GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Master of Business Administration, 4th Semester
Subject Class: Sectoral Elective
Subject Name: Business Reporting Data Visualization (BRDV)
Subject Code: 4549293

With effective from academic year 2018-19

1. Learning Outcomes:

Learning Outcome Component	Learning Outcome (Student will be able to)
Business Environment and Domain Knowledge (BEDK)	• *Analyze* how Data Visualization transforms data into intelligent business insight. • *Analyze* how Data Visualization helps in trend analysis, business forecasting and decision making...
Critical thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	• *Analyse* how data can be presented in a visually understandable form according to the business domain and problem, so that decision making is enhanced
Global Exposure and Cross-Cultural Understanding (GECCU)	• *Appraise* the latest global trends and technologies in business reporting.
Social Responsiveness and Ethics (SRE)	• Judge the efficacy of a business reporting system by safeguarding social and human concerns
Effective Communication (EC)	• *Develop* professional communication for reporting business information.
Leadership and Teamwork (LT)	• *Encourage* cross functional collaboration to enhance efficiency and productivity.

LO – PO Mapping: Correlation Levels:
1 = Slight (Low); 2 = Moderate (Medium); 3 = Substantial (High), "-"= no correlation

Sub. Code: 4549293	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
LO1: Analyze how Data Visualization transforms data into intelligent business insight.	3	3	3	2	2	2	-	2	2
LO2: Analyze how Data Visualization helps in trend analysis, business forecasting and decision making.	3	3	3	-	-	2	-	3	2
LO3: Analyse how data can be presented in a visually understandable form according to the business domain and problem, so that decision making is enhanced	3	3	3	3	1	3	-	2	2
LO4: Appraise the latest global trends and Technologies in business reporting.	3	2	3	1	3	1	-	2	2
LO5: Judge the efficacy of a business reporting system by safeguarding social and human concerns	2	3	3	1	1	1	-	2	1
LO6: Develop professional communication for reporting business information.	1	3	1	3	1	1	-	1	1

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LO7: Encourage cross functional collaboration to enhance efficiency and productivity.	1	3	3	3	1	3	-	2	2

2. **Course Duration:** The course duration is of **40 sessions of 60 minutes each.**

3. **Course Contents:**

Module No:	Contents	No. of Sessions	70 Marks (External Evaluation)
I	**Basics of Business Reporting:** Reporting perspectives for organization – Functional, Internal / external, Role, Nature, Purpose, Content, Timeframe; Reporting standards and practices, Report layouts and characteristics, KPI's, Balance scorecards and Dashboards.	6	7
II	**Introduction to Data Visualization:** Acquiring Data, Visualizing Data, Simultaneous Acquisition and Visualization, Applications of Data Visualization (Uses in the Public Sector, Business-to-Business and inter-Business Uses, Business-to-Consumer Uses), Control of Presentation, Faster and Better JavaScript Processing, Rise of HTML5, Lowering the Implementation Bar **Data Visualization Foundation:** Exploring the Visual Data Spectrum- Charting Primitives (Data Points, Line Charts, PerfChart, Seasonality Chart, Bar Charts, Pie Charts, Donut Charts, Area Charts), Exploring advanced Visualizations (Candlestick Charts, Bubble Charts, Surface Charts, Map Charts, Heat Maps, Gantt Chart, Polygon Maps, Infographics).	14	21
III	**Introduction to Tableau:** Home, Overview, Environment Setup, Getting Started, Navigation, Design Flow, File Types, Data Types, Show Me, Terminology **Tableau data sources:** Data Sources, Custom Data View, Extracting Data, Fields Operations, Editing Metadata, Data Joining, Data Blending **Tableau Worksheets** Add Worksheets, Rename Worksheet, Save & Delete Worksheet, Reorder Worksheet, Paged Workbook **Tableau Calculations** Operators, Functions, Numeric Calculations, String Calculations, Date Calculations, Table Calculations, LOD Expressions **Tableau Sort & Filters** Basic Sorting, Basic Filters, Quick Filters, Context Filters, Condition Filters, Top Filters, Filter Operations	10	17

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IV	**Visualization in Tableau:** **Charts -** Bar Chart, Line Chart, Pie Chart, Crosstab, Scatter Plot, Bubble Chart, Bullet Graph, Box Plot, Tree Map, Bump Chart, Gantt Chart, Histogram, Motion Charts, Waterfall Charts **Advanced -** Tableau Dashboard, Formatting, Forecasting, Trend Lines	10	17
V	**Practical:** Develop a complete business report with KPI's and Dashboards using all the features covered in the syllabus.	---	(30 marks CEC)

4. Pedagogy:

- ICT enabled Classroom teaching
- Case study
- Practical / live assignment
- Interactive class room discussions

5. Evaluation:

Students shall be evaluated on the following components:

	Internal Evaluation	**(Internal Assessment- 50 Marks)**
A	• Continuous Evaluation Component	30 marks
	• Class Presence & Participation	10 marks
	• Quiz	10 marks
B	**Mid-Semester examination**	**(Internal Assessment-30 Marks)**
C	**End –Semester Examination**	**(External Practical Assessment-70 Marks)**

6. Reference Books:

No.	Author	Name of the Book	Publisher	Year of Publication / Edition
1.	R N Prasad and Seema Acharya	Fundamentals of Business Analytics	Wiley	Latest
2.	Jon Raasch, Graham Murray, Vadim Ogievetsky, Joseph Lowery	JavaScript amd JQuery for Data analysis and visualization	Wiley	Latest
3.	Daniel G. Murray	Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software	Wiley	Latest
4.	Ryan Sleeper	Practical Tableau	O'Reilly	Latest

Note: Wherever the standard books are not available for the topic appropriate print and online resources, journals and books published by different authors may be prescribed.

7. List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc.

1. https://www.tutorialspoint.com/tableau/index.htm
2. Data Visualization with Tableau Specialization- Visualize Business Data with Tableau. Create powerful business intelligence reports - https://www.coursera.org/specializations/data-visualization