

SN	Course Code:	Course Name: Introduction to Business Analytics	L	T	P	S	C	CH	Course Category	Course Type
4	BBO-104	Course Coordinator:	3	0	0	6	3	3	Open Elective	Theory
Pre-Requisites:		Nil								
Co-Requisite		Nil								
Anti-Requisite		Nil								

A. COURSE DESCRIPTION

Data analysis has become critical for success in business. Most major employers are looking for candidates with the ability to analyze, understand, and articulate data analytics. This foundational business analytics course will provide you with the hands-on skills and knowledge to be able to analyze, present findings, and make meaningful conclusions about data in a business setting. By the end of this course, you will be able to offer valuable insights by recognizing, interpreting, and summarizing your company's data. The course covers key subjects related to business analytics including Data Collection, Data Visualizations, Descriptive Statistics, Basic Probability, Statistical Inference, and Creating Linear Models.

B. COURSE OBJECTIVES:

- 1) Data extraction: Investigate data to establish new relationships and patterns
- 2) Predictive Analytic and Predictive Modelling: Analyze the correlation between different variables
- 3) Logistic Regression: Analyze the possibility of default and generate customer records
- 4) Problem analysis: Understand and explore problems in business
- 5) Data interpretation: Use tools such as Excel and open source to interpret data

C. COURSE OUTCOMES:

CO No	Statement	Performance Indicator	Student Outcome Indicator (ABET)	Level of Learning (Highest BT Level)	Target Attainment
CO1	Understand the various aspects of Business analytics	Demonstrate comprehension of the fundamental principles of Business Analytics.		2	2.1
CO2	Analyse data in order to solve various business problems	Analyze high-level digital campaigns to enhance analytical skills.		2	2.1
CO3	Visualize clearly the transformation of data into information.	Analyze high-level data collection enhance analytical skills.		3	2.1

CO4	Forecast business trends using Time Series Modelling.	Critically appraise the concept and execution of real-time business modelling.		4	2.1
CO5	Evaluate different outcomes through decision tree and pick the best possible solution	Evaluate the effectiveness and proficiency in Business Analytics.		5	2.1

D. SYLLABUS

Unit-1	Introduction to Business Analytics with their Applications and Need	Contact Hours: 14
Business Analytics Overview	Meaning of Business Analytics; Significance of Business Analytics; Scope; Resource Considerations to Support Business Analytics,	
Application and Need	Application of Business Analytics, Understanding the need for Analytics in Specific Domain.	
Self-study topic	Big data and data mining	
Unit-2	Overview on Data, Describing, Analysing Data and Visualization/ Data Issue	Contact Hours: 14
Data in Business Analytics	Types of Data; Measurement Scale; Basic Statistics on Data, Source of Data, Data Quality and Classification.	
Describing and Summarizing Data	Handling Missing Data. Recognize trends in data and detect outliers; Data Sets and their importance, summarize data sets,	
Self-study topic	Analysis of data	
Unit-3	Time Series Modelling, Decision Trees and Decision Tables	Contact Hours: 14
Time Series Modelling	Introduction of Time Series Modelling, Its significance and Application.	

Decision Trees	Introduction of Decision Tree, Symbols used to draw Decision Trees, Design Decision trees with real time examples, Pros and Cons of decision Trees.
Decision Tables	Introduction of Decision Tables, Design Decision tables for real time problems and their solutions, Pros and Cons of decision Tables.

Self-Study topics for advance learners: Product Levels as per Kotler and its usage in different industries

E. PROJECT BASED LEARNING COMPONENTS

1. Create a case study for the role of analytics in different organizations.
2. Collect the raw data of any organization and remove missing data and show the meaning data.
3. Create decision tree based on the working of Shopping Mall.

F. TEXT BOOKS/ REFERENCE BOOKS

TEXT BOOKS

T1. Changing Business with Data Insight, IBM Career Education

T2. IBM Cognos Insight: Analyze and Share Data, IBM Career Education

REFERENCE BOOKS

R1. Harris, J. G. and Davenport, T. H. (2020). Competing on Analytics: The New Science of Winning. Harvard Business Review Press, 4th Edition.

R2. Acharya, S. and Prasad, R. N. (2021). Fundamentals of Business Analytics. Wiley India Pvt Ltd; 3rd Edition.

G. ASSESSMENT PATTERN

The performance of students is evaluated as follows:

	Theory	
Components	Continuous Internal Assessment (CAE) [Formative]	Semester End Examination (SEE) [Summative]
Marks	40	60
Total Marks	100	

Internal Evaluation Components

Sr. No.	Direct Evaluation Instruments	Weightage of actual conduct	Frequency of Task	Final Weightage in Internal Assessment	BT Levels	CO Mapping	Mapping with SIs (ABET)	Mapping with PIs	Remarks (Graded/ Non-Graded)
1	Assignment	10 marks for each assignment	One per unit	4	5, 6	3, 4, 5			Graded

2	Exam	20 marks for one MST	2 per semester	20	2, 4	1, 2			Graded
3	Quiz/Test	4 marks for each quiz	2 per unit	NA	2, 4	1, 2			Graded
4.	Surprise test	12 marks for each test	One per unit	4	2, 4, 5	1, 2, 3			Graded
5	Homework	NA	One per lecture topic (of 2 questions)	NA					Non-Graded
6	PBL / Case study	10	Once	10					Graded
7	Discussion Forum	NA	One per unit	NA					Non-Graded
8	Presentation	NA	NA	NA					Non-Graded
9	Attendance	NA	NA	2					Graded

H. CO-PO Mapping

Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12	PO13	PO14	PO15	PO16	PO17	PSO 1	PSO 2	PSO 3
CO1		2																		
CO2		2		2					2			1		1	1		1			
CO3		2		1					1			2					2			2
CO4		2		2					1			2			2		2			
CO5		2		3					2			2					2			

CO PO correlation matrix of each subject to be mapped with
High correlation (3); Medium correlation (2); Low correlation (1)