

BUNTS SANGHA'S
S.M.SHETTY COLLEGE OF SCIENCE, COMMERCE & MANAGEMENT STUDIES POWAI

Bachelor of Science- Data Science

Semester	Subject	Subject Codes	Course Outcomes
Semester 1	Descriptive Statistics	USDS101	CO1 To understand the use of data for tabulating and analyze statistical information given in descriptive form with attributes
			CO2 To use graphical techniques as well as to compute various measures of central tendency.
			CO3 To compute various measures of dispersion, skewness and kurtosis and to calculate range of variables and the deviation of specific data point
			CO4 To compute the correlation coefficient for bivariate data and Calculate the simple linear regression equation for a set of data.
			CO5 To Describe and verify mathematical considerations for analyzing time series
	Introduction to Programming	USDS102	CO1 To undrstand about use of various data science tools
			CO2 To apply regular expressions to perform complex operations in less code
			CO3 To analyze various data types including, string, array list, tuple and dictionary
			CO4 To evaluate IPython architecture for Data Science Applications
			CO5 To create date and time in Python for various applications.
	Web Technology	USDS103	CO1 To define the meaning of the basic terminologies of web technology and explore, use the HTML5 concepts. Define what are the basic requirement of web design.
			CO2 To illustrate the use of Page layout, Navigation, Tables, Forms and Media features of HTML5.
			CO3 To apply the concept of Cascading Style sheet for beatifying the web pages.
			CO4 Examine the technique of transmitting data between a server and web application using JSON.
			CO5 Build applications with Java Script for validation of user forms in web pages.
	Business Communication and Information Ethics	USDS104	CO1 To understand how to communicate effectively in non-verbal way, draft and write effective business letters
			CO2 To apply the information ethics in all walks of life
			CO3 To analyze elegant business reports and prepare user instruction manual
			CO4 To evaluate effective communication activities of business by following email etiquettes, drafting memos
			CO5 To create a good communicator
Precalculus	USDS105	CO1 Apply the knowledge of numbers, graph and functions in real life	
		CO2 Apply trigonometry in modelling real life problems	
		CO3 Use analytic trigonometry and inverse circular functions to solve variety of problems	

	Calculus	USDS205	CO4	Apply complex numbers theory to different domains, use vectors and matrices to solve real life problems
			CO5	Identify different types of conics from equations, understand sequences and series and basics of limits and derivatives
Semester 2	Probability and Distributions	USDS201	CO1	Organize, manage and present data also Analyse statistical data graphically using frequency distributions and cumulative frequency distributions
			CO2	Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events
			CO3	Translate real-world problems into probability models
			CO4	Derive the probability density function of transformation of random variables
			CO5	Calculate probabilities and derive the marginal and conditional distributions of bivariate random variables
	Database Management	USDS202	CO1	To define business information problem and find the requirements of a problem in terms of data
			CO2	To explain and demonstrate database design in logical structure and can identify the entities which exist in a system
			CO3	To apply and build normalized database and functional dependencies between attributes and relational algebra queries
			CO4	To analyse database schema with the use of appropriate data types for storage of data in database
			CO5	To create and design query and back up the databases with features of SQL
	R Programming	USDS203	CO1	To show the working of R Studio and list the features for R programming.
			CO2	To demonstrate use of R functions and graphics with in R programming for solving problems.
			CO3	To apply advanced graphics of R, import, use and represent the data into tables.
			CO4	To determine how to manipulate Data Frames and make use of Dates in R application.
			CO5	To develop applications to demonstrate formatting on table, use Pipelines in application and use strings, factors in R programme.
	Environmental Science	USDS204	CO1	To understand the importance of environment and its resources
			CO2	To apply insights of ecology and biodiversity
			CO3	To analyze the cause and effects of environmental pollution and other social issues
			CO4	To evaluate impact of population on environment
			CO5	To discuss environment management and sustainable development
Calculus	USDS205	CO1	Quickly and easily find the derivative of a function	
		CO2	Perform integration of functions with ease	
		CO3	Apply the knowledge of derivatives and integration to different domains and obtain the results	

			CO4	Apply the knowledge of multiple integrals and polar coordinates to solve real life problems with ease
			CO5	Use partial derivatives and differential equations to solve variety of problems




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