Gyanmanjari Innovative University

Course Syllabus

Gyanmanjari Institute of Management Studies

Semester- 6 (BBA)

Subject: AI in Finance – BBAFM16324

Type of course: Major (Core)

Prerequisite:

Students should have basic understanding of finance and accounting concepts along with familiarity in using computers and spreadsheets.

Rationale:

This course introduces students to the applications of Artificial Intelligence in banking, investments, insurance, and risk management. It enables future managers to understand AI-driven tools for decision-making and prepares them for technology-driven changes in finance.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks			Total Marks
					CCE		
CI	T	P	C	SEE	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.

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Course Content:

Sr. No	Course content	Hrs	% Weightage
1	**Foundations of AI in Finance** • Introduction to Artificial Intelligence • Types and Sources of Financial Data • Applications of AI in Financial Services: overview of banking, insurance, and investments. • Ethical and Social Aspects • Case Studies of AI in Finance	15	25
2	**AI in Banking and Risk Management** • AI in Banking • Credit Scoring and Risk Assessment • Fraud Detection and Prevention • AI in Insurance • Practical Banking Applications	15	25
3	**AI in Investments and Analytics** • Predictive Analytics in Finance • AI in Investment Management • Sentiment Analysis for Financial Markets • Basics of Algorithmic Trading • Visualization and Reporting with AI Tools	15	25
4	**Emerging Trends and Future of AI in Finance** • Fintech Revolution • AI in Expense Management and Budgeting • Customer Service Transformation with AI • Future of Work in Finance with AI • Challenges and Prospects of AI in Finance	15	25

Continuous Assessment:

Sr. No	Active Learning Activities	Marks
1	**AI in Global Finance** Students will choose a country and investigates how AI is transforming its financial sector, highlighting applications in banking, investments, or Fintech. Upload PDF on GMIU Web Portal.	10
2	**AI in Insurance Report** Students will select an insurance company and prepare a brief report on its use of AI in claim processing or risk management. Upload PDF on GMIU Web Portal.	10
3	**AI in Indian Banking** Students will select an Indian bank (e.g., HDFC, ICICI, SBI) and prepare a report on how it uses AI for credit scoring, fraud detection, or customer service. Upload PDF on GMIU Web Portal.	10
4	**Fraud Case Analysis** Students will research a real case of financial fraud and propose how AI tools could have detected or prevented it. Upload PDF on GMIU Web Portal.	10
5	**Chat-bot for Financial Queries** Students will design a simple prototype of an AI chat-bot for answering customer financial queries. They will prepare document for chat-bot flow. Upload PDF on GMIU Web Portal.	10
6	**Algorithmic Trading Concept Note** Students will prepare a written assignment about algorithmic trading, its advantages, risks, and one real-world example where AI is applied. Upload PDF on GMIU Web Portal.	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	40%	30%	10%	10%	10%	-

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 the fundamentals of Artificial Intelligence, financial data sources, and its applications in financial services.
CO2	Apply AI techniques in banking, credit scoring, fraud detection, and insurance for effective risk management.
CO3	Analyze financial data using AI tools for predictive analytics, investment decisions, sentiment analysis, and reporting.
CO4	Evaluate emerging AI trends in finance, including Fintech, expense management, customer service, and future workforce implications.

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] Sharda, R., Delen, D., & Turban, E. (2023). Analytics, Data Science, and Artificial Intelligence: Systems for Decision Support. Pearson Education.
[2] Irfan G., & Anwar S. (2020). Artificial Intelligence in Banking and Finance: Global Perspectives on Risk, Regulation, and Fintech. Springer.
[3] Hull, J. C. (2021). Risk Management and Financial Institutions. Wiley.
[4] Gupta, S. (2021). Financial Analytics with R and Python. McGraw Hill.
[5] Arner, D. W., Barberis, J., & Buckley, R. P. (2020). The RegTech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries in Regulation. Wiley.