IDHAYA ENGINEERING COLLEGE FOR WOMEN

CHINNASALEM-606 201, VILLUPURAM DISTRICT, TAMIL NADU, INDIA.
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.
An ISO 9001: 2015 Certified Institution
A Christian Minority Institution run by the Franciscan Sisters of the Immaculate Heart of Mary Society, Puducherry.
Phone: 04151-258325, 258326
Website: www.iecw.edu.in Email ID: idhaya@iecw.edu.in

COURSE OUTCOMES FOR

M.E. COMMUNICATION SYSTEMS

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	DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING - M.E.CSE
	Regulation 2017
	MA5154-Applied Mathematics for Communication Engineers
C101.1	**Concepts** on vector spaces, linear transformation, inner product spaces, eigenvalues and generalized eigenvectors.
C101.2	**Apply** various methods in linear algebra to solve system of linear equations.
C101.3	Using discrete time Markov chains to **model** computer systems.
C101.4	**Numerical solution** of differential equations by single and multistep methods.
C101.5	**Computation** of probability, random variables and their associated distributions, correlations and regression.
	CU5191-Advanced Radiation Systems
C102.1	**Ability** to understand antenna concepts
C102.2	**Ability** to design antenna for various applications
C102.3	**Knowledge** of modern antenna design
	CU5151-Advanced Digital Communication Techniques
C103.1	**Develop** the ability to understand the concepts of signal space analysis for coherent and non-coherent receivers.
C103.2	**Conceptually** appreciate different Equalization techniques
C103.3	**Possess** knowledge on different block codes and convolutional codes.
C103.4	**Comprehend** the generation of OFDM signals and the techniques of multiuser detection.
	AP5152-Advanced Digital Signal Processing
C104.1	**Formulate** time domain and frequency domain description of Wide Sense Stationary process in terms of matrix algebra and relate to linear algebra concepts.
C104.2	**State** Parseval‟s theorem, W-K theorem, principle of orthogonality, spectral factorization theorem, Widrow-Hoff LMS algorithm and Shannon‟s sampling theorem, and define linear prediction, linear estimation, sample auto-correlation, periodogram, bias and consistency.
C104.3	**Explain** various noise types, Yule-Walker algorithm, parametric and non-parametric methods, Wiener and Kalman filtering, LMS and RMS algorithms, Levinson Durbin algorithm, adaptive noise cancellation and adaptive echo cancellation, speed verses convergence issues, channel equalization, sampling rate change, subband coding and wavelet transform.
C104.4	**Calculate** mean, variance, auto-correlation and PSD for WSS stochastic processes, and derive prediction error criterion, Wiener-Hoff equations, Parseval‟stheorem,W-K theorem and normal equations.
C104.5	**Design** AR, MA, ARMA models, Weiner filter, anti aliasing and anti imaging filters, and develop FIR adaptive filter and polyphase filter structures.

	CU5192-Optical Networks
C105.1	**Design** and Analyze Network Components
C105.2	**Assess** and Evaluate optical networks
	CU5091 - Advnced Satellite Communication and Navigation System
C106.1	**Discuss** satellite navigation and global positioning system
C106.2	**Outline** deep space networks and inter planetary missions
	CU5161-Communication Systems Laboratory
C107.1	**Measure** and analyze various transmission line parameters.
C107.2	**Design** Microstrip patch antennas.
C107.3	**Implement** the adaptive filtering algorithms
C107.4	To **generate** and detect digital communication signals of various modulation techniques using MATLAB.
C107.5	**Evaluate** cellular mobile communication technology and propagation model.
	CU5291-Advanced Wireless Communication Systems
C208.1	**Analyze** MIMO system.
C208.2	**Discuss** millimeter wave communication.
C208.3	**Demonstrate** software defined radio and cognitive radio.
	CU5201-MIC and RF System Design
C209.1	Capability to **design** RF circuits.
C209.2	To be able to **analyze** RF circuits.
	CU5292-Electromagnetic Interference and Compatibility
C210.1	**Identify** Standards
C210.2	**Compare** EMI test methods
C210.3	**Discuss** EMI mitigation techniques
	CU5071 - Digital Communication Receivers
C211.1	**Apply** basic principles of digital communication techniques
C211.2	**Discuss** on receivers for AWGN & Fading channel
C211.3	**Describe** various synchronization techniques
C211.4	**Design** adaptive equalization algorithms to satisfy the evolving demands in digital communication
	DS5291 - Advanced Digital Image Processing
C212.1	**Explain** the fundamentals digital image processing

C212.2	**Describe** image various segmentation and feature extraction techniques for image analysis
C212.3	**Discuss** the concepts of image registration and fusion
C212.4	**Explain** 3D image visualization
	CU5096 - Pattern Recognition and Machine Learning
C213.1	**Classify** the data and identify the patterns
C213.2	**Utilize** the given data set to extract and select features for Pattern recognition
C213.3	**Describe** the decision tree and concept learning
C213.4	**Discuss** on recent advances in pattern recognition
	CU5211-RF System Design Laboratory
C214.1	**Apply** knowledge to identify a suitable architecture and systematically design an RF system.
C214.2	**Comprehensively** record and report the measured data, and would be capable of analyzing, interpreting the experimentally measured data and produce the meaningful conclusions.
C214.3	**Design** and develop microstrip filters.
	CP5281-Term Paper Writing and Seminar
C215.1	**Ability** to understand Millimeter devices and circuits
C215.2	**Ability** to design antenna for Millimeter wave frequencies
C215.3	**Knowledge** of Millimeter wave technology
	CU5301-Millimeter Wave Communication
C301.1	**Ability** to understand Millimeter devices and circuits
C301.2	**Ability** to design antenna for Millimeter wave frequencies
C301.3	**Knowledge** of Millimeter wave technology
	MU5091 - Multimedia Compression Techniques
C302.1	**Implement** basic compression algorithms with MATLAB and its equivalent open source environments.
C302.2	**Design** and implement some basic compression standards.
C302.3	Critically **analyze** different approaches of compression algorithms in multimedia related mini projects.

ABBREVIATIONS

C101.1 **C stands for Course**

1 stands for year of study

01 stands for first paper as per the curriculum

.1 stands for Outcomes for particular course

***The same format is followed for remaining years and courses**