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NBA accredited Programs* | Accredited by NAAC with 'A' Grade (CGPA 3.08)

DEPARTMENT OF ELECTRICAL ENGINEERING

Course Outcome A.Y.2020-21

SY B. Tech. (Odd Semester)

Sr. no	Name of Subject	Course Outcome
1	Network Analysis and Synthesis	To review basic components of electric network. To design and develop network equations and their solutions. To apply Laplace theorem for electric network analyses To analyze AC circuit.
2	Fluid Mechanics and Thermal Engineering	To introduce properties of fluid and hydraulic measurement To understand dynamics of fluid flow To understand basic concepts of IC engines To understand concept of refrigeration and air conditioning
3	Measurement and Instrumentation	Discuss the philosophy of measurement. Explain Analog Measurement of Electrical Quantities. Discuss Measurement of Parameters. Explain Digital Measurement of Electrical Quantities. Explain different types of Transducers. Explain Display methods, recorders.
4	Elective –I	To study about crystal structure. To understand magnetic material structure. To study about conducting and superconducting materials. To study dielectric and nano materials.
5	Basic Human Rights	To study concept of time value of money To study about demand in detail To understand Meaning of Production and factors of production, To understand dif. Concept about market

6	Engineering Economics	To study concept of time value of money To study about demand in detail To understand Meaning of Production and factors of production, To understand dif. Concept about market
7	Electrical Workshop/ Mini Project	Build And Verifies Basic Scientific Principles

SY B.Tech. (Even Semester)

Sr. no	Name of Subject	Course Outcome
1	Electrical Machine-I	To study diff. types, construction and operating principle of diff. types of electrical machines
2	Power System-I	To understand basic operation of power system, power system components and their characteristics.
3	Electrical Installation and Estimation	To prepare estimates and costing of electrical installation of power system. To understand procedures of contracting and purchase. Identify tools, appliances, special outlets, motors and motor circuits. Estimation and costing of residential and commercial buildings
4	Numerical Methods and Programming	To study and understand MATLAB programming. To review mathematical concepts. To develop computer programs for linear and nonlinear equations.
5	Product Design Engineering	Create simple mechanical or other design. Create design documents for knowledge sharing. Manage own work to meet design requirements. Work effectively with colleagues.
6	Elective –II	Discuss the philosophy of Transistor Circuits Explain details of Operational Amplifier Convert number systems Explain different techniques in use of digital circuits Explain different Minimization Techniques Explain Combinational Systems
7	Elective –III	To review energy scenario. To understand basic concepts, construction and operational features of different non-conventional sources.

TY B. Tech. (Odd Semester)

Sr. no	Name of Subject	Course Outcome
1	Electrical Machine-II	To study different methods of speed control of AC and DC motor. To study importance and procedure of different performance test on AC and DC motor. To determine different operating characteristics of AC and DC machines.
2	Power System-II	To study different parameters of power system operation and control. To study load flow and Diff. methods of reactive power control. To understand diff. methods of fault analysis and stability study.
3	Microprocessor and micro Controller	Understand architecture of 8085 Understand interfacing of memory and PPI 8085 Understand interrupt features of 8085 Understand interfacing of ADC, DAC 8085 Understand architecture of 8051 Understand interrupt features of 8051
4	Value Education, Human Rights and Legislative Procedures [MOOC/Swayam/ NPTEL]	To understand value of education and self-development To develop good values and character To know Human right and legislative procedure
5	Elective-IV	To know the principle of energy conversion technique from biomass, geothermal and hybrid energy systems. To understand effects of air pollution and ecosystems
6	Elective-V	To review basic components of power system, energy sources. To understand principle of construction and operation of different conventional power plants.

TY B. Tech. (Even Semester)

Sr. no	Name of Subject	Course Outcome
1	Control System	To understand the behavior of non linear control system. To design and analyze PID controller. To understand and analyze state variable technique. To design and analyze suitable control system for engineering application.
2	Principles of Electrical Machine Design	To understand principles of electric machine design. To design different components of electric machine. To design Transformer To understand CAD and use it for transformer design
3	Power Electronics	To review principle of construction, operation and characteristics of basic semiconductor devices. To understand and analyze performance of controlled and uncontrolled converters. To understand and analyze performance of DC to DC converters. Dc to AC converters. To understand and analyze performance of AC voltage controllers.
4	Elective-VI	To understand construction and working principle of different industrial measurement systems. To understand new trends in industrial process control.
5	Elective-VII	Remember the types of Relays Describe the different types Circuit Breakers Analyze the types of Over current Protection and Digital Protection Describe the types of Generator and Transformer protection
6	Elective-VIII [MOOC/Swayam/ NPTEL]	Explain concepts of project management Explain Project Cost Estimation and budgeting Explain Project scheduling and Planning Tools Explain project plan Explain project implementation strategy analyze post project affects

Final Year B. Tech. (Odd Semester)

Sr. no	Name of Subject	Course Outcome
1	Power System Operation & Control	Develop power system components modeling and analyze their performance. Develop modeling of synchronous machine and analyze its performance. Understand configuration and functioning of synchronous machine excitation system. Understand and transmission line, load and reactive power compensator modeling. Detect Optimal Power System Operation
2	High Voltage Engineering	Illustrate the concept of electric field stresses, applications of insulating materials and methods for Non-destructive testing of equipment like transformers, insulators, isolators, bushings, lightning arrestors, cables, circuit breakers and surge diverters. Explain the breakdown process in solid, liquid, and gaseous materials Analyze methods for generation and measurement of High Voltages and Currents (both ac and dc) Describe the phenomenon of over-voltage and choose appropriate insulation coordination levels based on IS & IEC Standards.
3	Electrical Drives	Analyze the dynamics of Electrical Drives system. Use various control techniques for controlling the speed of AC and DC motors. Analyze the AC and DC drives. To Select/recommend the appropriate Drive according to the particular applications. State the recent technology of AC and DC drive
4	Elective-IX	Demonstrate construction, working principle, and application of various types of special purpose electrical machines Select a special Machine for a particular application Demonstrate behavior of induction generator and induction machine.
5	Elective-X	To recognize Global Environmental Issues and Role of Renewable & non-conventional energy sources To estimate Energy efficiency opportunities in Thermal- Mechanical Systems and Electrical System. To analyze Energy Conservation Proposals economically and prepare audit reports.

Prof. A. A. Malgave

(HOD)