GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY

FACULTY OF MANAGEMENT SOCIAL SCIENCES AND HUMANITIES

DEPARTMENT OF MANAGEMENT & FINANCE

BSc (Hons) in Financial Analytics

Programme Structure: BSc (Hons) in Financial Analytics: Overview

	SEMESTER - 1	GPA	NGPA
BM-11013	Principles of Management	3	
FA-11022	Introduction to Finance Analytics	2	
BM-11033	Financial Accounting	3	
FA-11042	Mathematical Foundations for Financial Analytics	2	
FA-11053	Programming for Finance	3	
FA-11062	IT for Finance	2	
DL-11072	Communication Skills		2
	Semester Total	**15**	**2**

	SEMESTER - 2	GPA	NGPA
FA-12012	Foundations of Financial Statistics	2	
FA-12023	Advanced Mathematics for Financial Analytics	3	
BM-12033	Cost and Management Accounting	3	
BM-12042	Applied Managerial Operations Research	2	
FA-12052	Corporate Finance	2	
FA-12063	Machine Learning for Finance	3	
DL-12071	Business Communication		1
	Semester Total	**15**	**1**

	SEMESTER - 3	GPA	NGPA
BM-21013	Financial Derivatives and Strategic Analytics	3	
FA-21023	Economic Analysis for Financial Decision-Making	3	
FA-21032	Advanced Financial Statistics	2	
FA-21043	Auditing and Taxation	3	
BM-21052	Strategic Enterprise Risk Management	2	
FA-21062	Advanced Financial Modeling with Excel	2	
DL-21071	Analytical Writing Skills		1
BM-21082	Operations Management (Blended Learning)		2
	Semester Total	**15**	**3**

	SEMESTER - 4	GPA	NGPA
FA-22013	Portfolio Management	3	
FA-22023	Financial Economics	3	
BM-22033	Data Management and Visualization	3	
BM-22042	Entrepreneurship and Innovation Analytics	2	
FA-22052	Behavioral Finance and Decision Making	2	
BM-22062	Data Governance and Ethics	2	
BM-22072	Data Analytics in Enterprise Resource Planning		2
	Semester Total	**15**	**2**

	SEMESTER - 5	GPA	NGPA
BM-31013	Research Methodology	3	
FA-31022	Financial Ethics and Regulations	2	
FA-31033	Financial Management	3	
FA-31043	Investment Analysis	3	
BM-31052	Statistical Quality Management and Analysis (Blended Learning)		2
FA-31062	Insurance and Actuarial Analysis	2	
FA-31072	Sustainability and Green Finance	2	
BM-31082	Human Resource Analytics (Blended)		2
	Semester Total	15	4

	SEMESTER - 6	GPA	NGPA
FA-32012	Decision Modeling for Financial Analytics	2	
FA-32022	Financial Econometrics	2	
BM-32032	Data Mining and Warehousing	2	
BM-32042	Project Management Analytics	2	
FA-32052	Big Data Analytics in Finance		
FA-32062	Blockchain and FinTech Innovations (Blended Learning)	2	
FA-32072	Public Finance Management	2	
BM-32083	Research - I	3	
	Semester Total	**15**	**0**

	SEMESTER - 7	GPA	NGPA
FA-41012	Financial Analytics Tools and Technologies	2	
FA-41022	Artificial Intelligence in Financial Engineering	2	
FA-41033	Financial Analysis for Business	3	
FA-41042	Information Security and Fraud Analysis (Blended Learning)		2
FA-41052	Financial Data Base Management	2	
BM-41063	Predictive Analytics	3	
BM-41073	Research - II	3	
	Semester Total	15	2

	SEMESTER - 8	GPA	NGPA
BM-42019	Professional Practice in Financial Analytics	9	
FA-42026	Financial Analytics - Skill Based Project	6	
FA-42031	Agile Business Analysis (+Seminar and Workshops)		1
FA-42041	Equity Investment (+Seminar+Workshops)		1
FA-42051	Contemporary Issues in Business (Seminar + Workshops)		1
	Semester Total	15	3

Credit Ratings and Course Codes BSc Hons in Financial Analytics Year 1

The following table gives an overall summary of the course units entitled for the year one of the BSc (Hons) in Financial Analytics degree program. The respective course units have been outlined in detail beneath the table. The following table gives an overall summary of the course units.

