



SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.11)
Syllabus with effect from the Academic Year 2023-2024

MBA Sem. 2
PM02CMBA 60: Business Analytics

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| Course Code | PM02CMBA60 | Title of the Course | Business Analytics |
| Total Credits of the Course | 04 | Hours per Week | 04 |

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| Course Objectives: | <ul style="list-style-type: none">• To equip students with the ability to proficiently use Microsoft Excel as a powerful tool for data analysis, visualization, and decision-making in real-world business scenarios.• To provide students with the fundamental knowledge of Python programming and its application in data manipulation, analysis, and predictive modeling, enabling them to harness the power of programming for business insights.• To introduce students to the world of web analytics through Google Analytics, enabling them to understand user behavior, track website performance, and make data-driven decisions to optimize online presence and marketing strategies.• To equip students with the skills to effectively visualize and communicate data using Tableau and Power BI, enabling them to create interactive dashboards and compelling data stories for improved data-driven decision-making in organizations. |
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Course Content - 40 sessions of one hour each duration

| Unit | Description | Weightage (%) |
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| 1. | Unit 1: Excel Applications of Business Analytics Introduction to Business Analytics and its importance in decision-making. Understanding Excel's essential functions and formulas for data analysis. Data visualization techniques in Excel: Charts, graphs, and conditional formatting. Exploring data tables and PivotTables for data summarization. Data manipulation with Excel: Sorting, filtering, and advanced data handling techniques. Data analysis tools like Data Tables, What-If Analysis, and Goal Seek. Case studies and real-world applications of Excel in Business Analytics. | 25 |

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| 2. | <p>Unit 2: Python Applications Introduction to Python for Business Analytics. Data manipulation and analysis using Pandas library. Data visualization using Matplotlib and Seaborn. Introduction to statistical analysis with Python. Time-series analysis with Python. Text mining and sentiment analysis. Web scraping for data acquisition. Machine Learning algorithms for business applications. Case studies and practical implementation of Python in Business Analytics.</p> | 25 |
| 3. | <p>Unit 3: Google Analytics Introduction to web analytics and Google Analytics. Setting up Google Analytics for websites and mobile apps. Navigating the Google Analytics interface and understanding its key features. Analyzing website traffic and user behavior. Tracking conversions and goal setting in Google Analytics. E-commerce tracking and analysis. Segmentation and custom reporting in Google Analytics. Analyzing marketing campaigns and channel attribution. Integrating Google Analytics with other platforms. Case studies and hands-on exercises using Google Analytics.</p> | 25 |
| 4. | <p>Unit 4: Tableau and Power BI Introduction to data visualization and its importance in Business Analytics. Getting started with Tableau and Power BI: Interface and basic functionalities. Connecting to data sources and data preparation. Creating interactive visualizations in Tableau and Power BI. Implementing filters, parameters, and calculated fields. Building dashboards and storyboarding for effective communication. Advanced visualization techniques: Heatmaps, tree maps, and geographical mapping. Sharing and publishing reports on Tableau Server and Power BI Service. Integrating Tableau and Power BI with other tools. Case studies and practical applications using Tableau and Power BI.</p> | 25 |

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| Teaching-Learning Methodology | Lectures, Case Discussions, Presentations, Assignments, projects-based learning |
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| Evaluation Pattern | | |
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| Sr. No. | Details of the Evaluation | Weightage |
| 1. | Mid Semester Examination | 30% |
| 2. | Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance | 30% |
| 3. | End Semester Examination | 40% |

| Course Outcomes: Having completed this course, the learner will be able to | |
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| 1. | Students will demonstrate proficiency in analyzing and manipulating data using tools such as Microsoft Excel and Python. |
| 2. | Students will acquire the skills to create compelling data visualizations and dashboards using tools like Tableau and Power BI. They will be able to effectively communicate their findings to stakeholders, enabling clear and concise presentation of complex data insights. |
| 3. | Students will be able to apply various data analysis techniques, including data visualization and time-series analysis, to derive meaningful insights from complex datasets. |

| Suggested References: | |
|------------------------------|---|
| Sr. No. | References |
| 1. | Winston, W. L. (2019). Microsoft Excel Data Analysis and Business Modeling. Microsoft Press. |
| 2. | McKinney, W. (2017). Python for Data Analysis. O'Reilly Media. |
| 3. | Murray, D. G. (2019). Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software. Wiley. |