	K2
C214.4	Apply the working principle of data converters in signal processing and communications.	K3
C214.5	Apply the voltage regulators and PLL in communication systems.	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C214.1	3	1	1	-	1	-	-	-	-	-	-	-	1	-
C214.2	3	1	1	-	1	-	-	-	-	-	-	-	1	-
C214.3	3	1	1	-	1	-	-	-	-	-	-	-	1	-
C214.4	3	1	1	-	1	-	-	-	-	-	-	-	1	-
C214.5	3	1	1	-	1	-	-	-	-	-	-	-	1	-
AVERAGE	3	1	1	-	1	-	-	-	-	-	-	-	1	-

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Subject Code: GE8291

Subject Name: ENVIRONMENTAL SCIENCE AND ENGINEERING

CO No.	Course Outcome	RBT Level
C215.1	Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection. One will obtain knowledge on the following after completing the course.	K2
C215.2	Public awareness of environmental is at infant stage.	K1
C215.3	Ignorance and incomplete knowledge has lead to misconceptions	K1
C215.4	Development and improvement in std. of living has lead to serious environmental disasters	K1
C215.5	Know about Role of information technology in environment and human health	K1

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C215.1	2	1	-	-	-	1	3	1	-	-	-	1	-	-
C215.2	2	1	-	-	-	1	3	1	-	-	-	1	-	-
C215.3	2	1	-	-	-	1	3	1	-	-	-	1	-	-
C215.4	2	1	-	-	-	1	3	2	-	-	-	1	-	-
C215.5	2	1	-	-	-	1	3	2	-	-	-	1	-	-
AVERAGE	2	1	-	-	-	1	3	1.4	-	-	-	1	-	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8461

Subject Name: CIRCUITS DESIGN AND SIMULATION LABORATORY

CO No.	Course Outcome	RBT
C216.1	Students can analyze various types of feedback amplifiers.	K3
C216.2	Students can design oscillators, tuned amplifiers, wave-shaping circuits and multivibrators.	K4
C216.3	Design and simulate feedback amplifiers, oscillators, tuned amplifiers, wave-shaping circuits and multivibrators using SPICE Tool.	K4

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C216.1	3	2	2	1	-	-	-	1	1	1	-	1	1	-
C216.2	3	2	2	1	-	-	-	1	1	1	-	1	1	-
C216.3	3	2	2	1	1	-	-	1	1	1	-	1	1	-
AVERAGE	3	2	2	1	1	-	-	1	1	1	-	1	1	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8462

Subject Name: LINEAR INTEGRATED CIRCUITS LAB

CO No.	Course Outcomes	RBT Level
C217.1	Design the amplifier, Integrator, Differentiator, Filters circuits using opamp and simulation filter using SPICE	K3
C217.2	Apply the PLL, VCO, analog Multiplier in communication applications.	K3
C217.3	Design the Oscillator and Multivibrator Circuit and simulation of Multivibrator using SPICE	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C217.1	3	2	2	1	1	-	-	1	1	1	-	1	1	-
C217.2	3	2	2	1	1	-	-	1	1	1	-	1	1	-
C217.3	3	2	2	1	1	-	-	1	1	1	-	1	1	-
AVERAGE	3	2	2	1	1	-	-	1	1	1	-	1	1	-

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Subject Code: EC8501

Subject Name: DIGITAL COMMUNICATION

CO No.	Course Outcome	RBT Level
C301.1	Analyse the limits set by information theory	K3
C301.2	Comprehend the various waveform coding schemes.	K2
C301.3	Design and implement base band transmission schemes.	K3
C301.4	Design and implement band pass signaling schemes.	K3
C301.5	Analyze the spectral characteristics of band pass signaling schemes and their noise performance. Design Error control coding schemes.	K4

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C301.1	3	2	-	2	1	-	-	-	-	-	-	-	1	-
C301.2	3	2	-	1	-	-	-	-	-	-	-	-	1	-
C301.3	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C301.4	3	2	-	2	1	-	-	-	-	-	-	-	1	-
C301.5	3	2	1	1	2	-	-	-	-	-	-	-	1	-
AVERAGE	3	2	1	1.5	1.3	-	-	-	-	-	-	-	1	-

