

**SES's L.S. RAHEJA COLLEGE OF ARTS AND COMMERCE
(AUTONOMOUS)**



BOARD OF STUDIES: Information Technology and Data Science

Programme: B.Sc. (Artificial Intelligence & Data Science)

Semester: II

Nomenclature of the Course: Data Visualization using Tableau

NEP Vertical: SEC

Credit: 02

Total Marks: 50

Academic Year: 2026–27

(As per Choice Based Credit System under NEP 2020)



Course Structure

Part A: Introductory Theory Component

1. Introduction to Data Visualization
2. Principles of Effective Visualization
3. Types of Data (Dimensions & Measures)
4. Role of Visualization in Data Science
5. Overview of Tableau Interface
6. Concept of Dashboards and Storytelling

(Conceptual understanding before tool implementation)

Part B: Practical Component

1. Installation and Setup of Tableau
2. Connecting Tableau to Excel/CSV datasets
3. Data Preparation and Cleaning in Tableau
4. Creating Basic Charts (Bar, Line, Pie)
5. Creating Advanced Charts (Scatter Plot, Histogram)
6. Sorting, Filtering and Grouping Data
7. Creating Calculated Fields
8. Using Parameters and Interactive Filters
9. Creating Tree Maps and Heat Maps
10. Creating Combined Charts (Dual Axis Chart)
11. Building Interactive Dashboard
12. Designing KPI-based Dashboard
13. Storytelling using Tableau Stories
14. Mini Industry-Based Project
 - Sales Analysis Dashboard
OR
 - Academic Performance Dashboard
OR
 - Healthcare Data Dashboard

Learning Objectives

1. To understand principles of data visualization.
2. To develop skills in Tableau for data exploration.
3. To design interactive dashboards.

4. To apply storytelling techniques in visualization.
5. To create industry-ready data dashboards.

Course Outcomes (CO)

CO No.	Course Outcome	Bloom's Level
CO1	Explain visualization principles and concepts	Understand (L2)
CO2	Create charts and visualizations using Tableau	Apply (L3)
CO3	Develop interactive dashboards	Apply (L3), Analyze (L4)
CO4	Use calculated fields and parameters effectively	Apply (L3)
CO5	Evaluate visualization effectiveness for decision-making	Analyze (L4), Evaluate (L5)

Evaluation Scheme

Component	Marks
Mini Project (Dashboard)	15
Journal	05
Viva	05
Practical Examination	25
Total	50