



Gyanmanjari
Innovative University

Course Syllabus
Gyanmanjari Institute of Management Studies
Semester-1 (BBA)

Subject: Introduction to Business Analytics – BBABA11301

Type of course: Major (Core)

Prerequisite:

Students must have basic understanding of statistics and proficiency in Excel or similar spreadsheet software.

Rationale:

Introduction to Business Analytics equips students with essential data analysis skills and tools to make informed business decisions and drive strategic growth.

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	<p>Understanding Business Analytics</p> <p>Introduction: Meaning of Analytics - Evolution of Analytics - Need of Analytics - Business Analysis vs. Business Analytics - Categorization of Analytical Models - Data Scientist vs. Data Engineer vs. Business Analyst-Business Analytics in Practice-Types of Data-Role of Business Analyst.</p> <p>Ethical, Legal and Organizational Issues</p> <p>Issues & Challenges: Business Analytics Implementation Challenges- Privacy and Anonymizaiton – Hacking and Insider Threats- Making Customer Comfortable.</p>	15	25 %
2	<p>Dealing with Data and Data Science</p> <p>Data: Data Collection - Data Management - Big Data Management - Organization/Sources of Data Importance of Data Quality- Dealing with Missing or Incomplete Data-Data Visualization- Data Classification.</p> <p>Data Science Project Life Cycle: Business Requirement-Data Acquisition- Data Preparation - Hypothesis and Modeling - Evaluation and Interpretation - Deployment - Operations - Optimization-Applications for Data Science</p>	15	25%
3	<p>Data Mining and Machine Learning</p> <p>Data Mining: The Origins of Data Mining - Data Mining Tasks - OLAP and Multidimensional Data Analysis- Basic Concept of Association Analysis and Cluster Analysis.</p> <p>Machine Learning: History and Evolution - AI Evolution - Statistics vs. Data Mining vs. Data Analytics vs. Data Science - Supervised Learning - Unsupervised Learning – Reinforcement Learning-Frameworks for Building Machine Learning Systems.</p>	15	25 %



4	<p>Applications of Business Analytics</p> <p>Overview of Business Analytics Applications: Financial Analytics - Marketing Analytics – HR Analytics - Supply Chain Analytics - Retail Industry - Sales Analytics - Web & Social MediaAnalytics-HealthcareAnalytics-EnergyAnalytics-TransportationAnalytics-LendingAnalytics –Sports Analytics-Future of Business Analytics.</p>	15	25%
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Continuous Assessment:

Sr.No	Active Learning Activities	Marks
1	<p>Quiz:</p> <p>Faculty will conduct MCQ test unit wise on GMIU Web Portal (10 MCQ’s from each unit)</p>	10
2	<p>Poster Presentation:</p> <p>Students will prepare a poster for the topic issues and challenges in implementing business analytics and upload the PDF on GMIU Web Portal.</p>	10
3	<p>Data Collection Exercise:</p> <p>Faculty will provide specific instructions to students for data collection and students will collect the data and upload the excel file on GMIU Web Portal.</p>	10
4	<p>Tool Exploration:</p> <p>Students will explore various tools like (Tableau or Python's Matplotlib and Seaborn libraries) given by the faculty and prepare a detailed report on the benefits, use, limitations of the software and upload the PDF on GMIU Web Portal.</p>	10
5	<p>Case Study:</p> <p>Faculty will provide a topic and ideas related to case study. Students will prepare the solutions on the given case / situation and upload it to the GMIU web portal.</p>	10



6	Attendance	10
7	Hands On Analytics: Students will collect data from a relevant source (e.g., sales data, social media data, or any publicly available datasets) and use data visualization tools (like Tableau, Power BI, or Python libraries) to create visual representations of the data and upload it on GMIU Web Portal.	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	30%	30%	20%	10%	10%	0%

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	Understand business analytics' evolution, types, roles, and ethical considerations, equipping them to address implementation challenges effectively.
CO2	Manage, analyze, and visualize data effectively, understanding the complete data science project life cycle from data acquisition to deployment and optimization.
CO3	Master fundamental techniques in data mining and machine learning, enabling them to analyze complex datasets and build intelligent systems for business applications.
CO4	Gain practical insights into applying business analytics across various sectors and explore future trends in the field.

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] Provost, F., & Fawcett, T. (2013). Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking. O'Reilly Media.
- [2] Siegel, E. (2013). Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Die. Wiley.
- [3] Evans, J. R. (2016). Business Analytics: Methods, Models, and Decisions. Pearson.
- [4] Shmueli, G., Patel, N. R., & Bruce, P. C. (2016). Data Mining for Business Analytics: Concepts, Techniques, and Applications in R. Wiley.