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Subject Code: EC8553

Subject Name: DISCRETE-TIME SIGNAL PROCESSING

CO No.	Course Outcome	RBT Level
C302.1	Apply DFT for the analysis of digital signals and systems	K3
C302.2	Design IIR and FIR filters	K3
C302.3	Characterize the effects of finite precision representation on digital filters	K3
C302.4	Design the Multirate Filters	K2
C302.5	Apply adaptive filters appropriately in communication systems	K3

CO PO Matrices:

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C302.1	3	2	2	-	1	-	-	-	-	-	-	-	1	-
C302.2	3	2	2	1	1	-	-	-	-	-	-	-	1	-
C302.3	3	2	2	1	1	-	-	-	-	-	-	-	1	-
C302.4	3	2	1	-	1	-	-	-	-	-	-	-	1	-
C302.5	3	-	-	-	1	-	-	-	-	-	-	-	1	-
AVERAGE	3	2	1.4	1	1	-	-	-	-	-	-	-	1	-

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Subject Code: EC8552

Subject Name: COMPUTER ARCHITECTURE AND ORGANIZATION

S. No.	Course Outcome	RBT Level
C303.1	Describe data representation, instruction formats and the operation of a digital computer	K3
C303.2	Illustrate the fixed point and floating-point arithmetic for ALU operation	K3
C303.3	Discuss about implementation schemes of control unit and pipeline performance	K5
C303.4	Explain the concept of various memories, interfacing and organization of multiple processors	K2
C303.5	Discuss parallel processing technique and unconventional architectures	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C303.1	2	2	2	2	2	-	-	-	-	-	-	-	2	-
C303.2	3	-	2	-	2	-	-	-	-	-	-	2	2	-
C303.3	2	2	3	2	2	-	-	-	-	-	-	-	2	2
C303.4	3	2	3	2	2	-	-	-	-	-	-	2	2	2
C303.5	3	2	2	2	2	-	-	-	-	-	-	2	-	-
AVERAGE	2.6	2	2.4	2	2	-	-	-	-	-	-	2	2	2

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Subject Code: EC8551

Subject Name: COMMUNICATION NETWORKS

S. No.	Course Outcome	RBT Level
C304.1	Identify the components required to build different types of networks.	K3
C304.2	Choose the required functionality at each layer for given application.	K3
C304.3	Identify the path for each routing algorithms in network layer.	K3
C304.4	Trace the flow of information from one node to another node in the network.	K2
C304.5	Be familiar with the different user applications	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C304.1	3	2	1	1	-	-	-	-	-	-	-	-	1	-
C304.2	3	2	1	1	-	-	-	-	-	-	-	-	1	-
C304.3	3	2	2	2	2	-	-	-	-	-	-	-	1	-
C304.4	3	1	1	-	-	-	-	-	-	-	-	-	1	-
C304.5	3	1	1	-	-	-	-	-	-	-	-	-	1	-
AVERAGE	3	1.6	1.2	1.3	2	-	-	-	-	-	-	-	1	-

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Subject Code: GE8077

Subject Name: TOTAL QUALITY MANAGEMENT

S. No.	Course Outcome	RBT Level
C305.1	Describe the overview of quality and TQM and will be able to explain the salient contributions of Quality Gurus.	K2
C305.2	Differentiate the TQM concepts like customer Focus, Employee Focus and their involvement, continuous process improvement and Supplier Management	K2
C305.3	Use the basic and traditional seven management tools, Quality concepts like Six sigma, FMEA.	K1
C305.4	Explore industrial applications of latest modern TQM Tools in Quality function deployment, Taguchi quality concepts and TPM.	K2
C305.5	Illustrate the various quality systems in ISO 9000 - ISO 9001-2008 and ISO 14000 Concepts	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C305.1	-	-	-	-	-	-	-	-	1	1	1	-	-	-
C305.2	-	-	-	-	-	-	-	-	2	1	1	2	-	-
C305.3	-	1	-	1	3	1	-	1	-	1	-	1	-	-
C305.4	-	1	-	1	3	1	-	1	-	1	-	1	-	-
C305.5	-	-	-	-	-	2	3	-	-	-	-	-	-	-
AVERAGE	-	1	-	1	3	1.3	3	1	1.5	1	1	1.3	-	-

