

# DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION

## SE : III SEM (CBCS)

### **Subject: Applied Mathematics III (ECC301)**

- CO1. Obtain the Laplace Transform and Inverse Laplace transform using standard results and properties. Solve ODE using LT.
- CO2. Obtain the Laplace Transform and Inverse Laplace transform using standard results and properties. Solve ODE using LT.
- CO3. Obtain the Laplace Transform and Inverse Laplace transform using standard results and properties. Solve ODE using LT.
- 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 (ECC302)**

- CO1. Understand the current voltage characteristics of semiconductor devices,
- CO2. Understand Rectifier, filter, zener diode and voltage regulator
- CO3. Analyze dc circuits of Semiconductor device analytically and graphically
- CO4. Analyze dc circuits and relate ac models of semiconductor devices with their physical Operation,
- CO5. Evaluate the time and frequency response of Continuous and Discrete time, system which is useful in understanding behavior of Electronics circuits and Communication system
- CO6. Design and analyze of electronic circuits

### **Subject: Circuit Theory and Network (ECC304)**

- CO1. Apply their knowledge in analyzing DC Circuits by using network theorems and AC
- CO2. Apply the time and frequency method of circuit analysis.
- CO3. Understand network functions and their properties for analyzing the circuit
- CO4. Find the various parameters of two port network
- CO5. Synthesize the network using passive elements.
- CO6. Understand & Apply Graph theory for Network analysis.

### **Subject: Electronics Instrumentation And Control (ECC305)**

- CO1. Students will be able to explain principle of operation for measuring instruments for passive components
- CO2. students will be able to explain principle of operation for various sensor.
- CO3. Students will be able to describe functional blocks of data acquisition system.
- CO4. Students will be able to find transfer functions for given system
- CO5. students will be able to calculate time domain and frequency domain parameter for given system
- CO6. Students will be able to predict stability of given system using appropriate criteria

## SE : IV SEM (CBCS)

### **Subject: Applied Mathematics IV (ECC401)**

CO1. Students will demonstrate basic knowledge of Calculus of variation, Vector Spaces, Matrix Theory, Random Variables, Probability Distributions, Correlation and Complex Integration.

CO2. Students will demonstrate an ability to identify and Model the problems in the field of Electronics and Telecommunication and solve it.

CO3. Students will be able to apply the application of Mathematics in Telecommunication Engineering.

CO4. Students will be able to apply the application of Mathematics in Telecommunication Engineering

### **Subject: Electronic Devices & Circuits-II (ECC402)**

CO1. Design and analyse the basic operations of MOSFET.

CO2. Know about the multistage amplifier using BJT and FET in various configuration to determine frequency response and concept of voltage gain.

CO3. Know about different power amplifier circuits, their design and use in electronics and communication circuits.

CO4. Know the concept of feedback amplifier and their characteristics

CO5. Design the different oscillator circuits for various frequencies

CO6. Design and analyse multistage amplifiers.

### **Subject: Linear Integrated Circuits (ECC403)**

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

CO2. Analyze important types of integrated circuits.

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

CO4. Understand the differences between theoretical, practical & simulated results in integrated circuits.

CO5. Select the appropriate integrated circuit modules to build a given application.

CO6. Understand the special purpose integrated circuits and its applications.

**Subject: Signals and Systems (ECC404)**

CO1. Understand about various types of signals and systems, classify them, analyze them, and perform various operations on them,

CO2. Understand use of transforms in analysis of signals and system in continuous and discrete time domain

CO3. Observe the effect of various properties and operations of signals and systems

CO4. Evaluate the time and frequency response of Continuous and Discrete time systems which are useful to understand the behaviour of electronic circuits and communication

CO5. To Realize Discrete Time systems using different forms.

CO6. To apply Signal and System Concepts in Multidisciplinary Areas.

**Subject: PCE (ECC405)**

CO1. Use of different modulation and demodulation techniques used in analog communication

CO2. Identify and solve basic communication problems

CO3. Analyze transmitter and receiver circuits

CO4. Compare and contrast design issues, advantages, disadvantages and limitations of analog communication systems

CO5. To impart knowledge on the communication system

CO6. Design and analyze circuit used in analog communication .