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
SEMESTER III

ELECTROMAGNETIC FIELD THEORY (BEE301)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Apply different coordinate systems and their application in electromagnetic field theory, establish a relation between any two systems and also understand the vector calculus.	K3
(CO2)	Understand the concept of static electric field. Understand the concept of current and properties of conductors. Establish boundary conditions and to calculate capacitances of different types of capacitors	K4
(CO3)	Understand the concept of static magnetic field, magnetic scalar and vector potential	K4
(CO4)	Understand the forces due to magnetic field, magnetization, magnetic boundary conditions and inductors.	K4
(CO5)	Understand displacement current, time varying fields, propagation and reflection of EM waves and transmission lines.	K3

ELECTRICAL MEASUREMENTS & INSTRUMENTATION (BEE302)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Evaluate errors in measurement as well as identify and use different types of instruments for the measurement of voltage, current.	K1
(CO2)	Demonstrate the construction and working of different measuring instruments for Power, energy and frequency measurements.	K2
(CO3)	Demonstrate the construction and working of different AC and DC bridges, along with their applications	K2
(CO4)	Demonstrate the working of instrument transformers as well as calculate the errors in current and potential transformers, Manifest the working of electronic instruments like voltmeter, multimeter, frequency meter and CRO and ability to measure electrical engineering parameters like voltage, current, power, phase difference and frequency.	K2
(CO5)	Display the knowledge of transducers, their classifications and their applications for the measurement of physical quantities like motion, force, pressure, temperature, flow and liquid level.	K3

BASIC SIGNAL & SYSTEMS(BEE303)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Represent the various types of signals & systems and can perform Mathematical operations on them.	K2
(CO2)	Apply fundamental concepts of functions and Boolean algebra for solving the problems of logical abilities.	K4
(CO3)	Employ the rules of propositions and predicate logic to solve the complex and logical problems	K4
(CO4)	Explore the concepts of group theory and their applications for solving the advance technological problems.	K3
(CO5)	Illustrate the principles and concepts of graph theory for solving problems related to computer science.	K4

CIRCUIT SIMULATION LAB (BEE351)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Apply the knowledge of basic circuital law, nodal and mesh analysis for given circuit.	K2
(CO2)	Analysis of the AC and DC circuits using simulation techniques.	K3
(CO3)	Analysis of transient response of AC circuits.	K3
(CO4)	Evaluation and analysis of two-port network parameters.	K2
(CO5)	Estimation of parameters of different filters.	K2

ELECTRICAL MEASUREMENTS AND INSTRUMENTATION LAB (BEE352)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Understand the importance of calibration of measuring instruments.	K2
(CO2)	Demonstrate the construction and working of different measuring instruments.	K3
(CO3)	Demonstrate the construction and working of different AC and DC bridges, along with their applications.	K3
(CO4)	Ability to measure electrical engineering parameters like voltage, current, power & phase difference in industry as well as in power generation, transmission and distribution sectors.	K2
(CO5)	Capability to analyze and solving the variety of problems in the field of electrical measurements.	K2

PYTHON PROGRAMMING (BCC302)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.	K1,K2
(CO2)	Express proficiency in the handling of strings and functions	K_1, K_2
(CO3)	Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.	K_2
(CO4)	Identify the commonly used operations involving file systems and regular expressions.	K_1,K_2
(CO5)	Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance	K_2

ELECTRICAL WORKSHOP (BEE353)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Perform various types of Electrical connections.	K3
(CO2)	Develop small circuits on PCB	K6
(CO3)	Differentiate between various electrical wires, cables and accessories.	K3
(CO4)	Demonstrate the layout of electrical substation & various safety measures	K2

Mini Project (BCC 351)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Discover potential research areas in the field of IT	K2
(CO2)	Compare and contrast the several existing solutions for research challenge	K5
(CO3)	Demonstrate an ability to work in Teams and manage the conduct of the research study	K4
(CO4)	Formulate and propose a plan for creating a solution for the research plan identified.	K5
(CO5)	To report and present the findings of the study conducted in the preferred domain	K5

Universal Human Values and Professional Ethics (BVE301)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Understand the significance of value inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and process of value education, explore the meaning of happiness and prosperity and do a correct appraisal of the current scenario in the society	K1, K2
(CO2)	Distinguish between the Self and the Body, understand the meaning of Harmony in the Self the Co-existence of Self and Body.	K1, K2
(CO3)	Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human relationships and explore their role in ensuring a harmonious society.	K2, K4
(CO4)	Understand the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.	K2, K4
(CO5)	Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious Environment wherever they work.	K2, K3

BASICS DATA STRUCTURES AND ALGORITHM (BOE306)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Describe how arrays, linked lists, stacks, queues, trees, and graphs are represented in memory, used by the algorithms and their common applications.	**K1, K2**
(CO2)	Discuss the computational efficiency of the sorting and searching algorithms	**K2**
(CO3)	Implementation of Trees and Graphs and perform various operations on these data structure.	**K3**
(CO4)	Understanding the concept of recursion, application of recursion and its implementation and removal of recursion.	**K4**
(CO5)	Identify the alternative implementations of data structures with respect to its performance to solve a real world problem.	**K5, K6**