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Subject Code: OMD551

Subject Name: BASICS OF BIOMEDICAL INSTRUMENTATION

CO No.	Course Outcome	RBT Level
C306.1	To Learn the different bio potential and its propagation.	K1
C306.2	To illustrate the different electrode and its placement for various physiological recording.	K1
C306.3	Students will be able design bio amplifier for various physiological recording.	K3
C306.4	Students will able to describe measurement techniques for non-physiogical parameters.	K2
C306.5	To identify the different biochemical measurements.	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C306.1	2	-	1	-	2	-	-	-	-	-	-	-	-	-
C306.2	3	-	2	2	-	-	2	-	-	-	-	-	-	-
C306.3	1	3	3	-	1	1	-	-	-	-	-	-	-	-
C306.4	1	-	1	-	2	2	-	-	-	-	-	-	-	-
C306.5	1	-	1	-	2	2	-	-	-	-	-	-	-	-
AVERAGE	1.6	3	1.6	2	1.7	1.6	2	-	-	-	-	-	-	-

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Subject Code: EC8562

Subject Name: Digital Signal Processing Laboratory

CO No.	Course Outcomes	RBT Level
C307.1	Carryout basic signal processing operations.	K3
C307.2	Design and Implement the FIR and IIR Filters in DSP Processor for performing filtering operation over real- time signals.	K3
C307.3	Design a DSP system for various applications of DSP.	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C307.1	3	2	2	1	1	-	-	-	-	-	-	1	1	-
C307.2	3	2	2	1	1	-	-	-	-	-	-	1	1	-
C307.3	3	2	2	1	1	-	-	-	-	-	-	1	1	-
AVERAGE	3	2	2	1	1	-	-	-	-	-	-	1	1	-

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Subject Code: EC8561

Subject Name: Communication Systems Laboratory

CO No.	Course Outcomes	RBT Level
C308.1	Simulate & validate the various functional modules of a communication system	K2
C308.2	Demonstrate their knowledge in base band signaling schemes through implementation of digital modulation schemes	K2
C308.3	Apply various channel coding schemes & demonstrate their capabilities towards the improvement of the noise performance of communication system	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C308.1	3	2	2	1	1	1	1	1	1	1	1	1	1	-
C308.2	3	2	2	1	1	1	1	1	1	1	1	1	1	-
C308.3	3	2	2	1	1	1	1	1	1	1	1	1	1	-
AVERAGE	3	2	2	1	1	1	1	1	1	1	1	1	1	-

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Subject Code: EC8563

Subject Name: COMMUNICATION NETWORKS LABORATORY

CO No.	Course Outcomes	RBT Level
C309.1	Carryout basic signal processing operations.	K3
C309.2	Design and Implement the FIR and IIR Filters in DSP Processor for performing filtering operation over real- time signals.	K3
C309.3	Design a DSP system for various applications of DSP.	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C309.1	3	1	-	-	-	-	-	-	-	-	-	-	-	-
C309.2	3	1	-	1	1	-	-	-	-	-	-	1	1	1
C309.3	3	1	-	1	1	-	-	-	-	-	-	1	1	1
AVERAGE	3	1	-	1	1	-	-	-	-	-	-	1	1	1

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8691

Subject Name: MICROPROCESSORS AND MICROCONTROLLERS

CO No.	Course Outcomes	RBT Level
C310.1	Outline basics of 8086 and execute programs based on 8086 microprocessors.	K2
C310.2	Develop Memory Interfacing circuits.	K3
C310.3	Experiment with I/O interface circuits based on 8086 microprocessors.	K3
C310.4	Summarize the basics of 8051 and execute programs based on 8051 microcontrollers.	K2
C310.5	Construct a system based on 8051 microcontrollers.	K4

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C310.1	3	1	-	-	-	-	-	-	-	-	-	-	-	-
C310.2	3	1	1	-	-	-	-	-	-	-	-	-	-	-
C310.3	3	2	2	1	1	-	-	-	2	1	1	1	1	2
C310.4	3	1	-	-	-	-	-	-	-	-	-	-	-	-
C310.5	3	2	2	2	2	-	-	-	2	1	1	2	1	2
AVERAGE	3	1.4	1.6	1.5	1.5	-	-	-	2	1	1	1.5	1	2

