DRONACHARYA
Group of Institutions

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Approved by: All India Council for Technical Education (AICTE), New Delhi
Affiliated to: Dr. A. P. J. Abdul Kalam Technical University (AKTU), Lucknow

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Academic Year -2023-24

Course Outcomes

B.TECH.4th SEM

Digital Electronics (BEE401)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Perform number style arithmetic and logic simplification using various methods
(CO2)	Design and analyze modular combinational circuits with MUX / DEMUX, Decoder & Encoder
(CO3)	Design & analyze synchronous sequential logic circuits
(CO4)	Analyze various logic families and design circuits using PLDs
(CO5)	Design various ADCs and DACs according to the given specifications

ELECTRICAL MACHINES – I (BEE402)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Analyze the various principles & concepts involved in Electromechanical Energy conversion.
(CO2)	Demonstrate the constructional details of DC machines as well as transformers, and principle of operation of brushless DC motor, Stepper and DC Servo motors.
(CO3)	Evaluate the performance and characteristics of DC Machine as motor and as well as generator.
(CO4)	Evaluate the performance of transformers, individually and in parallel operation
(CO5)	Demonstrate and perform various connections of three phase transformers.

NETWORK ANALYSIS & SYNTHESIS (BEE403)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Apply the knowledge of basic circuital law, nodal and mesh methods of circuit analysis and simplify the network using Graph Theory approach.
(CO2)	Analyze the AC and DC circuits using Kirchhoff's law and Network simplification theorems
(CO3)	Analyze steady-state responses and transient response of DC and AC circuits using classical and Laplace transform methods.
(CO4)	Demonstrate the concept of complex frequency and analyze the structure and function of one and two port network. Also evaluate and analysis two-port network parameters.
(CO5)	Synthesize one port network and analyze different filters

NETWORK ANALYSIS AND SYNTHESIS LAB (BEE451)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand basics of electrical circuits with nodal and mesh analysis.
(CO2)	Appreciate electrical network theorems.
(CO3)	Analyse RLC circuits.
(CO4)	Determine the stability of an electrical circuit.
(CO5)	Design network filters.

ELECTRICAL MACHINES-I LAB (BEE452)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Analyze and conduct basic tests on DC Machines and single-phase Transformer
(CO2)	Obtain the performance indices using standard analytical aswell as graphical methods.
(CO3)	Determine the magnetization, Load and speed-torque characteristics of DC Machines.
(CO4)	Demonstrate procedures and analysis techniques to perform electromagnetic and electromechanical tests on electrical machines.

DIGITAL ELECTRONICS LAB (BEE453)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understanding of Digital Binary System and implementation of Gates
(CO2)	Design the Sequential circuits with the help of combinational circuits and feedback element.
(CO3)	Design data selector circuits with the help of universal Gates.
(CO4)	Design the counters with the help of sequential circuit and basic Gates.
(CO5)	Implement the projects using the digital ICs and electronics components.

Python Programming (BCC402)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand the basic syntax, semantics, and data types in Python.
(CO2)	Apply control flow mechanisms such as loops and conditional statements to develop logical programs.
(CO3)	Use Python's built-in data structures (lists, tuples, sets, and dictionaries) for effective data organization and manipulation.
(CO4)	Implement modular programming concepts using functions, modules, and packages.
(CO5)	Perform file operations and exception handling for robust and efficient programming.

Technical Communication (BAS401)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Understand the principles, types, and processes of effective technical communication.
(CO2)	Develop professional documents such as technical reports, proposals, resumes, and emails with clarity and accuracy.
(CO3)	Demonstrate effective verbal and non-verbal communication skills through group discussions, presentations, and interviews.
(CO4)	Apply appropriate communication techniques in academic and professional environments using digital tools.
(CO5)	Analyze and adapt technical content for diverse audiences and purposes, maintaining coherence and professionalism.

Math IV (BAS403)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	Apply concepts of probability and statistics to analyze and interpret data in engineering contexts.
(CO2)	Use numerical methods such as interpolation, differentiation, and integration to solve mathematical problems computationally.
(CO3)	Solve linear and nonlinear equations using appropriate numerical techniques.
(CO4)	Understand and apply complex variable theory, including analytic functions, Cauchy's theorem, and residue calculus.
(CO5)	Model and solve engineering problems using mathematical and statistical tools, demonstrating logical and analytical thinking.