DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

TE : V SEM (CBGS)

Subject: Microcontrollers and Applications (ETC501)

CO1. Draw and describe architecture of 8051 and ARM 7 microcontroller.

CO2. Interface various peripheral devices to the microcontrollers.

CO3. Write assembly language programs for microconrollers.

CO4. Design microcontroller based system for various applications

CO5. Understand the embedded systems like digital camera and stepper motor controller.

CO6.Understand RISC design phylosophy and dataflow diagram of ARM 7.

Subject: Analog Communication (ETC502)

CO1. To impart knowledge on the communication system

CO2.Different modulation and demodulation techniques in analog communication.

CO3. Identify and solve basic communication problems.

CO4. Analyze transmitter and receivers.

CO5. Compare and contrast advantages and limitations of analog communication systems.

CO6. Design and analyze circuit used in analog communication .

Subject: Random Signal Analysis (ETC503)

CO1.Students should be able to apply theory of probability in identifying and solving relevant problems

CO2. Students should be able to Define and differentiate random variables and vector through the use of cummulative distribution fuction (CDF), probability density function (PDF), probability mass function (PMF) as well as joint, marginal and conditional CDF, PDF and PMF.

CO3. Students should be able to Show probability and expectation computations using important discrete and continuous random variable types.

CO4. Students should be able to Define and specify random processes and determine whether a given process ia stationary or wide sense stationary.

CO5. Students should be able to Determine the response of a linear time invariant system to such a random process.

CO6. Students should be able to Describe basic concepts related to Markov chains and queuing theory and relate it to seal world applications.

Subject: RF Modeling and Antennas (ETC504)

CO1. Design of high frequency passive and active components

CO2. Analyze and design RF filters.

CO3. Analyze the radiation mechanism of antennas in communication systems.

CO4. Ability to discriminate between antennas on the basis of their electrical performance.

CO5.Ability to critically evaluate and use of appropriate design antennas for given specifications

CO6. Defend and summarize the impact of RF and microwave engineering solutions in a global and social context

Subject: Integrated Circuits (ETC505)

CO1. Understand the fundamentals and areas of applications for integrated circuits

CO2. Analyze important types of integrated circuits of day to day requirements

CO3. Demonstrate the ability to design practical circuits that perform the desired operations

CO4. Understand the differences among theoretical, practical and simulated results in integrated circuits.

CO5. Choose the appropriate integrated circuits modules to build the given application.

CO6. Implement small circuit/system using any studied IC for certain application in team.

TE : VI SEM (CBGS)

Subject: Digital Communication (ETC601)

CO1. Understand the basics of information theory and coding techniques.

CO2. Determine the minimum number of bits per symbol required to represent the source and the maximum rate at which a reliable communication can take place over the channel.

CO3. Describe and determine the performance of different waveform techniques for the generation of digital representation of signals.

CO4. Determine methods to mitigate inter symbol interference in baseband transmission system.

CO5. Describe and determine the performance of different error control coding schemes for the reliable transmission of digital representation of signals and information over the channel.

CO6. Understand various spreading techniques and determine bit error performance of various digital communication systems.

Subject: Discrete Time Signal Processing (ETC602)

CO1. Formulate engineering problems in terms of DSP tasks

CO2. Apply Engineering problem solving strategies to DSP problems

CO3. Design and test signal processing algorithms for various applications

CO4. Recover information from signals

CO5. Design and simulate digital filters

CO6. apply theoretical concepts in real time applications

Subject: Computer Communication and Telecom Networks (ETC603)

CO1. Assemble the components of a PC and install one or more network operating systems resulting in a functioning

CO2. Design a small or medium sized computer network including media types, end devices, and interconnecting devices that meets a customer's specific needs.

CO3. Perform basic configurations on routers and Ethernet switches.

CO4. Demonstrate knowledge of programming for network communications

CO5. Learn to simulate computer networks and analyze the simulation results

CO6. Troubleshoot connectivity problems in a host occurring at multiple layers of the OSI model

CO7. Develop knowledge and skills necessary to gain employment as computer network engineer and network administrator

Subject: Television Engineering (ETC604)

CO1. Describe basics of TV.

CO2. Describe various componants available in TV.

CO3. Describe various signal standards worldwide available in TV.

CO4. Describe various manufacturing standards worldwide available in TV.

CO5. Describe and differentiate working principles of latest digital TV, HDTV, WDTV.

CO6. Understand, use and working principles of latest display like LCD, LED, Plasma and large plat panel

Subject: Operating Systems (ETC605)

CO1. Understand the concepts of different OS.

CO2. Understand the concept of process and memory management for different OS

CO3. Compare different algorithms used for process management in OS

CO4. Describe the various CPU scheduling algorithms used in OS.

CO5. Understand concept of file management used in different OS

CO6. Compare UNIX,LINUX and WINDOWS OS

Subject: VLSI Design (ETC606)

CO1. To describe various fabrication process flows and the steps involved

CO2. To describe the structure, operation modes and second order effects of a MOSFET

CO3. To design an inverter with specified static /dynamic characteristics

CO4. Students will be able to design combinational circuits using various CMOS styles

CO5. Students will be able to describe different semiconductor memories, it's operation and applications.

CO6. To describe various clocking styles and low power design techniques