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Subject Code: EC8095

Subject Name: VLSI Design

CO No.	Course Outcomes	RBT Level
C311.1	Realize the concepts of digital building blocks using MOS transistor.	K2
C311.2	Design combinational MOS circuits and power strategies.	K3
C311.3	Design and construct Sequential Circuits and Timing systems.	K3
C311.4	Design arithmetic building blocks and memory subsystems.	K3
C311.5	Apply and implement FPGA design flow and testing.	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C311.1	3	-	1	-	1	-	-	-	-	-	-	-	-	-
C311.2	3	1	2	1	1	-	-	-	-	-	-	-	-	-
C311.3	3	1	2	1	1	-	-	-	-	-	-	-	-	-
C311.4	3	1	2	-	1	-	-	-	-	-	-	-	-	-
C311.5	3	-	1	-	1	-	-	-	-	-	-	-	-	-
AVERAGE	3	1	1.6	1	1	-	-	-	-	-	-	-	-	-

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Subject Code: EC8652

Subject Name: Wireless Communication

CO No.	Course Outcomes	RBT Level
C312.1	Able to analyse various characteristics of communication channels.	K3
C312.2	Able analyse and select multiple access techniques for cellular networks.	K3
C312.3	Understand the various digital modulation schemes.	K2
C312.4	Compare multipath mitigation techniques and analyze their performance.	K3
C312.5	Design and implement MIMO system with transmits/receive diversity.	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C312.1	3	2	-	-	-	-	-	-	-	-	-	-	1	-
C312.2	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C312.3	3	2	1	1	1	-	-	-	-	-	-	-	1	-
C312.4	2	1	-	-	-	-	-	-	-	-	-	-	1	-
C312.5	2	1	-	-	-	-	-	-	-	-	-	-	1	-
AVERAGE	2.6	1.6	1	1	1	-	-	-	-	-	-	-	1	-

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Subject Code: MG8591

Subject Name: PRINCIPLES OF MANAGEMENT

CO No.	Course Outcomes	RBT Level
C313.1	Understanding of Managerial functions like planning, organizing, staffing, leading & controlling and have same basic knowledge on international aspect of management	K2
C313.2	Understanding of Planning	K2
C313.3	Understanding of, organizing.	K2
C313.4	Understanding of Directing	K2
C313.5	Understanding of controlling.	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C313.1	-	-	-	-	-	1	1	-	3	-	-	1	-	-
C313.2	-	-	-	-	-	-	-	-	-	-	-	1	-	-
C313.3	-	-	-	-	-	-	-	-	-	-	-	1	-	-
C313.4	-	-	-	-	-	-	-	-	-	-	3	1	-	-
C313.5	-	-	-	-	1	-	-	-	3	1	3	1	-	-
AVERAGE	-	-	-	-	1	1	1	-	3	1	3	1	-	-

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Subject Code: EC8651

Subject Name: TRANSMISSION LINES AND RF SYSTEMS

CO No.	Course Outcomes	RBT Level
C314.1	Explain the characteristics of transmission lines and its losses	K2
C314.2	transmission lines	K1
C314.3	Analyze impedance matching by stubs using smith charts.	K3
C314.4	Analyze the characteristics of TE and TM waves	K3
C314.5	Design a RF transceiver system for wireless communication	K4

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C314.1	3	1	1	-	-	-	-	-	-	-	-	-	1	-
C314.2	3	1	1	-	-	-	-	-	-	-	-	-	1	-
C314.3	3	2	1	1	1	-	-	-	-	-	-	-	1	-
C314.4	3	1	-	-	-	-	-	-	-	-	-	-	1	-
C314.5	3	1	1	-	-	-	-	-	-	-	-	-	1	-
AVERAGE	3	1.2	1	1	1	-	-	-	-	-	-	-	1	-

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Subject Code: EC8004

Subject Name: Wireless Networks

CO No.	Course Outcomes	RBT Level
C315.1	Understand wireless network environment for any application using latest wireless protocols and standards	K1
C315.2	Ability to select the suitable network depending on the availability and requirement	K3
C315.3	Conversant with the latest 3G networks and its architecture	K1
C315.4	Implement different type of applications for smart phones and mobile devices with latest network strategies	K2
C315.5	Conversant with the latest 4G networks and its architecture.	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C315.1	3	1	-	-	-	-	-	-	-	-	-	-	1	-
C315.2	3	2	1	1	-	-	-	-	-	-	-	-	1	-
C315.3	3	1	-	-	-	-	-	-	-	-	-	-	1	-
C315.4	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C315.5	3	1	-	-	-	-	-	-	-	-	-	-	1	-
AVERAGE	3	1.4	1	1	-	-	-	-	-	-	-	-	1	-

