Lok Jagruti Kendra University
University with a Difference

Masters of Business Administration (MBA) – Semester - 3
Course Teaching Plan

Course Title: **Advanced Data Visualization with Power BI**
Course Code: **340039312**
Course Credit: **4.0**

1. **Course Introduction:**
   Business Intelligence analytical skills are highly sought after in organizations as they rely on data-driven decision-making. Microsoft Power BI is the leading data analytics, business intelligence, and reporting tool in the field, used by most of the companies to make decisions based on data-driven insights and analytics. It helps to solve a business problem and identify new opportunities through storytelling using dashboards, reports and charts.

2. **Course Objective:**
   - Learn to use Power BI to connect to data sources and transform them into meaningful insights.
   - Learn to use the visualization and report capabilities of Power BI to create compelling reports and dashboards.

3. **Course Learning Outcome:**

CLO1: Understanding how to import and transform data in Power BI
CLO2: Develop Data Modelling proficiency in Power BI
CLO3: Demonstrate proficiency in using Power BI for Data Visualization
CLO4: Understanding how to share and collaborate using Power BI

4. **CLO –PO Mapping Matrix**

	PO1	PO2	PO3	PO4	PO5
CLO1	3	3	3	-	2
CLO2	3	3	3	-	2
CLO3	3	3	3	-	2
CLO4	3	3	3	2	2

Correlation levels: 3= ‘High’, 2=‘Medium’, 1=‘Low’ and ‘-‘ = No correlation

5. Course Contents & Session Plan:

Session No.	Topic
Unit I - Import & Transform Data	
1-10	Data import from csv, excel, pdf, web, SQL Data Profiling, Formatting data, Understanding of Data types, Merge Query, Append Query, Data aggregation, Duplicate & Reference tables, Pivot & Un-pivot of data, Custom columns, Conditional columns, Split columns values, Move columns and sorting of data, Promote rows as column headers, data source settings
Unit II – Data Modelling	
11-20	Hierarchies in Power BI, Calculated columns, DAX Measures, Calculated tables, colmuns vs measures, relationships, modify default properties
Unit III - Data Visualization	
21-30	Charts - Bar, Column, Line, Area, Combo charts; Pie, Donut and Treemap; Tables & matrix; Single and multi-row cards; Maps; Gauge & KPI charts; Slicers; AI visuals Formatting visuals, Interactive Elements like image, button, shape; Edit interaction, Custom visualization in Power BI, Tooltips & custom tooltips. Sort & filter visuals, Top-down and bottom-up analytics- Drill up, Drill down, Drill through. Apply analytics - Conditional formatting, Median line, Trend line Sync slicers, Bookmarks, Selection pane to show/hide visuals Page layout and formatting, Page navigations
Unit IV – Share & Collaborate:	
31-34	Publish to Power BI service, Publish to web, Power BI Service overview, Create & Manage workspace
35-40	Students work on a comprehensive data visualization project using Power BI and apply advanced visualization, storytelling, and data modeling techniques

6. **Assessment Scheme :**
Exam: 50%
Continuous Assessment 50 %

Specific assessment method	% Weightage	Theory	Practical

Exam	50%	✓	✓
Case Analysis/Class Participation	10%		✓
LAB Assignment	30%		✓
Quiz	10%	✓	✓

7. Educational Resources

Educational Resources	**Description**
i. Text Book	
ii. Reference Book	Learning Microsoft Power BI by Jeremey Arnold Publisher(s): O'Reilly Media, Inc. ISBN: 9781098112844 (Latest Edition)
iii. Blogs/ Magazine/periodical	Data transform - https://learn.microsoft.com/en-us/power-bi/transform-model/ data modelling - https://learn.microsoft.com/en-us/power-bi/transform-model/desktop-modeling-view visualization - https://www.youtube.com/watch?v=2CLf6LwMAag
iv. Video lecture	
v. Course related important Web links	Microsoft Power BI Data Analyst Professional Certificate https://www.coursera.org/professional-certificates/microsoft-power-bi-data-analyst?#outcomes