



COURSE OUTCOMES (COs)

Semester: VII

Course Name: Data Engineering		Course Code: CD 701
Students will be able to:		
CO1:	Understand the lifecycle, infrastructure, and core role of data pipelines in data-driven organizations.	
CO2:	Design schemas and data models using traditional and NoSQL databases.	
CO3:	Build, automate, and orchestrate ETL (Extract, Transform, Load) processes and data flows.	
CO4:	Implement scalable, cloud-based data storage and pipeline architectures..	
CO5:	Apply security, veracity checks, and data compliance protocols to massive datasets	

Course Name: Cloud Computing		Course Code: CD 702 (C)
Students will be able to:		
CO1:	Identify the fundamental concepts, characteristics, components, and architectural models of cloud computing compared to traditional, grid, and utility computing	
CO2:	Classify and implement different cloud services like Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS)	
CO3:	Analyze leading utility computing platforms, specifically Amazon EC2, Google App Engine, and Microsoft Azure	
CO4:	Explain cloud security requirements, data protection in public/private models, and identify risks	
CO5:	Apply design principles for conceptual cloud models and perform hands-on configuration of services	



**BANSAL INSTITUTE OF RESEARCH & TECHNOLOGY,
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING -DATA SCIENCE

Course Name : Computer Vision		Course Code: CD 703 (A)
Students will be able to:		
CO1:	Understand fundamental principles of computer vision, including its scope, applications, camera models, and geometry.	
CO2:	Demonstrate proficiency in extracting features from images and implementing feature matching and image stitching techniques.	
CO3:	Analyze and apply machine learning algorithms commonly used for image classification and object detection tasks.	
CO4:	Evaluate the performance of various classification models using specific metrics and optimize their performance.	
CO5:	Design object tracking and motion detection systems by integrating vision algorithms into practical projects.	

Course Name : Advanced statistics for Data Science		Course Code: CD 704 (A)
Students will be able to:		
CO1:	Ability to construct and interpret Generalized Linear Models (GLMs) and multivariate regression models.	
CO2:	Mastering nonparametric tests, ANOVA (Analysis of Variance), and statistical inference techniques to extract valid insights from real-world datasets	
CO3:	Applying techniques like Principal Component Analysis (PCA) and Factor Analysis to handle and visualize high-dimensional data efficiently	
CO4:	Understanding Bayesian inference and building time-series forecasting models (e.g., ARIMA) for trend and seasonality analysis	
CO5:	Translating statistical theory into actionable predictive insights using programming languages like R or Python	

**Approved By:-
Head of Department**