

(Annexure I-1)

**FACULTY OF COMPUTER SCIENCE & I.T.**

**SYLLABUS**

**Of**

**CERTIFICATE COURSE IN**

**DATA ANALYTICS WITH POWER BI AND TABLEAU**

**Session 2025-26**



**The Heritage Institution  
KANYA MAHA VIDYALAYA  
JALANDHAR  
(AUTONOMOUS)**

## **Kanya Maha Vidyalaya, Jalandhar (Autonomous)**

### **Certificate Course in Data Analytics with Power BI and Tableau Session 2025-26**

| <b>Course Code</b> | <b>Course Title</b>                      | <b>Credit</b> |              | <b>Duration</b> | <b>Marks</b> |          | <b>Total Marks</b> | <b>Examination Time (in Hours)</b> |
|--------------------|------------------------------------------|---------------|--------------|-----------------|--------------|----------|--------------------|------------------------------------|
|                    |                                          | <b>L-T-P</b>  | <b>Total</b> |                 | <b>L</b>     | <b>P</b> |                    |                                    |
|                    | Data Analytics with Power BI and Tableau |               |              |                 |              |          |                    |                                    |

### **Certificate Course in Data Analytics with Power BI and Tableau**

#### **Power BI**

Introduction to Power BI, Need, Working, Installation.

Basic Charts in Power BI. Creating a Map in Power BI. Changing Background in Power BI Map.

Table and Matrix in Power BI, Subtotal & Total in Matrix, Other Charts in Power BI Desktop, Cards and Filters in Power BI, Slicers in Power BI, Advanced Charts in Power BI, Objects & Actions (Hyperlinks).

Power BI Service Introduction, Text Functions in Power Query (Power BI), Date Functions in Power Query (Power BI), Number Functions in Power Query (Power BI), Appending Files & Tables in Power BI, Merging Files and Tables in Power BI.

M Language in Power Query, Introduction of DAX and its operations, Report Publishing in Power BI.

## **Tableau**

Introduction, Tableau Basics: Big Data Terms, Business Intelligence (BI) and Data Visualization, Excel vs BI-Tools, Top 3 BI-Tools, Meaning of Tableau, Need of Tableau.

Tableau Products: Development Products, Tableau Sharing Process, Tableau Hosting (OnPrem, IaaS, SaaS), Tableau Sharing Products.

Tableau Architecture: Live vs Extract, Tableau File Types, Tableau Desktop Architecture, Tableau Server Architecture.

Prepare the Environment: Download and Install Tableau Public, Create Tableau Public Account, Get Training Datasets, Tableau Interface.

Combining Data: Basics Data Modelling, Logical and Physical Layers, Joins, Union, Relationships, and Data Blending, Combining Methods.

Tableau Metadata: Data Types, Geographic and Image Roles, Dimensions and Measures, Discrete vs Continuous.

Renaming & Aliases: Naming Conventions, Renaming, Aliases

Organizing Data: Hierarchy, Groups, Cluster Group, Sets, Bins and Histograms

Filtering and Sorting Data

Tableau Parameters, Tableau Actions, Tableau Calculations, Tableau Charts, Tableau Dashboards.