CODE	MODULE	CREDITS	
	SEMESTER - 1	**GPA**	**NGPA**
BM-11013	Principles of Management	3	
FA-11022	Introduction to Finance Analytics	2	
BM-11033	Financial Accounting	3	
FA-11042	Mathematical Foundations for Financial Analytics	2	
FA-11053	Programming for Finance	3	
FA-11062	IT for Finance	2	
DL-11072	Communication Skills		2
	Semester Total	**15**	**2**
	SEMESTER - 2	**GPA**	**NGPA**
FA-12012	Foundations of Financial Statistics	2	
FA-12023	Advanced Mathematics for Financial Analytics	3	
BM-12033	Cost and Management Accounting	3	
BM-12042	Applied Managerial Operations Research	2	
FA-12052	Corporate Finance	2	
FA-12063	Machine Learning for Finance	3	
DL-12071	Business Communication		1
	Semester Total	**15**	**1**

Semester 1

Principles of Management	BM-11013
Understanding of management principles and functions, including planning, organizing, leading, and controlling, with a focus on their application in financial analytics. Students will develop key managerial skills to analyze organizational environments and make data-driven decisions. The module also introduces management theories and their relevance to modern financial systems.	
Credits 3	GPA Compulsory

Introduction to Finance Analytics	FA-11022
Provides an overview of financial analytics concepts, focusing on the use of data-driven techniques to support financial decision-making. Students will explore fundamental tools and methods to analyze financial data, identify trends, and solve real-world financial problems. The module emphasizes practical applications of analytics in areas such as risk management, investment analysis, and financial forecasting.	
Credits 2	GPA Compulsory

Financial Accounting	BM-11033
Provides an overview of financial analytics concepts, focusing on the use of data-driven techniques to support financial decision-making. Students will explore fundamental tools and methods to analyze financial data, identify trends, and solve real-world financial problems. The module emphasizes practical applications of analytics in areas such as risk management, investment analysis, and financial forecasting.	
Credits 3	GPA Compulsory

Mathematical Foundations for Financial Analytics	FA-11042

Covers essential mathematical concepts and techniques required for financial analytics. Students will learn key topics such as linear algebra, calculus, probability, and optimization, with a focus on their applications in financial modeling and analysis. The module provides the mathematical foundation necessary to interpret and solve complex financial problems using analytical methods.

Credits 2 GPA Compulsory

Programming for Finance	FA-11053

Covers essential mathematical concepts and techniques required for financial analytics. Students will learn key topics such as linear algebra, calculus, probability, and optimization, with a focus on their applications in financial modeling and analysis. The module provides the mathematical foundation necessary to interpret and solve complex financial problems using analytical methods.

Credits 3 GPA Compulsory

IT for Finance	FA-11062

Explores the role of information technology in modern financial systems, focusing on tools and technologies used for financial data management and analysis. Students will gain practical skills in using financial software, databases, and programming for automating financial processes and decision-making. The module emphasizes the integration of IT solutions to enhance efficiency and accuracy in financial operations.

Credits 2 GPA Compulsory

Communication Skills	DL-11072

Enhances students' proficiency in English communication, focusing on both written and oral skills essential for academic and professional success. Students will develop the ability to structure ideas effectively, deliver impactful presentations, and engage in professional correspondence. The module also emphasizes active listening, interpersonal communication, and cultural sensitivity in diverse environments.

Credits 2 NGPA Compulsory

Semester 2

Foundations of Financial Statistics	FA-12012
Introduces fundamental statistical concepts and techniques relevant to financial analytics. Students will learn to summarize, analyze, and interpret financial data using descriptive and inferential statistics. The module emphasizes practical applications in probability, regression analysis, and hypothesis testing to support data-driven financial decision-making.	
Credits 2	GPA Compulsory

Advanced Mathematics for Financial Analytics	FA-12023
Delves into advanced mathematical techniques essential for complex financial modeling and analysis. Students will explore topics such as multivariable calculus, differential equations, matrix theory, and numerical methods. The module focuses on applying these concepts to solve sophisticated problems in financial analytics and quantitative finance.	
Credits 3	GPA Compulsory

