DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION
BE : VII SEM (CBGS)

Subject: Image and Video Processing (ETC701)

CO1. Understand theory and models in Image and video processing.

CO2. Interpret and analyze 2D signals in frequency domain through image transforms.

CO3. Apply quantitative models of image and video processing for various engineering applications.

CO4. Study DFT, DCT, KL and Wavelet image transforms.

CO5. Perform Binary Image Processing Operations.

CO6.Apply various representation and description methods on segmented image.

CO7. Develop innovative design for practical applications in various engineering fields.

Subject: Mobile Communication (ETC702)

CO1.Study Various Wireless communication systems with their applications,standards,features and limitations

CO2.Understand Terminologies related to Analog and Digital cellullar Systems.

CO3. Understand various multiple access schemes required in mobile communication

CO4. Understand GSM,GPRS,EDGE,CDMA-One w.r.t Architecture, features,services and capabilities,data rates etc

CO5. Understand GSM, CDMA concepts and architecture, frame structure, system capacity, services provided.

CO6. Study of evolution of mobile communication generations 2G, 2.5G, and 3G with their characteristics and limitations.

CO7. Understand emerging technologies required for fourth generation mobile systems such as SDR, MIMO etc.

CO8. Understand different indoor and outdoor propagation models related to losses and different types of fading.

CO9. Understand various mobile communication Technologies comparatively w.r.t mobility management, power control, features, services etc

Subject: Optical Communication and Networks   (ETC703)

CO1. Apply the fundamental principles of optics and light wave to design optical fiber communication systems.

CO2. Identify structures, functions, materials, and working principle of optical fibers, light sources, couplers, detectors, and multiplexers.

CO3. Design optical fiber communication links using appropriate optical fibers, light sources, couplers, detectors, and multiplexers.

CO4. Explore concepts of designing and operating principles of modern optical communication systems and networks.

CO5. Apply the knowledge developed in-class to contemporary optical fiber communication research and industrial areas.

CO6. Apply the knowledge in budgeting the Optical fiber Link

Subject: Microwave and Radar Engineering (ETC704)

CO1. identify the charactristics of microwave signal.

CO2. Analyze the microwave components and design the tuning and matching networks by using smith chart

CO3. describe and identify various microwave tubes and semiconductors devices construction and their uses

CO4. design application microwave devices

CO5. identify various types of RADAR for industrial and scientific purpose.

CO6. describe various industrial application of microwave signal

Subject: Data Compression and Encryption (ETE701)

CO1. Understand data compression concepts and fundamental compression algorithms

CO2. Understand image and video compression processes

CO3. Learn about modern compression standards

CO4. Account for the cryptographic theories, principles and techniques that are used to establish security properties

CO5. Analyze and use methods for cryptography

CO6. Understand audio compression processes.

Subject: Analog and Mixed Signal VLSI (ETE704)

CO1. Differentiate between analog, digital & mixed signal CMOS Ics

CO2. Analyze & design current sources & voltage references for given specifications.

CO3. Analyze & design single stage MOS amplifiers.

CO4. Analyze & design Operational Amplifiers.

CO5. Analyze & design non linear circuits like comparator,

CO6. Understand & analyze data converter circuits.

BE : VIII SEM (CBGS)

Subject: Wireless Networkg (ETC801)

CO1.Describe the phases of planning and design of mobile wireless networks

CO2.List and compare personal area network (PAN) technologies such as Zigbee, Bluetooth etc

CO3.detail about sensor network architecture, traffic related protocols , transmission technology etc

CO4.Understand middleware protocol and network management issues of sensor network

CO5.Understand HSPA systems

CO6.Review about mobile communication system

Subject: Satellite Communication (ETC802)

CO1.To provide an in-depth understanding of different concepts used in a satellite communication system.

CO2.To explain the tools necessary for the calculation of basic parameters in a satellite communication system.

CO3. To get knowledge of every aspects of satellite communication like orbital mechanics & launching techniques.

CO4. To undertstad satellite link design, earth station technology and different access systems towards a satellite.

CO5. To understand the OSI model with reference to satellite communication.

CO6. To understand LASER satellite communication.

Subject: Internet voice Communication (ETC803)

CO1. Implement local area networks using both static and dynamic addressing techniques including sub netting.

CO2. Install, configure, and troubleshoot server and client operating systems.

CO3. Disassemble, troubleshoot/debug, upgrade, replace basic components, and reassemble servers and client systems.

CO4. Explain the concept of encapsulation and its relationship to layering in the network models.

CO5. Explain how TCP's byte-stream sliding window is related to a traditional packet-based sliding window algorithm.

CO6. Explain the operation of the components of a router including, DHCP, NAT/PAT, Routing function, Switching function.

CO7. Describe how DNS works in the global Internet including caching and root servers.

Subject: Speech Processing (ETE801)

CO1. Explain speech production mechanism, phoneme classification, digital models for speech production, Homomorphic speech processing, LPC analysis, and parametric speech coding.

CO2. Apply signal processing theory for estimation of speech parameters in time domain including pitch and formants

CO3. Apply signal processing theory for estimation of speech parameters in frequency domain including pitch and formants

CO4. Implement speech processing related experiments, analyze and interpret results, and write appropriate conclusions

CO5. Analyze application of speech processing in speech compression, speech recognition, and speech synthesis.

CO6. Enhance their written and oral technical communication skills related to speech processing subject

Subject: Telecom Network Management (ETE802)

CO1. Demonstrate broad knowledge of fundamental principles and technical standards underlying

CO2. Understand basic of telecommunication, networking and information technologies.

CO3. Architect and implement networked informative systems.

CO4. Continuously improve their technology knowledge and communication skills.

CO5. Anticipate the way technological change and emerging technologies might alter the assumptions underlying

CO6. Use current techniques, skills, and tools necessary for network management practice.