Business/Data Analytics

S. No.	Topic	Subtopic	Learning Outcome	Hours
1	Introduction to Business/Data Analytics	- What is Business/Data Analytics?	- Understand the fundamentals of business and data analytics.	2
		- Importance in Decision-Making	- Learn how analytics supports business decision-making processes.	2
		- Types of Analytics (Descriptive, Predictive, Prescriptive)	- Differentiate between descriptive, predictive, and prescriptive analytics.	2
2	Excel Basics	- Excel Interface Overview	- Navigate and customize the Excel interface for effective use.	3
		- Basic Formulas and Functions	- Apply basic formulas and functions to perform calculations in Excel.	4
		- Data Entry and Formatting	- Enter and format data in Excel for clarity and professionalism.	3
3	Data Handling in Excel	- Sorting and Filtering Data	- Organize and filter data for better analysis and interpretation.	3
		- Data Validation	- Implement data validation to ensure data accuracy and consistency.	3
		- Conditional Formatting	- Use conditional formatting to highlight important data points.	3
4	Advanced Excel Functions	- VLOOKUP, HLOOKUP, and XLOOKUP	- Master lookup functions to retrieve data from tables.	4
		- Pivot Tables and Pivot Charts	- Create pivot tables and charts to summarize and visualize data effectively.	4
		- Text Functions (LEFT, RIGHT, MID, CONCATENATE)	- Manipulate text data using Excel's text functions.	3
5	Data Visualization in Excel	- Creating Charts (Bar, Line, Pie, etc.)	- Design and customize charts to represent data visually.	4
		- Advanced Charting Techniques	- Explore advanced charting techniques such as combo charts and scatter plots.	3
		- Using Sparklines	- Use sparklines for mini-charts within cells for quick data insights.	2
6	Introduction to AI in Business Analytics	- Role of AI in Data Analytics	- Understand the impact and role of AI in modern data analytics.	3
		- AI Tools and Techniques in Excel	- Explore AI-powered tools and add-ins available in Excel for data analysis.	3
		- Case Studies of AI in Business	- Analyze real-world case studies where AI has been applied in business analytics.	4
7	Advanced Data Analytics Techniques	- Regression Analysis	- Perform regression analysis to understand relationships between variables.	4
		- Time Series Analysis	- Analyze time-series data to forecast trends and patterns.	4
		- Scenario and Sensitivity Analysis	- Conduct scenario and sensitivity analysis to evaluate different business strategies.	4
8	Excel Macros and Automation	- Introduction to Macros	- Understand the basics of macros and their role in automating repetitive tasks.	3
		- Recording and Running Macros	- Learn to record and execute macros in Excel.	3
9	Cybersecurity Basics for Data Analysts	- Introduction to VBA (Visual Basic for Applications)	- Get an overview of VBA and its applications in Excel for advanced automation.	4
		- Importance of Cybersecurity	- Understand the need for cybersecurity in the context of data analytics.	3
		- Data Privacy and Compliance	- Learn about data privacy laws and compliance requirements (e.g., GDPR).	3
		- Secure Data Handling Practices	- Implement best practices for securely handling and storing data.	3
10	Practical Application of Skills	- Real-World Data Analysis Project	- Apply learned skills to a practical project using real-world business data.	3
11	Final Project Presentation	- Project Report Preparation	- Prepare a detailed report summarizing the project outcomes, methodologies, and insights.	2
		- Presentation of Findings	- Present the final project, showcasing data analysis, AI integration, and cybersecurity considerations.	2

90