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Subject Code: EC8681

Subject Name: MICROPROCESSORS AND MICROCONTROLLERS LABORATORY

CO No.	Course Outcomes	RBT Level
C316.1	Write ALP Programmes for fixed and Floating Point and Arithmetic	K3
C316.2	Interface different I/Os with processor and Generate waveforms using Microprocessors	K3
C316.3	Execute Programs in 8051	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C316.1	3	2	1	1	1	1	1	-	1	1	1	1	1	2
C316.2	3	2	1	1	1	1	1	-	1	1	1	1	1	2
C316.3	3	2	1	1	1	1	1	-	1	1	1	1	1	2
AVERAGE	3	2	1	1	1	1	1	-	1	1	1	1	1	2

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Subject Code: EC8661

Subject Name: VLSI Design Laboratory

CO No.	Course Outcomes	RBT Level
C317.1	To design, implement and perform the pre synthesis and post synthesis simulation the list of combinational and sequential digital circuits using Verilog HDL and FPGA	K3
C317.2	To design, simulate and analyze the CMOS inverter, Basic gates, flip flops and counters using EDA tools	K4
C317.3	To design, simulate and analyze the CMOS inverting amplifier, Common source, gate & drain amplifiers and transistor differential amplifier using EDA tools	K4

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C317.1	3	2	2	-	2	1	-	-	1	1	-	1	1	-
C317.2	3	2	2	1	3	1	-	-	1	1	-	1	1	-
C317.3	3	2	2	1	3	1	-	-	1	1	-	1	1	-
AVERAGE	3	2	2	1	2.6	1	-	-	1	1	-	1	1	-

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Subject Code: HS8581

Subject Name: PROFESSIONAL COMMUNICATION

CO No.	Course Outcomes	RBT Level
C318.1	Make effective presentations	K1
C318.2	Participate confidently in Group Discussions.	K2
C318.3	Attend job interviews and be successful in them.	K1
C318.4	Develop adequate Soft Skills required for the workplace	K1
C318.5	Develop their confidence and able to attend interviews successfully	K1

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C318.1	-	-	-	-	-	-	-	-	1	3	-	1	-	-
C318.2	-	-	-	-	-	-	-	-	1	3	-	1	-	-
C318.3	-	-	-	-	-	-	-	-	1	3	-	1	-	-
C318.4	-	-	-	-	-	-	-	-	1	3	-	1	-	-
C318.5	-	-	-	-	-	-	-	-	1	3	-	1	-	-
AVERAGE	-	-	-	-	-	-	-	-	1	3		1	-	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8701

Subject Name: Antennas and Microwave Engineering

CO No.	Course Outcomes	RBT Level
C401.1	Explain the fundamentals of antennas and wave propagation.	k2
C401.2	Write about the radiation of Microstrip and Reflector antennas.	k2
C401.3	Analyze the -importance of frequency independent antennas.	k4
C401.4	Analyze various antenna arrays and smart antennas.	k4
C401.5	Understand and design the microwave amplifier, filters and mixer circuits.	k3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C401.1	3	1	1	1	1	-	-	-	-	-	-	-	1	-
C401.2	3	2	1	1	2	-	1	1	1	1	1	-	1	-
C401.3	3	1	2	1	2	-	-	-	-	-	-	-	1	-
C401.4	3	-	1	1	-	-	-	-	-	-	-	-	1	-
C401.5	3	1	1	1	1	-	-	-	-	-	-	-	1	-
AVERAGE	3	1.3	1.2	1	1.5	-	1	1	1	1	1	-	1	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8751

