SRI KRISHNA INSTITUTE OF TECHNOLOGY

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#29, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bengaluru- 560090

Department of Electronics and Communication Engineering

2022 Scheme CO's

3rd Semester Co's

BMATEC301
1. Demonstrate the Fourier series to study the behavior of periodic functions and theirapplications in system communications, digital signal processing, and field theory.
2. To use Fourier transforms to analyze problems involving continuous-time signals
3. To apply Z-Transform techniques to solve difference equations
4. Understand that physical systems can be described by differential equations and solvesuch equations
5. Make use of correlation and regression analysis to fit a suitable mathematical model for Statistical data.

BEC302

1. Simplify Boolean functions using K-map and Quine-McCluskey minimization technique.
2. Analyze and design for combinational logic circuits.
3. Analyze the concepts of Flip Flops(SR, D,T and JK) and to design the synchronous sequentialcircuits using Flip Flops.
4. Model Combinational circuits (adders, subtractors, multiplexers) and sequential circuits usingVerilog descriptions.

BEC303

1. Understand the characteristics and operations of BJTs , FETs and power amplifiers
2. Model BJT and MOSFET small signal equivalents circuits
3. Analyze different feedback topologies, amplifiers and oscillators with different circuit configurations and biasing conditions
4. Build circuits using linear ICs for wide range applications such as ADC, DAC, filters and timers

BEC304

1. Determine currents and voltages using source transformation/ source shifting/ mesh/nodal analysis and reduce given network using star delta transformation.
2. Solve problems by applying Network Theorems and electrical laws to reduce circuitcomplexities and to arrive at feasible solutions.
3. Analyse the circuit parameters during switching transients and apply Laplace transform tosolve the given network
4. Evaluate the frequency response for resonant circuits and the network parameters for twoport networks

BECL305

1.	Design and analyze the BJT/FET amplifier and oscillator circuits.
2.	Design and test Opamp circuits to realize the mathematical computations, DAC and precision rectifiers.
3.	Design and test the combinational logic circuits for the given specifications.
4.	Test the sequential logic circuits for the given functionality.
5.	Demonstrate the basic circuit experiments using 555 timer

BEC306C

1. Explain the basic organization of a computer system.
2. Describe the addressing modes, instruction formats and program control statement.
3. Explain different ways of accessing an input/ output device including interrupts.
4. Illustrate the organization of different types of semiconductor and other secondarystorage memories.
5. Illustrate simple processor organization based on hard wired control and micro-programmed control

BEC358C

1.	Write C++ program to solve simple and complex problems
2.	Apply and implement major object-oriented concepts like message passing, function overloading, operator overloading and inheritance to solve real-world problems.
3.	Use major C++ features such as Templates for data type independent designs and File I/O to dealwith large data set.
4.	Analyze, design and develop solutions to real-world problems applying OOP concepts of C++

4rth Semester CO's

BEC401

1. Evaluate problems on electrostatic force, electric field due to point, linear, volume charges by applying conventional methods and charge in a volume.
2. Apply Gauss law to evaluate Electric fields due to different charge distributions and Volume Charge distribution by using Divergence Theorem.
3. Determine potential and energy with respect to point charge and capacitance using Laplace equation and Apply Biot-Savart's and Ampere's laws for evaluating Magnetic field for different current configurations
4. Calculate magnetic force, potential energy and Magnetization with respect to magnetic materials and voltage induced in electric circuits.
5. Apply Maxwell's equations for time varying fields, EM waves in free space and conductors and Evaluate power associated with EM waves using Poynting theorem

BEC402

1. Understand the principles of analog communication systems and noise modelling.
2. Identify the schemes for analog modulation and demodulation and compare their performance.
3. Design of PCM systems through the processes sampling, quantization and encoding.
4. Describe the ideal condition, practical considerations of the signal representation for baseband transmission of digital signals.
5. Identify and associate the random variables and random process in Communication system design

BECL404

1. Illustrate the AM generation and detection using suitable electronic circuits.
2. Design of FM circuits for modulation, demodulation and noise suppression.
3. Design and test the sampling, Multiplexing and pulse modulation techniques using electronic hardware.
4. Design and Demonstrate the electronic circuits used for RF transmitters and receivers

BEC405A

1. Illustrate the AM generation and detection using suitable electronic circuits.
2. Design of FM circuits for modulation, demodulation and noise suppression.
3. Design and test the sampling, Multiplexing and pulse modulation techniques using electronic hardware.
4. Design and Demonstrate the electronic circuits used for RF transmitters and receivers

BECL456A

1. Write a Assembly Language/Cprogramsin8051forsolvingsimpleproblemsthatmanipulateinputdatausingdifferentinstructi ons.
2. Develop Testing and experimental procedures on 8051 Microcontroller, Analyze their operationunder different cases.
3. Developprogramsfor8051Microcontrollertoimplementreal worldproblems.
4. DevelopMicrocontrollerapplicationsusingexternalhardwareinterface

BBOK407

1. Understand the basic biological concepts through relevant industrial applications and case studies.
2. Evaluate the principles of design and development, for exploring novel bioengineering projects
3. Verify the concepts of biometrics for specific requirements.
4. Think critically towards exploring innovative bio based solutions for socially relevant problems