Cost and Management Accounting	BM-12033
Provides an understanding of cost and management accounting concepts, focusing on techniques for planning, controlling, and decision-making in organizations. Students will learn to analyze cost behavior, prepare budgets, and evaluate performance through various costing methods. The module emphasizes practical applications in managing financial resources and improving organizational efficiency.	
Credits 3	GPA Compulsory

Applied Managerial Operations Research	FA-12042
Focuses on the application of operations research techniques to managerial decision-making. Students will explore methods such as linear programming, decision analysis, and simulation to solve real-world operational problems. The module emphasizes practical problem-solving and strategic planning to optimize organizational performance.	
Credits 2	GPA Compulsory

Corporate Finance	FA-12052
Provides an in-depth understanding of corporate financial management, focusing on key topics such as capital budgeting, financial analysis, and risk management. Students will learn how to make strategic financial decisions regarding investments, financing, and dividend policies to maximize shareholder value. The module also covers financial markets and their role in corporate decision-making.	
Credits 2	GPA Compulsory

Machine Learning for Finance	FA-12063
Explores the application of machine learning techniques in the financial sector. Students will learn how to use algorithms such as regression, classification, and clustering to analyze financial data, predict market trends, and optimize investment strategies. The module emphasizes practical implementation of machine learning models to solve real-world financial problems.	
Credits 3	GPA Compulsory

Business Communication	DL-12071
Focuses on the essential communication skills required in a professional business environment. Students will learn to effectively convey ideas through written reports, emails, and presentations, while also developing strong interpersonal communication skills. The module emphasizes clarity, persuasion, and professionalism in all forms of business communication.	
Credits 1	NGPA Compulsory

	SEMESTER - 3	GPA	NGPA
BM-21013	Financial Derivatives and Strategic Analytics	3	
FA-21023	Economic Analysis for Financial Decision-Making	3	
FA-21032	Advanced Financial Statistics	2	
FA-21043	Auditing and Taxation	3	
BM-21052	Strategic Enterprise Risk Management	2	
FA-21062	Advanced Financial Modeling with Excel	2	
DL-21071	Analytical Writing Skills		1
BM-21082	Operations Management (Blended Learning)		2
	Semester Total	**15**	**3**
	SEMESTER - 4	**GPA**	**NGPA**
FA-22013	Portfolio Management	3	
FA-22023	Financial Economics	3	
BM-22033	Data Management and Visualization	3	
BM-22042	Entrepreneurship and Innovation Analytics	2	
FA-22052	Behavioral Finance and Decision Making	2	
BM-22062	Data Governance and Ethics	2	
BM-22072	Data Analytics in Enterprise Resource Planning		2
	Semester Total	**15**	**2**

Semester 3

Financial Derivatives and Strategic Analytics	BM-21013
Covers the principles and applications of financial derivatives, including options, futures, and swaps, in strategic decision-making. Students will learn to use these instruments to manage risk, optimize investment portfolios, and enhance financial strategies. The module combines theoretical insights with practical analytics to support strategic financial decisions.	
Credits 3	GPA Compulsory

Economic Analysis for Financial Decision-Making	FA-21023
Applies economic principles to financial decision-making, focusing on market structures, pricing, and the economic factors influencing financial choices. Students will learn to use economic models to assess risk, evaluate investment opportunities, and make informed financial decisions. The module emphasizes the integration of economic analysis with financial strategies to optimize outcomes.	
Credits 3	GPA Compulsory

Advanced Financial Statistics	FA-21032
Delves into advanced statistical techniques used in financial analysis, focusing on time series analysis, econometrics, and stochastic processes. Students will learn to apply these methods to model financial data, forecast trends, and assess market risks. The module emphasizes practical application in areas such as asset pricing, risk management, and investment analysis.	
Credits 2	GPA Compulsory

Auditing and Taxation	FA-21043
Provides an overview of auditing and taxation principles, focusing on their role in ensuring financial transparency and compliance. Students will learn auditing techniques to assess financial statements and tax strategies to minimize liabilities while adhering to regulatory requirements. The module emphasizes the integration of auditing and taxation practices to enhance organizational accountability and financial management.	
Credits 3	GPA Compulsory

Strategic Enterprise Risk Management	BM-21052
Focuses on identifying, assessing, and managing risks at an organizational level to align with strategic objectives. Students will learn techniques for evaluating financial, operational, and strategic risks, and how to develop risk management frameworks to mitigate potential threats. The module emphasizes the integration of risk management into business strategy to ensure long-term sustainability and resilience.	
Credits 2	GPA Compulsory