Subject Name: Optical Communication

CO No.	Course Outcomes	RBT Level
C402.1	Realize basic elements in optical fibers, different modes and configurations.	K2
C402.2	Analyze the transmission characteristics associated with dispersion and polarization techniques.	K3
C402.3	Design optical sources and detectors with their use in optical communication system.	K3
C402.4	Construct fiber optic receiver systems, measurements and coupling techniques.	K3
C402.5	Design optical communication systems and its networks.	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C402.1	3	2	1	1	-	-	-	-	-	-	-	-	2	-
C402.2	3	3	2	2	-	-	-	-	-	-	-	-	2	-
C402.3	3	2	2	2	-	1	-	-	-	-	-	-	2	-
C402.4	3	2	2	2	-	1	-	-	-	-	-	-	2	-
C402.5	3	2	3	2	-	1	-	-	-	-	-	-	2	1
AVERAGE	3	2.2	2	1.8	-	1	-	-	-	-	-	-	2	1

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Subject Code: EC8791

Subject Name: Embedded and Real Time Systems

CO No.	Course Outcomes	RBT Level
C403.1	Outline the concepts of embedded systems	K1
C403.2	Describe the architecture and programming of ARM processor	K2
C403..3	Describe the models and compoents of embedded program	K2
C403..4	Explain the basic concepts of real time operating system design	K1
C403.5	Model real-time applications using embedded-system concepts	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C403.1	3	1	2	-	1	1	-	-	1	-	2	-	-	3
C403.2	3	-	-	-	-	-	-	-	-	-	-	-	-	3
C403.3	3	1	1	-	1	-	-	-	-	-	-	-	-	3
C403.4	3	-	-	-	-	-	-	-	-	-	-	-	-	3
C403.5	3	2	2	1	1	1	-	-	1	1	1	1	1	3
AVERAGE	3	1.3	1.7	1	1	1	-	-	1	1	1.5	1	1	3

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Subject Code: EC8702

Subject Name: Ad hoc and Wireless Sensor Networks

CO No.	Course Outcomes	RBT Level
C404.1	Apply this knowledge to identify the suitable routing algorithm based on the network and user requirement	K2
C404.2	Be familiar with Wireless Sensor Networks and build basic modules	K3
C404.3	Apply the knowledge to identify appropriate physical and MAC layer protocols	K3
C404.4	Understand the transport layer and security issues possible in Ad hoc and sensor networks.	K3
C404.5	Be familiar with the OS used in Wireless Sensor Networks and build basic modules	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C404.1	3	2	2	1	1	-	-	-	-	-	-	-	2	-
C403.2	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C404.2	3	2	2	1	1	-	-	-	-	-	-	-	2	-
C404.3	3	2	1	1	1	-	-	-	-	-	-	-	2	-
C404.4	2	2	1	1	2	-	-	-	-	-	-	-	2	-
AVERAGE	2.8	2	1.4	1	1.3	-	-	-	-	-	-	-	1.8	-

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Subject Code: EC8071

Subject Name: Cognitive Radio

CO No.	Course Outcomes	RBT Level
C405.1	Gain knowledge on the design principles on software defined radio and cognitive radio	K1
C405.2	Develop the ability to design and implement algorithms for cognitive radio	K2
C405.3	Gain knowledge on spectrum sensing and dynamic spectrum access	K2
C405.4	Build experiments and projects with real time wireless applications	K2
C405.5	Apply the knowledge of advanced features of cognitive radio for real world applications	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C405.1	3	2	-	-	-	-	-	-	-	-	-	-	1	-
C405.2	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C405.3	3	2	1	1	1	-	-	-	-	-	-	-	2	-
C405.4	2	1	-	-	-	-	-	-	-	-	-	-	1	-
C405.5	2	1	-	-	-	-	-	-	-	-	-	-	1	-
AVERAGE	2.6	1.6	1	1	1	-	-	-	-	-	-	-	1.2	-

R. A

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: OC751

Subject Name: Transducer Engineering

CO No.	Course Outcomes	RBT Level
C406.1	Acquire the knowledge on how physical quantities are measured and how they are converted to electrical or other forms.	K3
C406.2	Understand knowledge in resistance, transducers.	K2
C406.3	Cultivate the knowledge of inductance and capacitance transducers.	K1
C406.4	Learning the characteristics of Transducers.	K1
C406.5	Understand knowledge on various types of transducers	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C406.1	3	2	2	-	-	-	-	-	-	-	-	-	1	-
C406.2	3	2	1	-	-	-	-	-	-	-	-	-	1	-
C406.3	2	2	2	-	-	-	-	-	-	-	-	-	1	-
C406.4	2	1	1	-	-	-	-	-	-	-	-	-	1	-
C406.5	3	1	2	-	-	-	-	-	-	-	-	-	1	-
AVERAGE	2.6	1.6	1.6	-	-	-	-	-	-	-	-	-	1	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC8711

