

Name of College: S. R. Luthra Institute of Management								
Faculty	Management			Program	Master of Business Administration, (M.B.A.)			
Year	II			Version	1.0			
Semester	3			Effective From	June 2025			
Course Code	MGMB18303			Course Name	Data Visualization using Power BI – I (DVI)			
<b>Teaching Scheme</b>				<b>Examination Scheme</b>				
Credits	Lecture (L)	Tutorial (T)	Practical (P)	ME	CE	SE	V	Total
4	4	0	0	30	40	50	---	120

#### Course Outcomes:

CO1	<i>Understand</i> the fundamental concepts of Business Intelligence and become familiar with the Power BI Desktop.
CO2	<i>Apply</i> Power BI tools to connect, retrieve, and manage different types of data from multiple sources using available data connection features.
CO3	<i>Apply</i> Power BI's Power Query Editor to clean, transform, and manage data using various ETL techniques.
CO4	<i>Develop</i> structured data models in Power BI to support scalable and meaningful data analysis.
CO5	<i>Develop</i> customized and interactive reports and dashboards in Power BI to effectively present and communicate data insights.

#### Mapping Course Outcomes to Program Outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	1	1	1	1	1
CO2	2	3	1	1	1	1
CO3	2	2	1	1	1	1
CO4	3	3	1	1	1	1
CO5	2	3	1	1	1	1



Sr. No	Module	Description	CO	Marks	Hours
1	I	<b>Introduction to Power BI</b> <ul style="list-style-type: none"> <li>• What is Power BI?</li> <li>• Components and Architecture of Power BI</li> <li>• Installing Power BI Desktop</li> <li>• Getting Familiar with Terminologies and Interface</li> </ul> <b>Data Sources and Connections</b> <ul style="list-style-type: none"> <li>• Supported Data Sources</li> <li>• Import Vs. Direct Query</li> <li>• Connecting the Data Sources</li> <li>• Refreshing and Managing Data</li> </ul>	1, 2	13	10
2	II	<b>Data Cleaning and Transformation (ETL)</b> <ul style="list-style-type: none"> <li>• Power Query Editor Overview</li> <li>• Data Profiling and Cleaning Tools</li> <li>• Transforming Data: Split, Merge, Replace, Pivot/Unpivot</li> <li>• Handling Missing/Null Values</li> <li>• Column and Data Type Management</li> </ul>	3	12	10
3	III	<b>Introduction to Data Modeling in Power BI</b> <ul style="list-style-type: none"> <li>• Understanding Data Models &amp; Schema Types</li> <li>• Star Schema vs. Snowflake Schema</li> <li>• Normalized vs. Denormalized Data</li> <li>• Creating Relationships Between Tables</li> <li>• Primary &amp; Foreign Keys</li> <li>• Hierarchies and sorting data by Columns</li> </ul>	4	10	10
4	IV	<b>Introduction to Data Visualization</b> <ul style="list-style-type: none"> <li>• Introduction to Visuals In Power BI</li> <li>• Basic and advanced charts in Power BI</li> <li>• Slicers and Filters – Types and Use</li> <li>• Formatting charts in Power BI</li> <li>• Enhancing dashboard</li> </ul> <b>Project (Create an interactive dashboard based on a dataset)</b>	5	15	10

#### REFERENCE

##### Reference Books.

1.	Ferrari, A., & Russo, M. (2016). Introducing Microsoft Power BI. Microsoft Press.
2.	Knight, D., Knight, B., Pearson, M., & Quintana, M. (2018). Microsoft Power BI quick start guide: Build dashboards and visualizations to make your data come to life. Packt Publishing Ltd.
3.	Aspin, A. (2016). Pro Power BI Desktop. Apress.
4.	Powell, B. (2017). Microsoft Power BI cookbook: Creating business intelligence solutions of analytical data models, reports, and dashboards. Packt Publishing Ltd.
5.	Powell, B. (2018). Mastering Microsoft Power BI: Expert techniques for effective data analytics and business intelligence. Packt Publishing Ltd.

##### Online Resources.

1. Microsoft – Power BI Learning Path: <https://learn.microsoft.com/en-us/training/powerplatform/power-bi/>
2. Power BI Documentation: <https://learn.microsoft.com/en-us/power-bi/>

