



# RVS COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE – 641 402

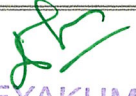
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

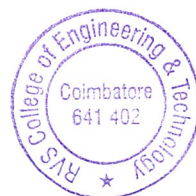
M E - COMMUNICATION SYSTEMS

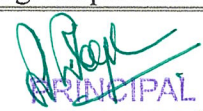
COURSE OUTCOMES

Regulation – 2021

COURSE ID	SEMESTER	COURSE CODE	COURSE NAME	COURSE OUTCOMES	
C101	I	MA4156	Linear Algebra, Probability and Queuing Theory	CO1	Apply various methods in Linear Algebra to solve the system of linear equations.
				CO2	Use two-dimensional random variables, correlations and regression in solving application problem.
				CO3	Apply the ideas of Random Processes.
				CO4	Understand the basic characteristic features of a queuing system and acquire skills in analyzing queuing models.
				CO5	Apply the Simplex method for solving linear programming problems.
C102	I	RM4151	Research Methodology and IPR	CO1	Understand the research problem and research process
				CO2	Understand research ethics
				CO3	Prepare a well-structured research paper and scientific presentations
				CO4	Explore on various IPR components and process of filing.
				CO5	Understand the adequate knowledge on patent and rights
C103	I	DS4152	Statistical Signal Processing	CO1	Analyze discrete time random processes
				CO2	Apply appropriate model for estimation and signal modelling for the given problem

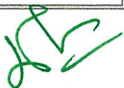
  
**Dr. D. JEYAKUMARI**  
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				CO3	Analyze non-parametric and parametric methods for spectral estimation
				CO4	Design optimum filter for the given problem
				CO5	Design adaptive filters for different applications
C104	I	EL4151	Modern Digital Communication Systems	CO1	Differentiate coherent and non coherent receivers and analyse their performance under AWGN channel conditions
				CO2	Illustrate the effect of signalling through band limited channels and Equalization techniques used to overcome ISI
				CO3	Determine the channel capacity and design various block coding techniques to combat channel errors
				CO4	Construct convolution coders and analyze the performance of different decoding techniques.
				CO5	Describe the basics of OFDM as a multicarrier communication and CDMA as a multiuser communication technique.
C105	I	CU4151	Advanced Wireless Communication	CO1	Analyze the wireless channel characteristics and identify appropriate channel models
				CO2	Understand the mathematics behind the capacity calculation under different channel conditions
				CO3	Understand the implication of diversity combining methods and the knowledge of channel
				CO4	Understand the concepts in MIMO Communications
				CO5	Understand multiple access techniques and their use in different multi
C106	I	CU4152	Radiating Systems	CO1	Understand the fundamentals behind the different techniques in antenna technology.
				CO2	Understand the challenges associated in designing antennas based on different technologies
				CO3	Understand the capability and assess the performance of various antennas.
				CO4	Identify the antennas specific to the applications
				CO5	Understand the need for optimizing in antenna design and the methodologies for the same.


  
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C107	I	EL4161	Digital Communication Systems Laboratory	CO1	Implement the adaptive filtering algorithms Generate and detect digital communication signals of various modulation techniques
				CO2	Using MATLAB. Evaluate cellular mobile communication technology and propagation model.
				CO3	Apply mathematical formulation to analyze spectrum estimation of a signal and bit rate.
				CO4	Determination of a transmission link Analyze the performance of optimization algorithms for equalizing the channel or noise/echo cancellation
				CO5	Able to design synchronization algorithm for Digital Communication systems
C108	I	CU4161	Advanced Digital Signal Processing Laboratory	CO1	Generate deterministic/Random sequences using simulation tool
				CO2	Design and analyze the frequency response of FIR/IIR digital filters for the given specifications.
				CO3	Estimate power spectrum of the given random sequence using parametric/nonparametric estimation methods
				CO4	Implement adaptive filters using LMS/RLS algorithm.
				CO5	Analyze the discrete time systems at various sampling rates
C109	II	CU4251	RF System Designs	CO1	Understand the specifications of transceiver modules
				CO2	Understand pros and cons of transceiver architectures and their associated design considerations
				CO3	Understand the impact of noise and amplifier non-linearity of amplification modules and also will learn the resultant effect during cascade connections
				CO4	Get exposure to learn about spurs and generation principles during signal generation and frequency translations
				CO5	Understand the case study of transceiver systems and aid to select specification parameters selections
C110	II	CU4201	Microwave Integrated Circuits	CO1	Understand the concepts of planar transmission line
				CO2	Design impedance matching circuits using LC components and stubs
				CO3	Design and analyze microwave components.
				CO4	Perform stability analysis and be able to design amplifiers and oscillators at


  
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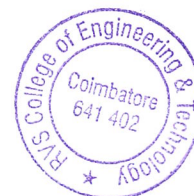


