



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING – DATA SCIENCE

COURSE OUTCOMES (COs)

Semester: II

Course Name: Engineering Physics		Course Code: BT-201
Students will be able to:		
CO1:	Review the fundamental concepts of modern physics and their applications using the principles of quantum mechanics.	
CO2:	Understand and apply the basic concepts and properties of matter and waves in everyday life.	
CO3:	Explain the types of semiconductors and the role of charge carrier concentration in electrical conductivity using the band theory of solids.	
CO4:	Review the applications of lasers in engineering, science, medicine, and optical fiber communication systems.	
CO5:	Explain the concepts of electrostatics and electromagnetism using dielectrics and Maxwell's equations.	

Course Name: Mathematics-II		CourseCode:BT-202
Students will be able to:		
CO1:	Explain the basic concepts of Ordinary Differential Equations (ODEs).	
CO2:	Describe the various methods for solving first-order and higher-order differential equations.	
CO3:	Classify linear and nonlinear Partial Differential Equations (PDEs), and apply characteristic methods to solve first-order and second-order PDEs encountered in science and engineering.	
CO4:	Explain the fundamental techniques and methods of Complex Function Theory.	
CO5:	Develop a fundamental understanding of the concepts of Vector Calculus.	



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Course Name: Basic Mechanical Engineering		Course Code: BT-203
Students will be able to:		
CO1:	Classify engineering materials based on their nature and evaluate their mechanical properties through standard material testing methods.	
CO2:	Explain the principles of measurements and the measuring instruments used in industrial production and engineering applications.	
CO3:	Apply the concepts of fluid characteristics and properties to analyze the working of machine components and systems.	
CO4:	Analyze the behavior and properties of flowing fluids in flow and thermal systems using the relevant laws and engineering principles.	
CO5:	Evaluate the working efficiency and performance of fuel- and air-based engines using appropriate diagrams, principles, and engine properties.	

Course Name: Basic Civil Engineering & Mechanics		Course Code: BT-204
Students will be able to:		
CO1:	Identify and differentiate various construction materials and building construction techniques by studying their properties, testing methods, and applications.	
CO2:	Explain the concepts and techniques of surveying using linear and angular measurement methods.	
CO3:	Apply the principles of surveying and mapping in civil engineering, and develop an understanding of remote sensing techniques.	
CO4:	Explain the concept of force systems and their applications in civil engineering.	
CO5:	Analyze the effects of different types of loads on structures and evaluate their structural behavior.	



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Course Name: Basic Computer Engineering		Course Code: BT-205
Students will be able to:		
CO1:	Illustrate the basic concepts of computers, their modern-day applications, and technology-related uses.	
CO2:	Apply the fundamental concepts of programming to solve engineering problems and understand its applications in various engineering fields.	
CO3:	Explain the concepts of Object-Oriented Programming (OOP) and Data Structures, and demonstrate their applications in software development.	
CO4:	Identify the concepts of computer networking, the devices used in networking, and the importance of network security.	
CO5:	Explain the concepts of Database Management Systems (DBMS) and cloud computing, and describe modern data storage techniques and their real-world applications.	

Course Name: Language Lab & Seminars		Course Code: BT-206
Students will be able to:		
CO1:	Introduce themselves confidently in professional settings.	
CO2:	Communicate effectively in public speaking and extempore presentations.	
CO3:	Demonstrate strong reading comprehension skills and proficiency in reading.	
CO4:	Express their understanding of reading materials through written book reviews and critical comments.	
CO5:	Develop effective conversational skills through role plays and interactive communication activities.	

Approved By:-
Head of Department