Dronacharya Group Of Institutions

Department: Applied Science and Humanities
Academic Year -2023-24

Course Outcomes

B.TECH.1st SEM

ENGINEERING PHYSICS (BAS101)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	To explain the distribution of energy in black body radiation and to understand the difference in particle and wave nature with explanation of Compton effect and Schrodinger wave equation.	K_2, K_3
(CO2)	To understand the concept of displacement current and consistency of Ampere's law and also the properties of electromagnetic waves in different medium with the use of Maxwell's equations.	K_2, K_4
(CO3)	To understand the behavior of waves through various examples/applications of interference and diffraction phenomenon and the concept of grating and resolving power.	K_3
(CO4)	To know the functioning of optical fiber and its properties and applications. To understand the concept, properties and applications of Laser.	K_2, K_3
(CO5)	To know the properties and applications of superconducting materials and nano materials.	K_2

ENGINEERING MATHEMATICS-I (BAS103)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Understand the concept of complex matrices, Eigen values,Eigen vectors and apply the concept of rank to evaluate linear simultaneous equations	K2,K5
(CO2)	Remember the concept of differentiation to find successive differentiation, Leibnitz Theorem, and create curve tracing, and find partial and total derivatives	K1,K6,K5
(CO3)	Applying the concept of partial differentiation to evaluate extrema, series expansion, error approximation of functions and Jacobians	K3,K5
(CO4)	Remember the concept of Beta and Gamma function; analyze area and volume and Dirichlet's theorem in multiple integral	K1,K4
(CO5)	Apply the concept of Vector Calculus to analyze and evaluate directional derivative, line, surface and volume integrals..	K3,K4,K5

FUNDAMENTALS OF ELECTRICAL ENGINEERING (BEE101)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Apply the concepts of KVL/KCL and network theorems in solving DC circuits.	K3
(CO2)	Analyze the steady state behavior of single phase and three Phase AC electrical circuits.	K4
(CO3)	Identify the application areas of a single phase two winding transformer as well as an auto transformer and calculate their efficiency. Also identify the connections of a three phase transformer.	K2
(CO4)	Illustrate the working principles of induction motor, synchronous machine as well as DC machine and employ them in different area of applications.	K4
(CO5)	Describe the components of low voltage electrical installations and perform elementary calculations for energy consumption.	K2

PROGRAMMING FOR PROBLEM SOLVING (BCS101)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	To Develop Simple Algorithms for Arithmetic and Logical Problems.	K2,K3
(CO2)	To Translate the Algorithms to Programs & Execution (in C Language)	K3
(CO3)	To Implement Conditional Branching, Iteration and Recursion.	K3
(CO4)	To Decompose a Problem into Functions and Synthesize a Complete Program Using Divide and Conquer Approach.	K4
(CO5)	To Use Arrays, Pointers and Structures to Develop Algorithms and Programs. .	K2,K3

ENVIRONMENT AND ECOLOGY (BAS104)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Gain in-depth knowledge on natural processes that sustain life, and govern economy.	K2
(CO2)	Estimate and Predict the consequences of human actions on the web of life, global economy and quality of human life.	K3
(CO3)	Develop critical thinking for shaping strategies (scientific, social, economic and legal) for environmental protection and conservation of biodiversity, social equity and sustainable development.	K4
(CO4)	Acquire values and attitudes towards understanding complex environmentaleconomic social challenges, and participate actively in solving current environmental problems and preventing the future ones.	K3
(CO5)	Adopt sustainability as a practice in life, society and industry.	K3

ENGINEERING PHYSICS LAB (BAS151)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Apply the principle of interference and diffraction to find the wavelength of monochromatic and polychromatic light	K3
(CO2)	Compute and analyze various electrical and electronic properties of a given material by using various experiments.	K4
(CO3)	Verify different established laws with the help of optical and electrical experiments.	K3
(CO4)	Determine and calculate various physical properties of a given material by using various experiments.	K3
(CO5)	Study and estimate the performance and parameter of given equipment by using graphical and computational analysis.	K3

BASIC ELECTRICAL ENGINEERING LAB (BEE151)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Conduct experiments illustrating the application of KVL/KCL and network theorems to DC electrical circuits.	K3
(CO2)	Demonstrate the behavior of AC circuits connected to single phase AC supply and measure power in single phase as well as three phase electrical circuits.	K4
(CO3)	Perform experiment illustrating BH curve of magnetic materials.	K3
(CO4)	Calculate efficiency of a single phase transformer and DC machine.	K4
(CO5)	Perform experiments on speed measurement and reversal of direction of three phase induction motor and Identify the type of DC and AC machines based on their construction.	K4

PROGRAMMING FOR PROBLEM SOLVING LAB (BCS151 / BCS251)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Able to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems.	K3,K4
(CO2)	Demonstrate an understanding of computer programming language concepts.	K2,K2
(CO3)	Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.	K6,K4
(CO4)	Able to define data types and use them in simple data processing applications he/she must be able to use the concept of array of structures.	K1,K5
(CO5)	Develop confidence for self-education and ability for life-long learning needed for Computer language.	K3,K4

ENGINEERING GRAPHICS & DESIGN LAB (BCE151/ BCE251)

Course Outcome (CO)	Details of Course Outcomes	Bloom's Knowledge Level (KL)
(CO1)	Use scales and draw projections of objects.	K3
(CO2)	Explain views of solids and their sectional surfaces.	K2
(CO3)	Analyze and draw isometric projections of objects.	K4
(CO4)	Demonstrate orthographic representation of perspective views using modern tools	K3
(CO5)	Apply AutoCAD software for creation of engineering drawing and models	K3