

COURSE CODE	COURSE TITLE	L	T	P	C
1152CS204	BUSINESS INTELLIGENCE	3	0	2	4

Course Category: Program Elective

A. Preamble:

All opening Vignettes and application cases shall be discussed for enlightening the significance of Business Intelligence

B. Prerequisite Courses:

- NIL-

C. Related Courses:

SI No	Course Code	Course Name
1	1152CS121	Big Data and Analytics
2	1152CS110	Knowledge Based Decision Support Systems
3	1152CS131	Building Enterprise Applications

D. Course Educational Objectives:

The Course Objectives are to:

1. Introduce a managerial perspective of Business Intelligence (BI), and Analytics and Decision Support,
2. Provide introduction to three levels of analytics: descriptive, predictive and prescriptive,
3. Provide exposure to analytics techniques and their applications,
4. Introduce to specific software tools that can be used for developing applications, and
5. Provide introduction to emerging technologies that are likely to impact on the development and use BI applications.

E. Course Outcomes:

Upon the successful completion of the course, learners will be able to

CO Nos.	Course Outcomes	Level of learning domain (Based on revised Bloom's taxonomy)
C01	Outline of Business intelligence, Analytics and Decision Support	K2
C02	Summarize the concepts of warehousing and descriptive level of analytics as business	K2
C03	Explain the predictive level of analytics through data mining	K2
C04	Analyze the Prescriptive level of analytics through text and web mining	K3
C05	Describe about the data analytics and business analytics	K2

F. Correlation of COs with POs:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CO1	M				L			L							L
CO2	M	L	L		M			L	L						L
CO3	M	L	M		M			L	L	M			L		M
CO4	M	L	L		M			L	L	L			L		L
CO5	M	L	L		M			L	L	L			L		L

G. Course Content:

Unit I An Overview of Business intelligence, Analytics and Decision Support 9

Changing Business Environments and Computerized Decision Support; Framework for Business intelligence (BI); Intelligence Creation, Use, and BI Governance; Transaction Processing versus Analytic Processing; Successful BI Implementation; Analytics Overview; and Introduction to Big Data Analytics.

Unit-II Data Ware Housing 9

Data Ware Housing(DW) Definitions and Concepts;DW Process Overview, Architectures; Data Integration, and the Extraction, Transformation and Load (ETL) Processes;DW Development;DW Implementation Issues; Real Time DW; and DW Administration, Security Issues and Future Trends.

Business Reporting, Visual Analytics and Business Performance Management

Business Reporting Definitions and Concepts; Data and Information Visualization;Different Types of Charts and Graphs; Emergence of Data Visualization and Visual Analytics; Performance Dash Boards; Business Performance Management; Performance Measurement; Balanced Score Boards; and Six Sigma as a Performance Measurement System

Unit-III Data Mining 9

Data Mining (DM) Concepts and Applications; DM Processed Methods Software Tools; and DM Privacy Issues, Myths and Blunders.

Unit-IV Text and Web Analytics: 9

Text Analytics (TA) and Text Mining (TM) Overview; Natural Language Processing; TM Applications' Process; Sentiment Analysis; Web Mining (WM) Overview; Search Engines; Web Usage Mining (Web Analytics); and Social Analytics

Unit-V Big Data Analytics: 9

Definition of Big Data; Fundamentals of Big Data Analytics; Big Data Technologies; Data Scientist; Big Data and Warehousing; Big Data Vendors; Big Data and Stream Analytics; and Applications of Stream Analytics.

Business Analytics (BA) – Emerging trends and Future Impacts:

Location-Based Analytics for Organizations; Analytics Applications for Consumers; Recommendation Engines; Web 2.0 Revolution and Online Social Networking; Cloud Computing and BI; Impacts of Analytics in Organizations –An Overview; Issues of Legality, Privacy and Ethics; and an overview of Analytics Ecosystem

Total: 45 Hours

H. Learning Resources:

i. Text Books:

1. Ramesh Sharda, DursunDelen, Efraim Turban, et al, “Business Intelligence: A Managerial Perspective on Analytics”, 3rd Ed, Pearson India Education Inc, Indian Subcontinent Reprint 2018 (ISBN 978-93-528-6271-9)

ii. Reference Books:

1. Jiawei Han and Michelinekambe, Jian Pei, "Data Mining: Concepts and Techniques", 3rd ed. The Morgan Kaufmann Publishers.
2. Michael Steinbach, Pang-Ning Tan, and Vipin Kumar, "Introduction To Data Mining", Pearson International Edition, 2006.
3. James Allen, "Natural Language Understanding", 2nd Ed., The Benjamin/Cummings Publishing Company Inc.
4. Daniel Jurafsky, James. H. Martin, "Speech and Language Processing", 2nd Edition, Pearson Education Inc.
5. Gabe Ignatow, Rada F. Mihalcea, "An Introduction to Text Mining: Research Design, Data Collection, and Analysis", 1st Edition,
6. ChengXiangZhai, Sean Massung, "Text Data Management and Analysis: A Practical Introduction to Information Retrieval and Text Mining" 1st Edition, ACM Book Series.
7. David Loshin, "Big Data Analytics: From Strategic Planning to Enterprise Integration with Tools, Techniques, NoSQL, and Graph", 1st Edition, The Morgan Kaufmann Publishers.

iii. Online Resources:

1. www.elegantjbi.com/Businessintelligence
2. www.perceptualedge.com/articles/Whitepapers/Common_Pitfalls.pdf