Advanced Financial Modeling with Excel	FA-21062
Focuses on advanced techniques for building financial models using Microsoft Excel, providing students with the tools needed to make data-driven decisions in financial analysis. Students will learn how to construct complex financial statements, perform valuation analysis, and develop scenario-based forecasts, all while mastering Excel's powerful functions and formulas. The module emphasizes practical application, enabling students to create professional-quality financial models for investment analysis, budgeting, and financial planning.	
Credits 2	GPA Compulsory

Analytical Writing Skills	DL-21071
Enhances students' ability to construct clear, coherent, and well-supported analytical essays and reports. Students will learn to critically analyze information, organize complex ideas, and present arguments effectively in written form. The module emphasizes developing strong writing techniques for academic and professional purposes, focusing on precision, clarity, and logical structure.	
Credits 1	NGPA Compulsory

Operations Management (Blended Learning)	BM-21082
Provides an in-depth understanding of the principles and practices of operations management, focusing on optimizing production and service processes. Students will explore key topics such as supply chain management, inventory control, quality assurance, and process design, using both theoretical concepts and practical case studies. The blended learning format combines online resources with in-person sessions to offer flexible and interactive learning experiences.	
Credits 2	NGPA Compulsory

Semester 4

Portfolio Management	FA-22013
Focuses on the strategies and techniques used to manage investment portfolios effectively. Students will learn to analyze and select assets, diversify investments, and assess risk to maximize returns. The module emphasizes the use of modern portfolio theory and asset allocation principles in building and managing portfolios to meet specific financial goals.	
Credits 3	GPA Compulsory

Financial Economics	FA-22023
Explores the relationship between economic theory and financial markets, focusing on how economic principles influence financial decision-making and market behavior. Students will examine key topics such as market efficiency, asset pricing, and the impact of macroeconomic factors on financial markets. The module emphasizes applying economic theories to analyze real-world financial issues and make informed financial decisions.	
Credits 3	GPA Compulsory

Data Management and Visualization	BM-22033
Covers the principles and techniques of managing and visualizing large datasets for financial analysis. Students will learn how to organize, clean, and structure data for effective analysis, as well as create compelling visualizations to communicate insights. The module emphasizes using data management tools and visualization software to support data-driven decision-making in finance.	
Credits 3	GPA Compulsory

Entrepreneurship and Innovation	BM-22042

Explores the principles of entrepreneurship and the role of innovation in business success. Students will learn how to identify opportunities, develop business models, and implement creative solutions to solve problems. The module emphasizes building entrepreneurial mindsets and fostering innovation to drive growth and competitiveness in dynamic markets.

Credits 2 GPA Compulsory

Behavioral Finance and Decision Making	FA-22052

Examines the psychological factors influencing financial decision-making and market behavior. Students will explore concepts such as cognitive biases, emotions, and social influences that impact individual and institutional investors. The module emphasizes understanding these behaviors to improve financial decisions, risk management, and market strategies.

Credits 2 GPA Compulsory

Data Governance and Ethics	BM-22062

Focuses on the principles and practices of data governance, ensuring the integrity, privacy, and security of data in financial systems. Students will explore ethical considerations in data collection, management, and usage, emphasizing compliance with legal and regulatory standards. The module highlights the importance of ethical decision-making and transparent data practices in maintaining trust and accountability in the financial sector.

Credits 2 GPA Compulsory

Data Analytics in Enterprise Resource Planning	BM-22072

Explores the integration of data analytics within Enterprise Resource Planning (ERP) systems to optimize business processes and decision-making. Students will learn how to analyze and interpret data from various ERP modules, such as finance, supply chain, and human resources. The module emphasizes the use of data-driven insights to improve operational efficiency, streamline workflows, and support strategic business goals.

