



**BANSAL INSTITUTE OF RESEARCH &
TECHNOLOGY, BHOPAL
Kokta Anand Nagar, Bhopal**

**DEPARTMENT OF ELECTRICAL
& ELECTRONICS**

COURSE OUTCOMES (COs)

Semester: I

Course Name: Engineering Chemistry		Course Code: BT-101
Students will be able to:		
CO1:	Understand the hardness of water, analysis of water, boiler problems and water softening methods to improve the quality of hard water for industrial purposes.	
CO2:	Understand functions of lubricants, mechanism and properties of lubricants.	
CO3:	Understand major chemical reactions that are used in synthesis of polymers.	
CO4:	Understand the fundamentals of corrosion and its mechanism, phase diagram of single and double component systems and identification of organic structure by spectroscopic methods.	
CO5:	Understand rationalize periodic properties such as ionization potential, electro negativity and oxidation states	

Course Name: Mathematics-I		Course Code: BT-102
Students will be able to:		
CO1:	Understand the complete knowledge of differential calculus involving fundamental tools.	
CO2:	Apply the application of double integration and triple integration in finding the area and volume.	
CO3:	Discuss the convergence of series by various testing methods.	
CO4:	Interpret algebraic and geometric representations of vectors and perform common matrix operations in vector space.	
CO5:	Solve linear systems of equations using the language of matrices.	



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Course Name: English for Communication		Course Code: BT-103
Students will be able to:		
CO1:	Identify the basic grammar tools and techniques to utilize them in language development..	
CO2:	Develop flair for any kind of writing with rich vocabulary and achieve fluency and comprehensibility.	
CO3:	Develop skills to communicate effectively in verbal and non-verbal forms from the employability perspective.	
CO4:	Show proficiency in using technical information and knowledge for practical documentation and presentations.	
CO5:	Prepare effective business correspondence with brevity and clarity to maximize job prospects	

Course Name: Basic Electrical & Electronics Engineering		Course Code: BT-104
Students will be able to:		
CO1:	Explain the concepts of laws of D.C. circuits. And also illustrate the behavior of network theorems of D.C. circuits.	
CO2:	Explain the concepts of A.C. circuits and fundamentals of 1-phase A.C. circuits and 3-phase A.C. circuits. And also illustrate the behavior of a given R-L, R-C and R-L-C single-phase A.C. circuits and star and delta three-phase A.C. circuits for resistive, inductive and capacitive loads.	
CO3:	Explain the fundamentals of magnetic circuits and also illustrate the constructional features, working principle and the performance of single-phase transformers.	
CO4:	Illustrate the constructional features, working principle and the performance of electrical machines.	
CO5:	Explain the fundamentals of basic electronics and its characteristics and also illustrate number systems and different types of digital electronic circuits.	



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Course Name: Engineering Graphics		Course Code: BT-105
Students will be able to:		
CO1:	Employ the basics of geometrical construction, dimensioning and scaling concepts in technical drawing.	
CO2:	Sketch the projections of plane and solids under two and three dimensions workspace using principles of orthographic projection.	
CO3:	Interpret and develop the sectional views of regular solids for better understanding of hidden features,	
CO4:	Develop and Prepare isometric views, convert orthographic views to isometric and vice-versa by applying principles of projection.	
CO5:	Create two and three dimensional modeling of engineered components by using modern engineering tool (CAD software) necessary for industrial practice.	

Course Name: Manufacturing Practices		Course Code: BT-106
Students will be able to:		
CO1:	Construct the job using fitting process	
CO2:	Apply the minimum practical skill and make a carpentry job	
CO3:	Build a job by Selecting a suitable technique for meeting a specific fabrication need in sheet metal.	
CO4:	Construct a job using cold smithy techniques and make a chisel.	
CO5:	Construct a simple components using Wax casting.	



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Course Name: Swach Bharat/ Rural Outreach		Course Code: BT-108
Students will be able to:		
CO1:	Create awareness among students towards sanitation and cleanliness.	
CO2:	Facilitate the efforts to achieve universal sanitation coverage and to put the focus on sanitation,	
CO3:	Determine the link between sanitation and development.	
CO4:	Analyze and predict the sanitation challenges of India.	
CO5:	Explain the Swachh Bharat Mission for rural and urban areas.	

**Approved By: -
Head of Department**