

Course Title: Data Analytics with Tableau

Course Description: This course is designed to equip participants with the skills and knowledge needed to effectively analyze and visualize data using Tableau. Through practical exercises and real-world examples, students will learn how to connect to various data sources, create interactive dashboards, and share insights. Topics covered include data preparation, data visualization best practices, calculations, dashboard design, and Tableau Server administration.

Course Outline:

1. Introduction to Tableau

- Overview of Tableau and its features
- Understanding the Tableau workspace
- Installing and setting up Tableau Desktop

2. Connecting to Data Sources

- Importing data from Excel, CSV, SQL Server, and other sources
- Connecting to cloud-based data sources (Google Analytics, Salesforce, etc.)

3. Data Preparation and Data Modeling

- Data modeling concepts (joins, blends, unions)
- Creating calculated fields and parameters

4. Data Visualization Basics

- Introduction to data visualization principles

- Building basic visualizations (bar charts, line charts, scatter plots, etc.)
- customizing visualizations (colors, labels, tooltips)

5. Calculations and Expressions

- Introduction to Tableau calculations
- Writing basic calculations (arithmetic operations, logical functions, etc.)
- Advanced calculations using Tableau functions (IF statements, LOD expressions, etc.)
- Using table calculations for dynamic analysis

6. Dashboard Design Principles

- Designing interactive dashboards
- Layout options and best practices
- Creating dashboard actions (filter actions, highlight actions, etc.)
- Adding interactivity with parameters

7. Advanced Analytics with Tableau

- Forecasting
- Clustering and predictive analytics
- Implementing statistical techniques (trend lines, box plots, etc.)

8. Case Studies and Real-World Applications

- Analyzing real-world datasets using Tableau

Solving business problems with data analytics

Presenting findings and insights

9. Project Work

Hands-on project to apply learned concepts

Analyzing a given dataset and creating interactive dashboards

Peer review and feedback