

COURSE TITLE	BUSINESS INTELLIGENCE AND DATA VISUALIZATION
COURSE CODE	04GB0508
COURSE CREDITS	2

Course Outcomes: After completion of this course, student will be able to:

- 1 Analyze the role of Business Intelligence in global markets and evaluate data management techniques like ETL, data warehousing, and big data integration for informed decision-making
- 2 Apply BI tools such as Power BI, Tableau, and Google Data Studio to transform raw data into meaningful business insights through effective data analysis and reporting.
- 3 Design interactive and dynamic data visualizations and dashboards, utilizing advanced techniques like trend analysis, forecasting, and geospatial mapping for strategic decision-making.
- 4 Evaluate ethical considerations, data privacy, and collaborative intelligence in BI practices, ensuring responsible and secure use of business data in global business environments.

Pre-requisite of course:Basic knowledge of Visualization & Data

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
2	0	0	50	30	20	0	0

Contents : Unit	Topics	Contact Hours
1	Foundations of Business Intelligence and Data Management Introduction to Business Intelligence (BI), Data Warehousing and Data Management, BI Tools and Technologies, Data Analysis Techniques, Big Data and AI Integration, Data Quality and Preparation, Case Studies	15
2	Data Visualization and Strategic Decision-Making Principles of Data Visualization, Types of Visualizations, Dashboard Development, Advanced Visualization Techniques, Ethics and Data Security, Collaborative Intelligence, Capstone Project	15
Total Hours		30

Textbook :

- 1 Data Analytics and Business Intelligence: Computational Frameworks, Practices, and Applications, Ramesh Chandra Poonia, Vishal Bhatnagar, and Mukesh Prasad, CRC Press, 2022

Textbook :

- 2 Data Visualization: Exploring and Explaining with Data, Jeffrey D. Camm, James J. Cochran, Michael J. Fry, and Jeffrey W. Ohlmann, Cengage Learning, 2022

References:

- 1 Business Intelligence, Analytics, and Data Science: A Managerial Perspective, Business Intelligence, Analytics, and Data Science: A Managerial Perspective, Ramesh Sharda, Dursun Delen, and Efraim Turban, Pearson Education India, 2019
- 2 Data Visualisation: A Handbook for Data Driven Design, Data Visualisation: A Handbook for Data Driven Design, Andy Kirk, SAGE Publications Ltd, 2019

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
20.00	30.00	25.00	15.00	10.00	0.00

Instructional Method:

- 1 PPT, Board work, Case study.