COURSE OUTCOME:

Course **SY EE**	**Course Outcome:**
PART-I Engineering Mathematics-III	1. Students learn about the how to solve mathematical model with Laplace Transform and error functions and their applications. 2. Gain knowledge of Finite and Infinite Fourier Transforms and applications. 3. Familiarize with the concept of analytic function, C-R equations and its uses. 4. Learn about Cauchy's theorem and its uses in complex integration. Taylor's and Laurent's series in complex form. 5. Learn about Cauchy Residues theorem and contour integrations.
PART-I Network Analysis and Synthesis	1. To review basic components of electric network. 2. To design and develop network equations and their solutions. 3. To apply Laplace theorem for electric network analyses 4. To analyze AC circuit.
PART-I Fluid Mechanics and Thermal Engineering	1. To introduce properties of fluid and hydraulic measurement. 2 To understand dynamics of fluid flow. 3. To understand basic concepts of IC engines To understand concept of refrigeration and air conditioning
PART-I Measurement and Instrumentation	1. To understand philosophy of measurement. 2. To understand different methods analog and digital measurement. 3. To study principle of construction and operation of different transducer and dismay methods.
PART-I Electrical Engineering Materials	1. To study about crystal structure 2. To understand magnetic material structure. 3. To study about conducting and superconducting materials. 4. To study dielectric and Nano materials.
PART-I Basic Human Rights	1. To study concept of time value of money. 2. To study about demand in detail. 3.To understand Meaning of Production and factors of production, 4. To understand dif. Concept about market
PART-II Electrical Machine-I	1. To study diff. types, construction and operating principle of diff. types of electrical machines.
PART-II POWER SYSTEM-I	1. To Understand basic operation of power system. 2. To power system components and their characteristics. 3. To Understand basic Load and Energy survey.
PART-II Electrical Installation and Estimation	1. To prepare estimates and costing of electrical installations of power system. 2. To understand procedures of contracting and purchase
PART-II	1. To study and understand MATLAB programming. 2. To review mathematical concepts.

Numerical Methods and Programming	3. To develop computer program for linear and nonlinear equations.
PART-II Product Design Engineering	1. Create simple mechanical or other designs 2. Create design documents for knowledge sharing 3. Manage own work to meet design requirements 4. Work effectively with colleagues
PART-II Solid State Devices	1. To study construction and characteristics of solid state devices. 2. To apply operational amplifier models in circuits employing negative feedback. 3. To design electronics circuit using Timer IC and voltage regulators. 4. To perform analysis of amplifiers using small signal models for the circuit elements. 5. To calculate the frequency response of circuits containing BJT, Op-Amp etc
PART-II Introduction to Non-Conventional energy sources	1. To review energy scenario. 2. To understand basic concepts , construction and operational features of different non-conventional sources

Course **TY EE**	**Course Outcome:**
PART-I Electrical Machine-II	1. To study different methods of speed control of AC and DC motor. 2. To study importance and procedure of different performance test on AC and DC motor. 3. To determine different operating characteristics of AC and DC machines
PART-I Power System-II	1. To study different parameters of power system operation and control 2. To study load flow and Diff. methods of reactive power control. 3. To understand diff. methods of fault analysis and stability study
PART-I Microprocessor and micro Controller	1. To know the architecture of 8085 and 8051. 2. To understand interfacing and interrupt features of 8085 and 8051. 3. To develop program for basic applications.
PART-I Value Education, Human Rights and Legislative Procedures	1. To understand value of education and self-development. 2. To develop good values and character. 3. To know Human right and legislative procedure
PART-I Testing and Maintenance of Electrical equipment.	1. Follow safe practices to prevent accidents while using electrical equipment. 2. Prepare maintenance schedules for electrical equipment. 3. Maintain rotating electrical machines.

	4. Maintain single phase and three phase transformers. 5. Maintain insulation systems of electrical equipment.
PART-I Power Plant Engineering.	1. To review basic components of power system, energy sources. 2. To understand principle of construction and operation of different conventional power plants

PART-II Control System	1. To understand the behavior of nonlinear control system. 2. To design and analyze PID controller. 3. To understand and analyze state variable technique. 4. To design and analyze suitable control system for engineering application.
PART-II Principles of Electrical Machine Design	1. To understand principles of electric machine design. 2. To design different components of electric machine. 3. To design Transformer and understand CAD and use it for transformer design
PART-II Power Electronics	1. To review principle of construction, operation and characteristics of basic semiconductor devices. 2. To understand and analyze performance of controlled and uncontrolled converters. 3. To understand and analyze performance of DC to DC converters. Dc to AC converters. 4. To understand and analyze performance of AC voltage controllers.
PART-II Industrial automation and Control	1. To understand construction and working principle of different industrial measurement systems. 2. To understand new trends in industrial process control.
PART-II Switch Gear and Protection	1. To understand principles of protective relaying. 2. To understand principle of construction, operation and selection of different type of circuit breaker used in power system. 3. To understand different protection schemes used in power system operation

Course BE EE	**Course Outcome:**
PART-I	1. Explain the fundamental concept of power system. 2. Design the mathematical model of synchronous machine.

Power System Operation & Control	3. Design the mathematical model Excitation system and speed governing system. 4. Analyze the transient stability of power system using swing equation and equal area criteria. 5. Analyze the economic operation of power system. 6. Explain the methods of Voltage control.
PART-I High Voltage Engineering	1. Explain the breakdown process in solid, liquid, and gaseous materials 2. Analyze methods for generation and measurement of High Voltages and Currents (both ac and dc) 3. Describe the phenomenon of over-voltage and choose appropriate insulation coordination levels based on IS & IEC Standards.
PART-I Electrical Drives	1. Analyze the dynamics of Electrical Drives system. 2. Use various control techniques for controlling the speed of AC and DC motors. Analyze the AC and DC drives. 3. To Select/recommend the appropriate Drive according to the particular applications. State the recent technology of AC and DC drive
PART-I Special Purpose Electrical Machines	1. Demonstrate construction, working principle, and application of various types of special purpose electrical machines 2. Select a special Machine for a particular application 3. Demonstrate behavior of induction generator and induction machine.
PART-I HVDC Transmission and FACTS	1. To understand importance, configuration and types of HVDC transmission. 2. To analyst the operation of HVDC converter, system control and protection. 3. To understand the concept of FACTS, their role, type and functionality. 4. To analyze the operation of static series and shunt compensator
PART-II Introduction To Industry 4.0 And Industrial Internet Of Things	1. Knowledge of theory and practice related to Industrial IoT Systems. 2. Ability to identify, formulate and solve engineering problems by using Industrial IoT. 3. Ability to implement real field problem by gained knowledge of Industrial applications with IoT capability.
PART-II Entrepreneurship Essentials	1.Evaluate an idea and assess the market 2. Explore the risks and rewards of entrepreneurship 3. Leverage experiments to validate concepts and refine your business strategy