Credits 2 NGPA Compulsory

Credit Ratings and Course Codes BSc Hons in Financial Analytics Year 3

	SEMESTER - 5	GPA	NGPA
BM-31013	Research Methodology	3	
FA-31022	Financial Ethics and Regulations	2	
FA-31033	Financial Management	3	
FA-31043	Investment Analysis	3	
BM-31052	Statistical Quality Management and Analysis (Blended Learning)		2
FA-31062	Insurance and Actuarial Analysis	2	
FA-31072	Sustainability and Green Finance	2	
BM-31082	Human Resource Analytics (Blended)		2
	Semester Total	15	4
	SEMESTER - 6	**GPA**	**NGPA**
FA-32012	Decision Modeling for Financial Analytics	2	
FA-32022	Financial Econometrics	2	
BM-32032	Data Mining and Warehousing	2	
BM-32042	Project Management Analytics	2	
FA-32052	Big Data Analytics in Finance		
FA-32062	Blockchain and FinTech Innovations (Blended Learning)	2	
FA-32072	Public Finance Management	2	
BM-32083	Research - I	3	
	Semester Total	**15**	**0**

Semester 5

Research Methodology	BM-31013
Provides an introduction to the principles and methods of academic research, focusing on techniques for designing and conducting research studies. Students will learn how to develop research questions, select appropriate methodologies, collect and analyze data, and present findings effectively. The module emphasizes critical thinking, ethical considerations, and the application of research methods in academic and professional contexts.	
Credits 3	GPA Compulsory

Financial Ethics and Regulations	FA-31022
Examines the ethical principles and regulatory frameworks that govern financial markets and institutions. Students will explore key topics such as corporate governance, compliance, financial fraud, and the role of regulatory bodies. The module emphasizes the importance of ethical decision-making and adherence to regulations in maintaining integrity and trust within the financial sector.	
Credits 2	GPA Compulsory

Financial Management	FA-31033
Provides an overview of key financial management principles, focusing on the effective planning, organizing, and controlling of financial resources within an organization. Students will learn to make strategic financial decisions related to capital budgeting, funding, and risk management. The module emphasizes the role of financial management in maximizing shareholder value and ensuring long-term business sustainability.	
Credits 3	GPA Compulsory

Investment Analysis	FA-31043
Focuses on the tools and techniques used to evaluate investment opportunities and make informed financial decisions. Students will learn how to analyze financial statements, assess risk, and value different asset classes such as stocks, bonds, and real estate. The module emphasizes the application of analytical methods to construct and manage investment portfolios aimed at achieving specific financial goals.	
Credits 3	GPA Compulsory

Statistical Quality Management and Analysis (Blended Learning)	BM-31052
Focuses on the tools and techniques used to evaluate investment opportunities and make informed financial decisions. Students will learn how to analyze financial statements, assess risk, and value different asset classes such as stocks, bonds, and real estate. The module emphasizes the application of analytical methods to construct and manage investment portfolios aimed at achieving specific financial goals.	
Credits 2	NGPA Compulsory

Insurance and Actuarial Analysis	FA-31062
Provides an introduction to the principles of insurance and actuarial science, focusing on the methods used to assess and manage risk in the insurance industry. Students will learn about pricing, underwriting, and claims analysis, as well as the application of statistical and mathematical models to evaluate financial risks. The module emphasizes the role of actuarial analysis in determining premiums, reserves, and ensuring financial stability within insurance companies.	
Credits 2	GPA Compulsory

Sustainability and Green Finance	FA-31072
Explores the principles of sustainable finance, focusing on investment strategies that promote environmental and social responsibility. Students will learn about green bonds, ESG (Environmental, Social, and Governance) investing, and the financial implications of climate change and sustainability. The module emphasizes how financial institutions and investors can support sustainable development goals while achieving long-term financial returns.	
Credits 2	GPA Compulsory

Human Resource Analytics (Blended)	FA-31082
Introduces students to the use of data analytics in human resource management, focusing on how data-driven insights can optimize HR practices. Students will learn techniques for analyzing employee performance, engagement, and turnover, as well as using predictive models to inform recruitment, retention, and development strategies. The blended learning format combines online materials with interactive in-person sessions to provide practical, real-world applications of HR analytics.	
Credits 2	NGPA Compulsory

Semester 6

Decision Modeling for Financial Analytics	FA-32012
Focuses on the use of decision modeling techniques to support financial decision-making. Students will learn how to apply mathematical models, optimization methods, and simulation techniques to solve complex financial problems such as portfolio selection, risk management, and investment strategy. The module emphasizes practical application of decision models to enhance the accuracy and efficiency of financial decisions in dynamic markets.	
Credits 2	GPA Compulsory

