K.L.N.COLLEGE OF ENGINEERING, POTTAPALAYAM.

DEPARTMENT OF ECE

M.E. COMMUNICATION SYSTEMS - COURSE OUTCOMES (CO)

REGULATIONS – 2013

COURSE CODE	SEM	COURE CODE	COURSE NAME	COURSE OUTCOMES
C111	**I**	MA7158	Applied Mathematics for Communication Engineers	CO I :To use QR factorization, for finding eigen values, To find singular value decomposition,
				CO II :To solve the linear programming problem by graphical method, simplex method, Big M meth
				CO III :To solve difrefential equations by using Runge Kutta method multistep method. Finite Differ method, shooting element method.Orthogonal collocation method andGalerkinâ finite
				CO IV: To find marginal and conditional density functions of discrete and continuous two dimensio variables, to evaluate correlation co efficient regression lines, regression curves
				CO V: To apply the concept of various queueing models single server, multiserver, with finite and i queue capacity, self service queue model and machine servicing model
C112	**I**	CU7101	Advanced Radiation Systems	CO I :The student must be familiar with fundamental antenna parameters and specifications for ante
				CO II :The students should understand the concepts of several aperture antennas and their advantage
				CO III :The student must be familiar with the reasons for arrays antennas
				CO IV :The students must understand various microstripantenna and typical uses for them
				CO V :The student must understand the concepts of antenna measurements
C113	**I**	CU7102	Advanced Digital Communication Techniques	CO I: Develop the ability to understand the concepts of signal space analysis coherent and nocoherre receivers.
				CO II: Conceptually appreciate different Equalizatin techniques.
				CO III : Possess knowledge on different block codes
				CO IV: Possess knowledge on convolutional codes and viterbi algorithm.
				CO V:Comprehend the generation of OFDM signals and the processing of the signals.
C114	**I**	AP7101	Advanced Digital Signal Processing	CO I: design a model for different random processes
				CO II : estimate spectrum using parametric and non-parametric methods

			CO III : design optimum filter and predictor
			CO IV: design the Adaptive Filters for equalization.
			CO V : design multirate DSP systems
C115	**I**	CU7103	Optical Networks
			CO I: The students will be able to understand the different optical components such as multiplexers, filters etc., needed to build a network
			CO II : The students will be able to understand broadcast and select WDM networks that are suitable and MANs.
			CO III : The students will be able to understand several wavelength routing
			CO IV : The Student will be able to understandOTDM and various issues associated with deploying technology in different types ofnetwork
			CO V : The students will be able to design understand the control and management aspects ofoptical including connection management, fault management and safety management
C116	**I**	CU7001	Real Time Embedded Systems
			CO I: Describe the requirements of various components and devices of embedded computing.
			CO II: Discuss the various types of computing platforms and its design analysis
			CO III : Discuss the various types of process control systems and the real-time operating systems
			CO IV : Explain the various hardware accelerators and its network connectivity
			CO V : Synthesizing of real-time digital embedded architectures and its design issues
C117	**I**	CU7111	Communication Systems Laboratory
			CO I: Use network analyzer for measuring transmission line parameters and S- parameters
			CO II: Use network analyzer for testing Microstrip couplers and transmission line parameters.
			CO III : Design channel equalizer and measure antenna radiation pattern using simulation tool.
			CO IV: Evaluate the performance of CDMA systems and Digital modulation schemes.
			CO V: Design micro strip antennas using simulation software.
C121	**II**	CU7201	Wireless Communication Networks
			CO I: Describe the various methods of propagation of EM signals in wireless channel and understand various channel classification and channel models.
			CO II: Discuss about the channel capacity of AWGN, flat and frequency selective fading channel and the transmitter and receiver diversity .
			CO III: Discuss MIMO channel capacity. and understand Space time Modulation and coding .

