



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



DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES (COs)

Semester: VIII

Course Name: Design of Steel Structures		Course Code: CE-801
Students will be able to:		
CO1:	Understand the principles of structural steel design using Working Stress Method (WSM) and Limit State Method (LSM).	
CO2:	Understand the types, behavior, and applications of steel connections used in structural engineering.	
CO3:	Design steel tension members, compression members, beams, and column bases in accordance with relevant design standards.	
CO4:	Design plate girders and explain the function and application of stiffeners in steel structures.	
CO5:	Classify and design structural steel components used in industrial buildings by applying standard engineering practices and IS code provisions.	
Course Name: Foundation Engineering		Course Code: CE-802 B
Students will be able to:		
CO1:	Understand the objectives of soil investigation and identification and apply suitable field and laboratory methods for soil exploration and classification.	
CO2:	Design shallow foundations and evaluate their performance using relevant bearing capacity and settlement theories.	
CO3:	Design deep foundations and analyze their behavior and safety under different loading and soil conditions.	
CO4:	Understand the construction methods of foundations for different soil conditions and evaluate their strength and stability.	
CO5:	Analyze earth pressure and slope stability problems using appropriate geotechnical theories and engineering principles.	



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Course Name: Integrated Water Management		Course Code: CE-803 D
Students will be able to:		
CO1:	Understand the principles of water resource management and explain sustainable approaches for efficient water utilization and conservation.	
CO2:	Identify the challenges involved in water resource planning and apply suitable management strategies to address them.	
CO3:	Explain the planning, implementation, and ecological aspects of Integrated Water Resources Management (IWRM) for sustainable development.	
CO4:	Analyze and evaluate surface water and groundwater systems for effective assessment and management of water resources.	
CO5:	Understand conventional and non-conventional techniques for water security and explain their role in ensuring sustainable water availability.	

**Approved By: -
Head of Department**