Financial Econometrics	FA-32022
Focuses on the application of econometric techniques to analyze and interpret financial data. Students will learn key concepts such as time series modeling, volatility analysis, and regression techniques to study asset pricing, risk management, and market behavior. The module emphasizes practical applications of econometric tools in understanding and solving real-world financial problems.	
Credits 2	GPA Compulsory

Data Mining and Warehousing	BM-32032
Provides an understanding of data mining techniques and data warehousing concepts for managing and analyzing large datasets. Students will learn methods such as clustering, classification, and association rule mining, as well as the design and implementation of data warehouses. The module emphasizes practical applications in extracting valuable insights and supporting decision-making in financial and business environments.	
Credits 2	GPA Compulsory

Project Management Analytics	BM-32042
Focuses on the application of analytical tools and techniques to enhance project management processes. Students will learn how to use data-driven methods for project planning, scheduling, resource allocation, risk assessment, and performance evaluation. The module emphasizes leveraging analytics to optimize project outcomes, improve decision-making, and ensure the successful delivery of projects within time and budget constraints.	
Credits 2	GPA Compulsory

Big Data Analytics in Finance	FA-32052
Explores the role of big data analytics in transforming financial decision-making and strategy. Students will learn how to process and analyze large, complex datasets using advanced tools and techniques to uncover patterns, trends, and insights. The module emphasizes practical applications in areas such as risk management, fraud detection, investment analysis, and algorithmic trading.	
Credits 2	GPA Compulsory

Blockchain and FinTech Innovations (Blended Learning)	FA-32062
Explores the transformative impact of blockchain technology and financial technology (FinTech) innovations on the financial industry. Students will learn about blockchain fundamentals, cryptocurrency, smart contracts, and emerging FinTech applications such as digital payments, crowdfunding, and robo-advisors. The blended learning approach combines online resources with interactive in-person sessions to provide both theoretical insights and practical applications in this dynamic field.	
Credits 2	GPA Compulsory

Public Finance Management	FA-32072
Examines the principles and practices of managing public financial resources, focusing on budgeting, revenue generation, expenditure control, and financial accountability in the public sector. Students will explore topics such as fiscal policy, public debt management, and the role of government in economic development. The module emphasizes the importance of transparency, efficiency, and sustainability in public financial management.	
Credits 2	GPA Compulsory

Research – I	BM-32083
Introduces students to the fundamentals of academic and professional research, focusing on the research process, literature review, and the formulation of research objectives and hypotheses. Students will learn to design research methodologies, collect data, and critically analyze sources to build a strong foundation for conducting independent research. The module emphasizes ethical considerations and the importance of rigor in research practices.	
Credits 3	GPA Compulsory

Credit Ratings and Course Codes BSc Hons in Financial Analytics Year 4

	SEMESTER - 7	GPA	NGPA
FA-41012	Financial Analytics Tools and Technologies	2	
FA-41022	Artificial Intelligence in Financial Engineering	2	
FA-41033	Financial Analysis for Business	3	
FA-41042	Information Security and Fraud Analysis (Blended Learning)		2
FA-41052	Financial Data Base Management	2	
BM-41063	Predictive Analytics	3	
BM-41073	Research - II	3	
	Semester Total	15	2
	SEMESTER - 8	**GPA**	**NGPA**
BM-42019	Professional Practice in Financial Analytics	9	
FA-42026	Financial Analytics - Skill Based Project	6	
FA-42031	Agile Business Analysis (+Seminar and Workshops)		1
FA-42041	Equity Investment (+Seminar+Workshops)		1
FA-42051	Contemporary Issues in Business (Seminar + Workshops)		1
	Semester Total	15	3

Semester 7

Financial Analytics Tools and Technologies	FA-41012
Provides hands-on experience with advanced tools and technologies used in financial analytics. Students will explore software and programming languages such as Python, R, Excel, and specialized financial platforms to analyze and visualize financial data. The module emphasizes practical applications, enabling students to leverage these tools for tasks such as financial modeling, risk assessment, and decision-making in dynamic financial environments.	
Credits 2	GPA Compulsory

Artificial Intelligence in Financial Engineering	FA-41022
Explores the application of artificial intelligence (AI) techniques in solving complex problems within financial engineering. Students will learn how AI methods such as machine learning, neural networks, and natural language processing can be used for algorithmic trading, risk modeling, fraud detection, and portfolio optimization. The module emphasizes the integration of AI-driven solutions to enhance innovation and efficiency in financial systems.	
Credits 2	GPA Compulsory

