



Gyanmanjari
Innovative University

Course Syllabus

Gyanmanjari Institute of Management Studies

Semester-7 (BBA)

Subject: Business Analytics for Decision Making – BBAXX17404

Type of course: Minor Stream

Prerequisite:

Students should have a basic understanding of business statistics, principles of management, and introductory concepts of data handling.

Rationale:

This course equips students with practical business analytics skills covering descriptive, diagnostic, predictive, and prescriptive techniques alongside emerging technologies such as AI and machine learning to prepare them for data-driven decision making in real-world roles across marketing, finance, operations, and general management.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks			Total Marks
CI	T	P		C	SEE	CCE	
			MSE			ALA	
4	0	0	4	100	30	70	200

Legends: CI-Classroom Instructions; T – Tutorial; P - Practical; C – Credit; SEE - Semester End Evaluation; MSE- Mid Semester Examination; V – Viva; CCE-Continuous and Comprehensive Evaluation; ALA- Active Learning Activities.

4 Credits * 25 Marks = 100 Marks (each credit carries 25 Marks)

SEE 100 Marks will be converted in to 50 Marks

CCE 100 Marks will be converted in to 50 Marks

It is compulsory to pass in each individual component.



Course Content:

Sr. No	Course content	Hrs.	% Weightage
1	Foundations of Business Analytics <ul style="list-style-type: none"> ● Introduction to Business Analytics & Decision Making ● Types of Analytics & Analytical Thinking ● Types of Data, Sources & Data Architecture ● Big Data: Concepts, Characteristics & Ecosystem ● Data Collection, Wrangling & Preprocessing ● Analytics Tools & Programming Basics (Excel, Tableau, Python) 	15	25
2	Descriptive & Diagnostic Analytics <ul style="list-style-type: none"> ● Descriptive Analytics & Statistical Inference ● Data Visualisation, Dashboards & Business Intelligence ● Diagnostic Analytics & Root Cause Methodologies ● Data Mining, Pattern Recognition & Association Rules ● Customer Intelligence & Behavioural Analytics ● Market, Competitive & Sentiment Analytics 	15	25
3	Predictive & Prescriptive Analytics <ul style="list-style-type: none"> ● Foundations of Predictive Modelling & Model Evaluation ● Business Forecasting & Time-Series Analysis ● Classification, Clustering & Decision Models ● Prescriptive Analytics, Optimization & Linear Programming ● Risk Modelling & Decision Analysis Under Uncertainty ● Operations, Supply Chain & Logistics Analytics 	15	25
4	Emerging Technologies & Ethics in Analytics <ul style="list-style-type: none"> ● Machine Learning Concepts & Business Applications ● Natural Language Processing & Generative AI ● Analytics in Marketing & HR ● Analytics in Finance, Healthcare & Education ● Data Ethics, Privacy & Governance Frameworks ● Building a Data-Driven Organisation & Future Trends 	15	25

Continuous Assessment:

Sr.No	Active Learning Activities	Marks
1	<p>Analytics Meme Challenge Students will create memes explaining business analytics concepts such as Big Data, Data Cleaning, or Types of Analytics. Students may interact with a local company's marketing or analytics team to understand how businesses communicate data insights. The final deliverable will include a meme portfolio with concept explanations submitted as a PDF on the GMIU Web Portal.</p>	10
2	<p>Dashboard Design Challenge Students will create dashboards using Excel or Tableau to present business insights visually. The dashboards will focus on decision-oriented metrics and key performance indicators. The final deliverable will include the dashboard and a brief insights report submitted as a PDF on the GMIU Web Portal.</p>	10
3	<p>Data Visualization Contest Students will create charts and visualizations from a given dataset to communicate meaningful business insights. Visualizations will be evaluated based on clarity, relevance, and decision-making value. The final deliverable will include the visualization and a short insights summary submitted as a PDF on the GMIU Web Portal.</p>	10
4	<p>AI Tool Exploration Students will explore AI tools such as automation platforms, chatbots, and analytics tools. Students will identify business applications and submit use cases. The final deliverable will include a tool analysis report submitted as a PDF on the GMIU Web Portal.</p>	10
5	<p>Future Trends Brainstorm Students will research emerging trends in business analytics and identify future industry developments. Based on their findings, students will prepare a poster highlighting key trends and strategic implications. The final deliverable will include the poster and brief summary submitted as a PDF on the GMIU Web Portal.</p>	10
6	<p>Competitor Analytics Visit Students will visit two Local competing businesses and collect data on pricing, product range, and customer footfall. Based on the collected data, students will perform a comparative analysis to identify competitive positioning. The final deliverable will include a comparative analytics report submitted as a PDF on the GMIU Web Portal.</p>	10
7	Attendance	10
Total		70



Suggested Specification table with Marks (Theory): 100

Distribution of Theory Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	10%	20%	25%	20%	25%	-

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcome:

After learning the course, the students should be able to:	
CO1	Apply fundamental business analytics concepts, data types, and analytics tools to support data-driven decision-making in business scenarios.
CO2	Analyze business data using descriptive and diagnostic analytics techniques to identify patterns, trends, and root causes for decision-making.
CO3	Evaluate predictive models and apply prescriptive analytics techniques to support forecasting and optimize business decisions.
CO4	Assess emerging analytics technologies and design ethical, data-driven solutions for business applications.

Instructional Method:

The course delivery method will depend upon the requirement of content and the needs of students. The teacher, in addition to conventional teaching methods by black board, may also use any tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc.

From the content 10% topics are suggested for flipped mode instruction. Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses. The internal evaluation will be done on the basis of Active Learning Assignment.

Practical/Viva examination will be conducted at the end of semester for evaluation of performance of students in the laboratory.

Reference Books:

[1] Camm, J. D., Cochran, J. J., Fry, M. J., & Ohlmann, J. W. (2024). Business analytics: Descriptive, predictive, prescriptive (5th ed.). Cengage Learning.
 [2] Evans, J. R. (2021). Business analytics (3rd ed.). Pearson Education.
 [3] Albright, S. C., & Winston, W. L. (2017). Business analytics: Data analysis and decision making (5th ed.). Cengage Learning.
 [4] Sahay, A. (2018). Business analytics (Volume I). Business Expert Press.
 [5] Basu, B., Jha, J. K., Mukherjee, I., & Sengupta, R. N. (Eds.). (2026). Data analytics for decision making towards business excellence. Springer.

