



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Business Administration

Level: PG

Branch: Information Technology

Course / Subject Code: MB03096011

Course / Subject Name : Business Reporting and Data Visualization

w. e. f. Academic Year:	2025-2026
Semester:	3
Category of the Course:	Major Subject 1

**Prerequisite:** Any Graduate

<b>Rationale:</b>	The digital age demands business leaders who can convert complex data into actionable insight. This course equips students with the ability to develop compelling business reports and dashboards using Tableau. Students will gain hands-on experience in transforming raw data into interactive and meaningful visualizations to aid in strategic decision-making.
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### Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Understand business reporting concepts and visualization principles.	Remember, Understanding
02	Apply data visualization techniques using Tableau for effective business communication.	Remember, Understanding, Application
03	Develop interactive dashboards for business analysis and decision-making.	Remember, Understanding, Create
04	Evaluate the effectiveness of visualizations in different business contexts.	Evaluate

*\*Revised Bloom's Taxonomy (RBT)*

### Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Tutorial / Practical		
				ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)	
3	1	0	4	70	30	50	0	150

### Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	<b>Fundamentals of Business Reporting</b> <ul style="list-style-type: none"> <li>Business reporting frameworks and perspectives</li> </ul>	12	17



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	<ul style="list-style-type: none"> <li>Internal vs. external reports</li> <li>Purpose-driven report design: KPI, Balanced Scorecards, Dashboards</li> <li>Report standards, formats, and structure</li> <li>Real-world case examples</li> </ul>		
2.	<b>Data Visualization Concepts &amp; Foundations</b> <ul style="list-style-type: none"> <li>Introduction to data acquisition and visualization</li> <li>Applications in B2B, B2C, and public sector</li> <li>Visualization fundamentals: charts, control of presentation, infographics</li> <li>JavaScript &amp; HTML5 trends in visualization (overview)</li> <li>Visual spectrum: Line, Bar, Pie, Area, Bubble, Map, Heat Maps, Gantt</li> </ul>	11	18
3.	<b>Tableau Essentials &amp; Data Handling</b> <ul style="list-style-type: none"> <li>Tableau interface, workspace, data types, file types</li> <li>Connecting data: Excel, CSV, SQL, live/extract</li> <li>Data operations: Joins, Blends, Metadata</li> <li>Calculations: String, Date, Table, LOD Expressions</li> <li>Sorting and Filtering techniques</li> <li><b>Using R with Tableau:</b> Integrating R scripts via Rserve for advanced statistical computations</li> <li><b>Overview of Power BI:</b> Interface, data model, connecting data, Power Query</li> </ul>	11	17
4.	<b>Visualization in Tableau Other BI Tools</b> <ul style="list-style-type: none"> <li>Basic visualizations: Bar, Line, Pie, Scatter, Treemap, Histogram</li> <li>Advanced visualizations: Gantt, Motion, Waterfall, Bump charts</li> <li>Interactive dashboards and storytelling</li> <li>Trendlines and forecasting</li> <li>Publishing and sharing dashboards</li> <li><b>Using Google Data Studio:</b> Connecting to Google Sheets, BigQuery; using calculated fields</li> <li><b>Open-source tool Gephi:</b> Importing network datasets, visualizing relationships, applying layouts</li> </ul>	11	18
5.	<b>Practical</b> <ul style="list-style-type: none"> <li>Analyze a business problem using Tableau</li> <li>Design KPI-based dashboards and reports</li> <li>Present findings and insights in a mock boardroom setup</li> <li>Iterative improvements based on peer feedback</li> </ul>	15	CEC(30 Marks)
<b>Total</b>		<b>60</b>	<b>100</b>



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## Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)					
R Level	U Level	A Level	N Level	E Level	C Level
20%	30%	25%	0%	15%	10%

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

## References/Suggested Learning Resources:

### (a) Books:

No.	Author	Title	Publisher	Edition
1	R N Prasad & Seema Acharya	Fundamentals of Business Analytics	Wiley	Latest
2	Daniel G. Murray	Tableau Your Data!	Wiley	Latest
3	Ryan Sleeper	Practical Tableau	O'Reilly	Latest
4	Jon Raasch et al.	JavaScript & JQuery for Data Analysis	Wiley	Latest
5	R for Data Science	Hadley Wickham & Garrett Grolemund	O'Reilly	Latest
6	Google Data Studio for Beginners	Mark P. Holtz	Independently Published	Latest
7	Network Graph Analysis and Visualization with Gephi	Ken Cherven	Packt Publishing	Latest

### (b) Open source software and website:

1. <https://www.geeksforgeeks.org/data-visualization-for-business/>
2. <https://www.tableau.com/visualization/what-is-data-visualization>
3. <https://r4ds.had.co.nz>
4. <https://learn.microsoft.com/en-us/training/powerplatform/power-bi/>
5. <https://gephi.org/users/tutorials/>

## CO- PO Mapping:

Semester 3	Course Name : Business Reporting and Data Visualization				
	POs				
Course Outcomes	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	2
CO2	3	3	3	3	2
CO3	3	3	2	2	3
CO4	3	3	2	2	3
CO5	-	-	-	-	-

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO.

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