  
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					microwave frequencies.
				CO5	Perform simulations, fabricate and test microwave devices.
C111	II	CU4202	Advanced Wireless Networks	CO1	Know the latest 4G networks and LTE
				CO2	Understand about the wireless IP architecture and LTE network architecture.
				CO3	Know the adaptive link layer and network layer graphs and protocol.
				CO4	Understand the mobility management and cellular network.
				CO5	Understand the wireless sensor network architecture and its concept.
C112	II	CP4252	Machine Learning	CO1	Understand and outline problems for each type of machine learning
				CO2	Design a Decision tree and Random forest for an application
				CO3	Implement Probabilistic Discriminative and Generative algorithms for an application and analyze the results.
				CO4	Use a tool to implement typical Clustering algorithms for different types of applications
				CO5	Design and implement an HMM for a Sequence Model type of application.
C113	II	CU4071	Advanced Satellite Communication and Navigation Systems	CO1	Discuss Satellite navigation and global positioning system
				CO2	Outline deep space networks and inter planetary missions
				CO3	Able to demonstrate an understanding of the different interferences and attenuation mechanisms affecting the satellite link designing
				CO4	The student would be able to demonstrate an understanding of the different communication, sensing and navigational applications of satellite.
				CO5	Familiar with the implementation aspects of existing satellite based systems
C114	II	CU4002	mm Wave Communication P	CO1	Understand the Millimeter wave characteristics and implementation challenges faced
				CO2	Understand Millimeter devices and circuits
				CO3	Apply his knowledge on the Modulation techniques for millimeter wave communications
				CO4	Design antenna for Millimeter wave frequencies
				CO5	Familiar with Millimeter wave technology

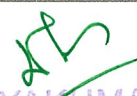
  
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C115	II	CU4211	Wireless Communication Laboratory	CO1	The student would be able to design and conduct experiments to demonstrate the trade-offs involved in the design of basic and advanced coding and modulation techniques and the advanced baseband signal conditioning methods.
				CO2	The student would be capable of applying communication engineering principles and design tools and will be well practiced in design skills.
				CO3	The student would be able to comprehensively record and report the measured data, write reports, communicate research ideas and do oral presentations effectively.
				CO4	The student would be capable of analyzing and interpreting the experimental measurement data and produce meaningful conclusions
				CO5	Able to communicate research ideas and do oral presentations effectively
C116	II	CU4212	Term Paper and seminar	CO1	Identify the Domain Specific Objective
				CO2	Summarize the literature Survey
				CO3	Analyzing different Methodologies
				CO4	Produce Final Draft of the Research Paper
				CO5	Prepare Presentation for the research undergone
C117	III	CU4301	Optical Communication and Networking	CO1	Able to demonstrate an understanding of the differences and challenges involved in the design of optical systems and networks.
				CO2	In a position to apply his knowledge for designing a fiber optic system addressing the channel impairments.
				CO3	Familiar with the architectures and the protocol stack in use.in optical networks and would be able to identify a suitable backbone infrastructure for our present and future communication needs.
				CO4	Able to understand how connections are managed in the network and the pros and cons of the different approaches
				CO5	Able to appreciate the need for network survivability and the methodologies used.
C118	III	CU4074	Ultra Wide Band Communications	CO1	Describe the multimedia Networking
				CO2	Explain UWB Signal Processing.
				CO3	Apply knowledge to UWB Technologies.

  
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				CO4	Able to assess the performance of UWB channels.
				CO5	Design UWB antenna for various applications.
C119	III	VE4072	Real Time Embedded Systems	CO1	To understand the current status and future of network.
				CO2	Able to study about the Macros functional model CMIP/CMIS
				CO3	Able to learn about the RMON & SNMP.
				CO4	To understand the TMN model.
				CO5	analyze and discuss the XML based network management.
C120	III	OCE434	Environmental impact assessment	CO1	Understand need for environmental clearance, its legal procedure, need of EIA, its types, stakeholders and their roles
				CO2	Understand various impact identification methodologies, prediction techniques and model of impacts on various environments
				CO3	Understand relationship between social impacts and change in community due to development activities and rehabilitation methods
				CO4	Document the EIA findings and prepare environmental management and monitoring plan
				CO5	Identify, predict and assess impacts of similar projects based on case studies
C121	III	CU4311	Project Work I	CO1	Apply relevant knowledge and skills to Identify challenging practical problems, solutions to co present scenario of Electronics and Communication Engineering Field.
				CO2	Analyze and discuss complex problems on the advanced level
				CO3	Apply technical knowledge and project management skills for solving the problem.
				CO4	Design and develop hardware and/or software for their project Specific problem..
				CO5	Able to document and present one work with requirements on structure, format, and language.

  
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