CHOUKSEY ENGINEERING COLLEGE

DEPARTEMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

B.Tech Third Semester

Subject Name- Mathematics-III	Subject Code-B000311(014)

1. Define (mathematically) unit step unit impulse.
2. Laplace transform its properties, inverse and applications to solve ordinary differential equations and find Numerical solution of differential equations, which may be arising due to mathematical modelling based on engineering problems.
3. Hands on these Mathematical topics will make them equipped to prepare for higher studies through competitive examinations.

Subject Name-Electric Circuit Analysis	Subject Code-B025312(025)

1. Students will learn about the different types of electrical sources and networks.
2. Students will have knowledge of converting an electrical circuit into graph and will be able to analyze the circuit graphically.
3. Student will analyse circuits with ideal, independent, and controlled voltage and current sources
4. 4. Student will be able to find out current through or voltage across any branch of a given Electrical network using theorems.
5. Students will learn about series and parallel resonance conditions in series and parallel circuits and its impact on network voltage and current magnitudes.
6. Students will have knowledge of balanced and unbalanced poly phase circuits.
7. Students will be able to analyze the behaviour of non-sinusoidal waveforms.

Subject Name- Electrical Machine -I	Subject Code- B025313(025)

1. Understand the fundamentals and working of transformers.
2. Draw the equivalent circuit diagrams of various transformers.
3. Analyse the load profile, voltage regulations and efficiency under various operating conditions.
4. Understand the working principle and construction of direct current machines.
5. Understand the needs and requirements of various types of d.c. machine operations like starting, speed control, tests etc.

Subject Name- Electronic devices and Circuits	Subject Code- B025314(025))

1. Student can predict and design rectifiers and filters as per circuit requirement.
2. Learn to design transistor biasing circuit and calculating its stability.
3. Student can apply the concept of feedback in amplifier circuit.
4. Learn to design oscillator of desired frequency.
5. Gain experience in the problem finding and trouble shooting in electronics circuits consisting of diodes and transistors.

| **Subject Name- Renewable & Environment Engineering** | **Subject Code- B025315(025)** |

1. Students must apply both mathematics and chemistry to understand and solve problems in this Semester.
2. Students perform design type analyses and solve engineering problems using green engineering.
3. There are many aspects of contemporary issues addressed in this Semester, especially with regard to power plant environmental and sitting issues.
4. Students will have a basic understanding of different types of Green Energy Sources.
5. Students will have a basic understanding of Environmental Pollution and Social and the Environment Issues.

| **Subject Name- Electrical Machines 1 Lab** | **Subject Code- B025321(025)** |

1. Use the appropriate bridges, and they should be able to measure low, medium, and high resistances.
2. Learn with the aid of the A.C. Bridge, the students ought to be able to calculate the values of the inductor and capacitor and create phasor diagrams for bridges.
3. Test and calibrate energy meters, ammeters, and voltmeters should be imparted to the students.
4. Choose the appropriate tool for measuring different electrical components.

| **Subject Name- Electrical circuit analysis lab** | **Subject Code- B025322(025)** |

1. Get knowledge of the many kinds of electrical networks and sources.
2. Graphically examine an electrical circuit and will know how to turn it into a graph.
3. Examine circuits with optimal, self-contained, and regulated sources of voltage and current.
4. Determine the voltage across the current flowing through each branch of a given electrical network using theorems.
5. Understand the effects of series and parallel resonance circumstances on network voltage and current magnitudes will be covered, along with how they affect series and parallel circuits.
6. Get the knowledge of balanced and unbalanced poly phase circuits will be attained by the students.

| **Subject Name- Electronic Devices and Circuits lab** | **Subject Code- B025323(025)** |

1. Understand the working of CRO and DSO.
2. Learn the working of diode, Zener diode and rectifier.
3. Acquire the knowledge to construct and compute the stability of transistor biasing circuits.
4. Study Wein Bridge Oscillator & R-C phase shift oscillator
5. Develop the ability to create appropriate frequency oscillators and positive voltage regulator.
6. Design the biasing of clipper and clamper.

Subject Name- Software lab	**Subject Code- B025324(025)**

1. Write and execute basic programs in MATLAB.
2. Numerical computation for solving electrical engineering problems.
3. Generate graphical representation of the given data.