Subject Name: Embedded Laboratory

CO No.	Course Outcomes	RBT Level
C407.1	Write programs in ARM for a specific Application, Interface memory, A/D and D/A convertors with ARM system	K3
C407.2	Analyse the performance of interrupt	K3
C407.3	Write program for interfacing keyboard, display, motor and sensor. Formulate a mini project using embedded system	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C407.1	3	2	2	1	2	1	-	-	1	1	1	1	-	3
C407.2	3	2	2	1	2	1	-	-	1	1	1	1	1	3
C407.3	3	2	2	1	2	1	-	-	1	1	1	1	-	3
AVERAGE	2.9	1.9	1.9	1	2	1	-	-	1	1	1	1	1	3

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Subject Code: EC8761

Subject Name: Advanced Communication Laboratory

CO No.	Course Outcomes	RBT Level
C408.1	Analyze the performance of simple optical link by measurement of losses and analysing the mode characteristics of fiber and analyze the Eye Pattern, Pulse broadening of optical fiber and the impact on BER.	K3
C408.2	Estimate the Wireless Channel Characteristics and Analyze the performance of Wireless Communication System	K3
C408.3	Understand the intricacies in Microwave System design	K2

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C408.1	3	3	2	3	1	-	-	1	2	-	1	1	2	-
C408.2	3	3	3	3	3	1	-	1	2	-	1	1	2	-
C408.3	3	3	2	3	1	-	-	1	2	-	1	1	2	-
AVERAGE	2	3	2	3	2	1	-	1	2	-	1	1	2	-

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Subject Code: EC8094

Subject Name: Satellite Communication

CO No.	Course Outcomes	RBT Level
C409.1	Analyze the satellite orbits	K3
C409.2	Analyze the earth segment and space segment	K3
C409.3	Analyze the satellite Link design	K3
C409.4	Analyze different access and coding schemes	K2
C409.5	Design various satellite applications	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C409.1	3	1	-	-	-	-	-	-	-	-	-	-	2	-
C409.2	3	1	-	-	-	-	-	-	-	-	-	-	2	-
C409.3	3	1	-	-	-	1	-	-	-	-	-	-	2	-
C409.4	3	1	-	-	-	-	-	-	-	-	-	-	2	-
C409.5	3	1	-	-	-	1	-	-	-	-	-	-	2	-
AVERAGE	3	1	-	-	-	1	-	-	-	-	-	-	2	-

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Subject Code: EC6011

Subject Name: Electromagnetic Interference and Compatibility

CO No.	Course Outcomes	RBT Level
C410.1	Gain Knowledge regarding the basic concept of EMI / EMC	K2
C410.2	Analyze the different EM coupling principles and its impact on performance of electronic system.	K3
C410.3	Demonstrate the different types of mitigation Techniques.	K3
C410.4	Discuss and Understand about the industry standards in different countries.	K2
C410.5	Explain the various EM radiation measurement techniques	K3

MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAMME SPECIFIC OUTCOMES

CO No	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
C410.1	3	1	-	-	-	-	-	-	-	-	-	-	1	-
C410.2	3	3	-	1	-	-	1	-	-	-	-	-	2	-
C410.3	3	1	1	-	-	-	-	-	-	-	-	-	1	-
C410.4	2	1	-	-	-	-	-	-	-	-	-	-	-	-
C410.5	3	2	-	1	-	-	1	-	-	-	-	-	1	-
AVERAGE	2.7	1.3	1	1	-	-	1	-	-	-	-	-	1	-

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Department of Electronics and communication Engineering

Program Outcomes:

Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of theinformation to provide valid conclusions.
5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant tothe professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning**: Recognize the need for, and have the preparation and ability to engage inindependent and life-long learning in the broadest context of technological change.

Program Specific Outcomes :

PSO1: To analyze, design and develop quality solutions in Communication Engineering by adapting the emerging technologies.

PSO2 : To innovate ideas and solutions for real time problems in industrial and domestic Automation using Embedded & IOT tools.