Financial Analysis for Business	FA-41033
Focuses on the tools and techniques used to evaluate the financial health and performance of businesses. Students will learn to analyze financial statements, assess profitability, liquidity, and solvency, and use ratio analysis to support strategic decision-making. The module emphasizes practical applications of financial analysis to drive business growth and operational efficiency.	
Credits 3	GPA Compulsory

Information Security and Fraud Analysis (Blended Learning)	FA-41042
Examines the principles of information security and techniques for detecting and preventing financial fraud. Students will learn about cybersecurity frameworks, data protection strategies, and fraud detection methodologies, including forensic analysis and anomaly detection. The blended learning approach combines online materials with interactive in-person sessions to provide both theoretical knowledge and practical applications in safeguarding financial systems.	
Credits 2	NGPA Compulsory

Financial Data Base Management	FA-41052
Provides an in-depth understanding of database systems and their applications in managing financial data. Students will learn how to design, develop, and maintain databases to ensure data integrity, security, and accessibility. The module emphasizes the use of database management tools and SQL to handle large-scale financial datasets and support data-driven decision-making in finance.	
Credits 2	GPA Compulsory

Predictive Analytics	BM-41063
Focuses on the concepts and techniques of predictive analytics to forecast future trends and outcomes using historical data. Students will learn methods such as regression analysis, time series forecasting, and machine learning algorithms to make data-driven predictions. The module emphasizes practical applications in areas like risk assessment, customer behavior analysis, and financial forecasting.	
Credits 3	GPA Compulsory

Research – II	BM-41073
Builds on the foundational skills acquired in Research - Part 1, focusing on data analysis, interpretation, and presentation of research findings. Students will learn advanced research techniques, apply statistical tools, and develop their ability to construct well-supported conclusions. The module emphasizes the preparation of a comprehensive research report or proposal, adhering to academic and professional standards.	
Credits 3	GPA Compulsory

Semester 8

Professional Practice in Financial Analytics	BM-42019
Bridges academic learning with real-world applications in financial analytics, focusing on professional standards, ethics, and best practices. Students will engage in practical case studies, projects, and simulations to solve complex financial problems using analytical tools. The module emphasizes critical thinking, effective communication, and teamwork to prepare students for careers in financial analytics.	
Credits 9	GPA Compulsory

Financial Analytics - Skill Based Project	FA-42026
Provides students with the opportunity to apply their financial analytics knowledge and skills in a hands-on project. Students will work on real-world financial data to analyze trends, build models, and provide actionable insights. The module emphasizes practical application, critical thinking, and problem-solving, with a focus on delivering a professional-quality project that demonstrates competence in financial analytics.	
Credits 6	GPA Compulsory

Agile Business Analysis (+Seminar and Workshops)	FA-42031
Introduces students to agile business analysis principles, focusing on how to apply agile methodologies to business problem-solving and project management. Students will learn how to gather and analyze business requirements, create user stories, and collaborate with cross-functional teams in an agile environment. The module includes seminars and workshops, providing interactive sessions for hands-on practice, real-world case studies, and the development of key skills in agile business analysis.	
Credits 1	NGPA Compulsory

Equity Investment (+Seminar+Workshops)	FA-42041
The principles and strategies of equity investment, focusing on analyzing and valuing stocks, understanding market trends, and building investment portfolios. Students will learn how to assess risk, determine stock valuations, and make informed investment decisions. The module includes seminars and workshops, providing practical, hands-on experience through case studies, market simulations, and expert-led discussions to deepen understanding and enhance investment skills.	
Credits 1	NGPA Compulsory

Contemporary Issues in Business (Seminar + Workshops)	FA-42051
Explores current trends and challenges in the business world, including globalization, sustainability, technological innovation, and shifting market dynamics. Students will engage with experts and industry leaders through seminars and workshops to analyze contemporary business issues and develop solutions. The module emphasizes critical thinking, strategic problem-solving, and the practical application of business concepts to real-world scenarios.	
Credits 1	NGPA Compulsory

Benefits and Career Paths

The BSc in Financial Analytics programme at KDU is designed to equip students with the skills and knowledge needed to excel in the dynamic field of financial analysis. Through a comprehensive curriculum, students gain expertise in financial modeling, data analysis, risk management, and the latest financial technologies. The programme also provides opportunities for practical learning, networking, and professional development, preparing graduates for a wide range of career paths.

