Shanmuganathan Engineering College

(Approved by AICTE, Affiliated by Anna University Chennai)

Department

Of

Electrical and Electronics

Engineering

Regulation-2021

Course Outcomes

Semester - 3	
Course code and Name	**Course Outcomes(CO)** **After completion of the course, the students will be able to**
MA3303 - PROBABILITY AND COMPLEX FUNCTIONS	CO1: Understand the fundamental knowledge of the concepts of probability and have knowledge ofstandard distributions Which can describe real life phenomenon. CO2: Understand the basic concepts of one and two dimensional random variables and apply inengineering Applications. CO3: To develop an understanding of the standard techniques of complex variable theory in particularanalytic function and Its mapping property. CO4: To familiarize the students with complex integration techniques and contour integrationtechniques which can be used in real integrals. CO5: To acquaint the students with Differential Equations which are significantly used in engineeringproblems.
EE3301 -ELECTROMAGNETIC FIELDS	CO1: Explain Gradient, Divergence, and Curl operations on Electromagnetic vector fields. CO2: Explain electrostatic fields, electric potential, energy density And their applications. CO3: Calculate magneto static fields, magnetic flux density, vector potential CO4: Explain different methods of emf generation and Maxwell's equations CO5: Explain the concept of electromagnetic waves and characterizing parameters
EE3302 -DIGITAL LOGIC CIRCUITS	CO1: Explain various number systems and characteristics of digital logic families CO2: Apply K-maps and Quine McCluskey methods to simplify the given Boolean expressions CO3: Explainthe implementation of combinational circuit such as multiplexers and de multiplexers - code converters, adders, subtractors, Encoders and Decoders CO4: Design various synchronous and asynchronous circuits using Flip Flops CO5: Explain asynchronous sequential circuits and programmable logic devices CO6: Use VHDL for simulating and testing RTL, combinatorial and sequential circuits

EC3301 -ELECTRON DEVICES AND CIRCUITS	CO1: Explain the structure and operation of PN junction devices (diode, Zener diode, LED and Laser diode) CO2: Design clipper, clamper, half wave and full wave rectifier, regulator circuits using PN junction diodes CO3: Analyze the structure and characteristics BJT, FET, MOSFET, UJT, Thyristor and IGBT CO4: Analyze the performance of various configurations of BJT and MOSFET based amplifier CO5: Explain the characteristics of MOS based cascade and differential amplifier CO6: Explain the operation of various feedback amplifiers and oscillators
EE3303- ELECTRICAL MACHINES - I	CO1: Apply the laws governing the electromechanical energy conversion for singly and multiple excited systems. CO2: Explain the construction and working principle of DC machines. CO3: Interpret various characteristics of DC machines. CO4: Compute various performance parameters of the machine, by conducting suitable tests. CO5: Draw the equivalent circuit of transformer and predetermine the efficiency and regulation. CO6: Describe the working principle of auto transformer, three phase transformer with different types of connections.
CS3353 - C PROGRAMMING AND DATA STRUCTURES	CO1 Develop C programs for any real world/technical application. CO2 Apply advanced features of C in solving problems. CO3 Write functions to implement linear and non–linear data structure operations. CO4 Suggest and use appropriate linear/non–linear data structure operations for solving a given problem. CO5 Appropriately use sort and search algorithms for a given application. CO6 Apply appropriate hash functions that result in a collision free scenario for data storage and retrieval.