DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

SE : III SEM (CBGS)

Subject: Applied Mathematics III (ETC301)

CO1. Obtain the Laplace Transform and Inverse Laplace transform using standard results and properties. Solve ODE using LT

CO2.Perform calculation with operators Gradient, Divergence and Curl.

CO3: Find the harmonic conjugate, orthogonal trajectory of an analytic function.

CO4.: Expand the periodic function using Fourier series and complex form of Fourier series, understand the concept of half range sine and cosine series.

CO5.Understand Recurrence relation between the   sequences of Bessel's function.

CO6.Evaluate surface/ volume integral using Stokes and Gauss Divergence theorem.

Subject: Analog Electronics I (ETC302)

CO1.Able to understand the current voltage charateristics of semiconductor devices

CO2. Able to understand and relate dc and ac models of semiconductor devices with their physical operation

CO3. Able to perform design and analysis of electronics circuits

CO4. Able to design analog system and component

CO5. Able to analyze the performance of FETs / BJT on the basis of their operation and working.

CO6. Able to study different oscillators

Subject: Digital Electronics (ETC303)

CO1. Distinguish between analog and digital signals & data.

CO2. Analyze, transform & minimize combinational logic circuits.

CO3. Understand basic arithmetic circuits.

CO4. Design and analyze sequential circuits.

CO5. Able to design digital system and components.

CO6. To design circuits to solve simple real world applications

Subject: Circuits and Transmission Lines (ETC304)

CO1.Students will be able to analyse the circuit and apply mesh,nodal,thevenins,nortan's theorem on the circuit.

CO2.students will be able to evaluate the time and frequency response which is useful in understanding behavior of electronic circuits and control system.

CO3. Students will be able to differentiate between LC,RC,and RL Transfer functions and synthesize the transfer function in different methods.

CO4.Students will be able to find short circuit, open circuit , ABCD ,h parameters of any of the two port networks and also simplify the circuit by considering the rconnection of the networks.

CO5.Student will able to understand how the information in terms of voltage and current is transmitted through the transmission lines and importance of matching.

CO6. Through test, laboratory exercises and home assignment, students will be able to apply their knowledge in solving complex circuits.

Subject: Electronic Instruments and Measurements (ETC305)

CO1. Learn measurement of physical parameters using various transducers and sensors.

CO2. Identify different errors in measurement and remedies to minimize them.

CO3. Understand basics of instruments and details of operation of measuring instruments.

CO4. Understand the different Data Acquisition system with detailed study of ADC and DAC.

CO5. Learn the operation of CRO and DSO with their detailed block diagram.

CO6. Understand different wave analyzers.

SE : IV SEM (CBGS)

Subject: Applied Mathematics IV (ECC401)

CO1. Find Eigen values and eigenvectors of a matrix to diagonalize the Square matrix.

CO2. Analyze the quadratic form of a matrix.

CO3. Evaluate integral using Cauchys theorem, residue theorem.

CO4. Use Gram Schmidt processes to orthogonalise the vectors.

CO5. Apply method of calculus of variations

CO6. Maximize or minimize functional by   Euler–Lagrange equation

Subject: Analog Electronics II (ETC402)

CO1. Analyse and compare various electronic circuits

CO2. Understand the concept and applications of different electronics circuits

CO3. Differentiate between discrete and integrated biasing techniques.

CO4. Analyse and compare BJT and MOSFET differential amplifiers

CO5. Differentiate between small signal and large signal Amplifiers.

CO6. Understand concepts of Operational amplifier and regulators

Subject: Microprocessors and Peripherals (ETC403)

CO1. To provide knowledge about software aspect of microprocessor

CO2. To impart knowledge on the architecture and hardware of microprocessor 8086

CO3. To write assembly language program in 8086 for various application.

CO4. To provide a framework on the co-processor configurations.

CO5. To create the various interfacing techniques with 8086 for various application.

CO6. To give an overview on the architecture and basic concepts of advanced microprocessors.

Subject: Wave Theory and Propagation (ETC404)

CO1. Ability to find nature of electric or magnetic field produced due to different charge distributions.

CO2. Ability to understand working of different equipments based on electromagnetic used in day to day life.

CO3. Knowledge of behavior of EM waves and travelling of waves in free space as well as media.

CO4. Able to apply numerical methods for designing antennas.

CO5. An ability to find conditions for loss of signal & select proper parameters for propagation of the waves by considering the factors affecting.

CO6. To understand the basics of wave propagation so as to identify and solve problems related to the propagation of waves for the study of antennas.

Subject: Signals and Systems (ETC405)

CO1. Understand significance of signals and systems in the time and frequency domains

CO2. Interpret and analyze signal and report results.

CO3. Evaluate the time and frequency response of continuous and discrete time system which is useful in understanding behavior of Electronic circuits and communication systems.Analyze CT and DT

CO4. Analyze CT signals and systems using Laplace transform,CTFS and CTFT.

CO5. Analyze DT signals and systems using Z Transform, DTFS and DTFT.

CO6. Identify the application areas of SS

Subject: Control Systems (ETC406)

CO1.Students will be able to derive the mathematical model of different type of the systems.

CO2.Students will understand the basic concepts of control system.

CO3. Students will understand the analysis of systems in time and frequency domain.

CO4.Students will be able to apply the control theory to design the conventional controllers widely used in the industries.

CO5.Students will be able to analyze the stability of control system

CO6. Students will be able to Identify, formulate and solve control engineering problems