Key Benefits:

Career Advancement: This degree equips students with the essential skills and knowledge to thrive in financial analysis, data-driven decision-making, and financial risk management. Graduates are well-positioned to take on senior roles in financial institutions, consulting firms, or corporate finance departments.

Industry-Relevant Curriculum: The BSc in Financial Analytics offers a curriculum designed to match the latest industry trends, including financial modeling, machine learning for finance, and big data analytics. Students are prepared for the rapidly evolving financial sector by learning advanced financial analysis tools, techniques, and technologies.

Networking Opportunities: The programme offers ample opportunities to engage with industry professionals through seminars, workshops, and guest lectures. Networking with finance experts can open doors to internships, job placements, and career growth.

Analytical and Technical Skills: Financial Analytics combines quantitative analysis with financial decision-making. Students will gain proficiency in tools like Python, R, SQL, and other financial modeling software, as well as develop critical thinking and problem-solving abilities, all of which are highly valued by employers in the financial sector.

Global Perspective: As financial markets become increasingly interconnected, the programme provides students with an understanding of global financial systems, market regulations, and international financial modeling. This global outlook prepares students for roles in multinational organizations or global finance firms.

Soft Skills Development: The programme emphasizes the development of essential soft skills, including communication, teamwork, leadership, and negotiation. These skills are crucial for success in dynamic financial environments, where clear communication and effective collaboration are vital.

Entrepreneurial Opportunities: Some graduates may choose to apply their financial knowledge to start their own consulting firms, financial advisory services, or fintech startups. The BSc in Financial Analytics provides a strong foundation for entrepreneurship in the finance industry.

Potential Career Paths:

Graduates with a BSc in Financial Analytics have a wide range of career opportunities across various industries. Here are some potential career paths:

Financial Analyst: Financial analysts are responsible for analyzing financial data, preparing reports, and providing recommendations for investment strategies, budgeting, and financial planning. They typically work in banks, investment firms, or corporate finance departments.

Investment Analyst: Investment analysts focus on evaluating potential investment opportunities, analyzing stocks, bonds, and other assets, and providing advice on investment portfolios. They are often employed by asset management firms, hedge funds, or private equity firms.

Risk Analyst: Risk analysts identify and assess potential risks to an organization's financial stability. They develop risk management strategies to mitigate financial risks, including market, credit, and operational risks, and

often work in banks, insurance companies, or consulting firms.

Financial Consultant: Financial consultants provide expert advice on financial planning, investment strategies, and risk management to businesses or individual clients. They may work independently or for consulting firms specializing in financial services.

Data Analyst (Finance): Data analysts in finance work with large datasets to extract insights that inform financial decision-making. They use statistical tools and software to analyze market trends, customer behavior, and financial performance, supporting organizations in strategic planning.

Credit Analyst: Credit analysts assess the creditworthiness of individuals or businesses applying for loans or credit. They analyze financial statements, credit histories, and market conditions to determine risk and make lending decisions.

Financial Technology (FinTech) Specialist: FinTech specialists work at the intersection of finance and technology, helping to develop and implement technology-driven financial services, including digital payments, blockchain, and robo-advisors. They may work in fintech startups, banks, or technology firms.

Quantitative Analyst (Quant): Quants use mathematical models and statistical techniques to analyze financial markets and develop complex financial instruments. They typically work in investment banks, hedge funds, or trading firms.

Portfolio Manager: Portfolio managers are responsible for managing investment portfolios for clients, balancing risk and return, and making decisions on asset allocation. They use financial data and analytical tools to inform investment strategies.

Treasury Analyst: Treasury analysts manage an organization’s cash flow, investments, and financial planning, ensuring liquidity and financial stability.

They work closely with the finance department to forecast cash needs and develop strategies for managing funds.

Compliance and Regulatory Analyst: Compliance analysts ensure that financial institutions adhere to regulatory standards and financial laws. They monitor financial transactions, develop compliance strategies, and work with regulators to ensure legal and ethical standards are met in financial operations.

Graduates of the BSc in Financial Analytics at KDU are equipped with the technical and analytical skills required to excel in various roles within the financial services sector, making them highly competitive candidates for a wide range of careers in finance.