



Gyanmanjari
Innovative University

Course Syllabus

Gyanmanjari Institute of Management Studies

Semester- 4 (BBA)

Subject: Financial Data Analytics– BBAFT14314

Type of course: Major (Core)

Prerequisite:

Students must have Knowledge of fundamental financial principles and Data base Management System.

Rationale:

The course aims to familiarize the students with the basic concepts of financial data analytics and their application in business.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks					Total Marks
CI	T	P	C	SEE		CCE			
				Theory	Practical	MSE	LWA	ALA	
3	0	2	4	75	25	30	20	50	200

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

3 Credits * 25 Marks = 75 Marks (each credit carries 25 Marks) Theory

1 Credits * 25 Marks = 25 Marks (each credit carries 25 Marks) Practical

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	Fundamentals of Financial Management Introduction, Objective, Scope and Functions of Financial Management - Profit Optimization and Value Maximization Principle - Dynamic Role of a CFO in Emerging Business Environment Time Value of Money - Rationale - Techniques - Future Value and Present Value of a Single Cash Flow - Annuity and Perpetuity - Compound Annual Growth Rate (CAGR) - Practical Applications Risk and Return - Various Connotations of Return - Ex-ante and Ex-post Return - Types of Risks - Calculation of Return and Risk - Capital Asset Pricing Model	15	25%
2	Introduction to Data Science for Business Decision-making Meaning, Nature, Properties, Scope of Data - Types of Data in Finance and Costing - Digitization of Data and Information - Transformation of Data to Decision Relevant Information - Communication of Information for Quality Decision-making - Professional Skepticism regarding Data - Ethical Use of Data and Information	12	25%
3	Data Processing, Organization, Cleaning and Validation Development of Data Processing - Functions of Data Processing - Data Organization and Distribution - Data Cleaning and Validation Data Presentation: Visualization and Graphical Presentation Data Visualization of Financial and Non-financial Data - Objective and Function of Data Presentation - Data Presentation Architecture - Dashboard, Graphs, Diagrams, Tables, Report Design - Tools and Techniques of Visualization and Graphical Presentation	18	25%
4	Data Analysis and Modeling Process, Benefits and Types of Data Analysis - Data Mining and Implementation of Data Mining - Analytics and Model Building (Descriptive, Diagnostic, Predictive, Prescriptive) - Standards for Data Tagging and Reporting (XML, XBRL) - Cloud Computing, Business Intelligence, Artificial Intelligence, Robotic Process Automation and Machine Learning Model vs. Data-driven Decision-making	15	25%



Sr. No	Practical	Unit no	App hours
1	Implement Time Series Analysis of Stock Prices	1	4
2	Calculate Risk and Return for different financial Portfolios using	1	3
3	Analyze and compare Stock Exchanges of different companies.	1	3
4	Implement Simple Stock Market Investment Analysis	4	3
5	Build Pivot Tables in Excel for different financial data	3	3
6	Building a Financial Model from Scratch Instructions	4	3
7	Implement and analyze debt-and-equity ratio.	1	3
8	Create a mini project that implement personal budget management.	2	4
9	Create a financial report presentation.	4	4
	Total		30

Continuous Assessment:

Sr.No	Active Learning Activities	Marks
1	Data Communication Activity: Students will take raw financial data from various Platforms given by faculty and prepare a report in the form of graphs, tables, and dashboards using software and upload Excel file on GMIU Web Portal.	10
2	Real-World Case Study Students will analyze financial strategy of a company of their choice, which include capital allocation, risk management, and growth strategies and upload PPT on GMIU Web Portal.	10
3	Comparison of Visualization Tools: Students will compare different data visualization tools, presenting the pros and cons of each regarding usability and functionality and upload PDF on GMIU Web Portal.	10
4	Field Visit: Financial Institutions: Students will visit a local bank or a financial services firm and observe how they handle customer transactions, savings plans, and financial advice. They should write a short report (1-2 pages) on the services offered by the institution and how they use financial data for decision-making. The report should be uploaded to the GMIU Web Portal.	10
5	Attendance	10
	Total	50



Suggested Specification table with Marks (Theory): 75

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	Gain in-depth knowledge on different fundamental concepts of finance and understand the role of financial management in dynamic business environment.
CO2	Understand the Concept of Finance by using Data analytics.
CO3	Develop a detail understanding of the fundamental concepts of data science and its expected role in business decisions.
CO4	Analyze and implement the Concept of Data Analytics in finance 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] "Financial Management: Theory and Practice" by Eugene F. Brigham, Michael C. Ehrhardt 2016
- [2] "Fundamentals of Financial Management" by James C. Van Horne, John M. Wachowicz Jr. 2014
- [3] "Data Science for Executives: Leveraging Data as a Competitive Asset" by Nir Kaldero 2020
- [4] "Data Analytics: The Key to Business Insights" by Anil Maheshwari 2020
- [5] "Data Science for Business and Decision-Making" by Luiz Paulo Fávero, Patrícia Belfiore 2019

