Ganpat University
॥ विद्यया समाजोत्कर्षः ॥

Faculty of Computer Applications

FACULTY OF COMPUTER APPLICATIONS

Programme	BCA Honors	**Branch**	Bachelor of Computer Applications
Semester	VI	**Version**	1.0.0.0
Effective from Academic Year	2026-2027	**Effective for the batch Admitted in**	June 2024
Subject Code	U36A2DA	**Subject Name**	DATA ANALYTICS - III

Teaching scheme						**Examination scheme (Marks)**			
(Per week)	**Lecture (DT)**		**Practical (Lab.)**		**Total**		**CE**	**SEE**	**Total**
	L	TU	P	TW					
Credit	2		2	-	2	Theory	50	50	100
Hours	2		4	-	6	Practical	-	-	-

Objective:

The objective of integrating Tableau is to enable students to transform complex, large-scale datasets into meaningful, interactive visual insights.

Pre-requisites:

Students should have knowledge regarding Basic Excel, and should know the advance functions like VLOOKUP and Pivot Table.

Course Outcomes :

Name of CO	**Description**
CO1	Understand Tableau's ecosystem and connect to different data sources effectively.
CO2	Create and customize basic visualizations using Tableau for data exploration.
CO3	Apply intermediate visualization techniques using calculations, parameters, and maps.
CO4	Design interactive dashboards and data stories for effective communication.
CO5	Use advanced Tableau features and publish optimized, interactive workbooks.

Mapping of CO and PO

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	1	3	0	1	1	0	1	1	2
CO2	3	3	2	2	3	1	2	2	2	2	1	2
CO3	2	3	3	3	3	1	2	2	2	2	1	3
CO4	1	2	3	3	3	2	1	2	3	3	1	3
CO5	1	3	3	3	3	2	1	2	3	3	1	3

Content:		
Unit		**Hrs**
1	**Introduction to Tableau & Data Connections** Introduction to Tableau & its ecosystem (Desktop, Public, Online, Server, Prep), Installation and Interface Overview, Connecting to Data Sources (Excel, CSV, SQL, Web Data Connectors), Live vs Extract Connections, Data Types and Metadata, Basic Data Preparation (Joins, Unions, Blends)	6
2	**Basic Visualizations and Data Exploration** Dimensions vs Measures; Discrete vs Continuous, Using "Show Me" to create visualizations, Bar, Line, Pie, and Text Tables, Filters, Sorting, and Grouping, Highlighting and Basic Tooltips, Aggregations and Granularity	6
3	**Intermediate Visual Analytics** Maps and Geographic Analysis, Dual Axis and Combined Charts, Calculated Fields (basic math, string, and logical functions), Parameters and Parameter Controls, Quick Table Calculations (Running Total, % of Total), Sets, Groups, Bins, and Hierarchies	6
4	**Dashboards and Stories** Dashboard Layouts and Best Practices, Adding Filters, Legends, and Interactivity, Using Dashboard Actions (Filter, Highlight, URL), Designing for Different Devices, Creating Story Points and Presentations	6
5	**Advanced Features and Capstone Project** Level of Detail (LOD) Expressions (FIXED, INCLUDE, EXCLUDE), Data Blending vs Joins Deep Dive, Performance Optimization Tips, Publishing Workbooks (Tableau Public / Online)	6
Practical Content:		
List of programs specified by the subject teacher based on above mentioned topics		
Text Books:		
1	Learning Tableau-Joshua N. Milligan-Packt Publishing-Latest Edition	
Reference Books:		
1	Visual Analytics with Tableau, Alexander Loth, Wiley, Focuses on dashboarding and visual storytelling	
2	Communicating Data with Tableau, Ben Jones, O'Reilly Media, Excellent for narrative visualization	
3	The Big Book of Dashboards, Steve Wexler et al., Wiley, Practical dashboard design examples	
Web References / MOOC / Certification Course		
1	https://help.tableau.com/	

2	https://www.thedataschool.co.uk/blog/
3	https://www.edx.org/course/analyzing-and-visualizing-data-with-tableau
4	https://www.mygreatlearning.com/academy/learn-for-free/courses/tableau
Question Paper Scheme:	
	End Semester Examination Duration: (2 Hours Theory Examination) **Note for Examiner:** - Q-1 Any Five out of Seven (25 Marks) Q-2 Any Two out of Three (06 Marks) Q-3 Mandatory question (05 Marks) Q-4 Any Two out of Three (08 Marks) Q-5 Any Two out of Three (06 Marks) *The question paper must comprehensively address all Course Outcomes (COs), align Taxonomy levels, and ensure complete syllabus coverage.*