				CO IV: Describe the various multiple access techniques and random access techniques for multiuser and can derive uplink and downlink channel capacity of multiuser systems.
				CO V: Explain 3G systems and 3GPP network architecture and familiar with 4G features and challe
C122	**II**	CU7202	MIC and RF System Design	CO I: To understand the fundamentals of RF radio system design.
				CO II: To understand the various components such as amplifiers, impedance matching networks that an RF radio system for wireless communication
				CO III: To know the basic analysis techniques such as stability, linearization techniques needed for e the performance of an RF radio system for Wireless applications.
				CO IV: To design RF circuits as filters oscillators and mixers
				CO V: To analyze the performance of RF circuits
C123	**II**	AP7301	Electromagnetic Interference and Compatibility	CO I: Describe the sources & victims of EMI and about EMC.
				CO II: Explain the different methods of coupling
				CO III: Describe the EMI control techniques and reduce crosstalk.
				CO IV: Design high speed PCB with minimum interference.
				COV: Study the EMI standards and measurement techniques to make our world free from unwanted electromagnetic environment.
C124	**II**	VL7013	VLSI for Wireless Communication	CO I: To study the design concept of Low noise Amplifiers (LNA)
				CO II: To study the various types of mixess designed for wireless communication
				CO III: To study and design Phase Locked Loop (PLL) and Voltage Controlled Oscillator (VCO)
				CO IV: To understand the concept of CDMA in wireless communication
				CO V:To study the VLSI architecture for Multi-tier wireless systems.
C125	**II**	DS7201	Advanced Digital Image Processing	CO I: To understand the image fundamentals and mathematical transforms necessary for imageProce to study the image enhancement techniques
				CO II: To understand the image segmentation and representation techniques
				CO III: To understand how imageare analyzed to extract features of interest.
				CO IV: To introduce the concepts of image registration and image fusion
				CO V: To analyze the constraints in image processing when dealing with 3D data sets.

C126	**II**	NC7101	High Performance Networks	CO I: The student will be able recall the networking concept CO II: The student will be able develop a comprehensive undertaking of multimedia networking CO III: The student will be able to study the types of VPN and tunneling protocols for security CO IV: The student will be able understand the traffic modelling in the network CO V: The student will able learn about network security in many layers and networks management
C127	**II**	CU7211	Innovative System Design Laboratory	CO I: To identify socially relevant issues and solve the problems CO II: Apply knowledge to complex problems and evolve feasible solutions. CO III: Able to think of creative solutions for the prototype and innovative systems. CO IV: Able to comprehensively record and report the measured data, write reports communicate re and do oral presentations effectively. CO V: Able to communicate research ideas and do oral presentations effectively
C231	**III**	CU7301	Advanced Satellite Based Systems	CO I: I understand the Navigation, Tracking and Safety System of GPS CO II: I understand the inertial navigation of GPS System CO III: I understand the Sensing and Image processing systems CO IV: I understand the DTH and other broadcast Systems CO V: I understand the Network of Systems with IPV6
C232	**III**	NC7002	Multimedia Compression Techniques	CO I: To explain scalar and vector quantization theory. Also they will be able to represent the multim in different formats for various applications. CO II: To understand different coding techniques and apply various algorithms for text compression CO III: To employ various audio and speech compression techniques for practical applications. CO IV: To describe Contour based compression and other image compression techniques ,Also they to implement the compression techniques in MATLAB CO V: To apply various video compression algorithms for practical applications
C233	**III**	NE7007	Network Management	CO I: I will be able to learn about the current status and future of network CO II: I will be able to study about the Macros functional model CMIP/CMIS CO III:I will be able to learn about the RMON & SNMP

			CO IV: I will be able to understand the TMN model
			CO V: I will be able to study about the XML based network management
C234	**III**	CU7311	Project Work (Phase I)
			CO I: apply relevant knowledge and skills to Identify challenging practical problems, solutions to co present scenario of Electronics and Communication Engineering Field
			CO II: analyze and discuss complex problems on the advanced level
			CO III: apply technical knowledge and project management skills for solving the problem
			CO IV: Design and develop hardware and/or software for their project Specific problem.
			CO V: be able to document and present one work with requirements on structure, format, and langua
C241	**IV**	CU7411	Project Work (Phase II)
			CO I: apply relevant knowledge and skills to Identify challenging practical problems, solutions to co present scenario of Electronics and Communication Engineering Field
			CO II: analyze and discuss complex problems on the advanced level
			CO III: apply technical knowledge and project management skills for solving the problem
			CO IV: Design and develop hardware and/or software for their project Specific problem.
			CO V: be able to document and present one work with requirements on structure, format, and langua