

Academic Programs Booklet

College of Business Administration

2024



Prepared By: VP For Academic Programs and Graduate Studies Office

College of Business Administration

Master in Financial Technology (FinTech)

Course Code	Course Title	Course Hours			Course Type	Pre requisite
		LEC	PRAC	CRD		
FIN641	FUNDAMENTALS OF FINANCIAL TECHNOLOGY	3	0	3	MR	No
FIN642	BLOCKCHAIN AND APPLICATIONS	3	0	3	MR	No
FIN620	CORPORATE FINANCE	3	0	3	MR	No
FIN645	BIG DATA IN FINANCE	3	0	3	MR	No
FIN644	CYBER SECURITY/ CRYPTOGRAPHY	3	0	3	MR	No
FIN646	FINANCIAL ANALYTICS AND MACHINE LEARNING	3	0	3	MR	No
FIN622	PORTFOLIO MANAGEMENT AND INTERNATIONAL INVESTMENTS	3	0	3	MR	No
FIN621	MONEY, BANKING, FINANCIAL MARKETS	3	0	3	MR	No
FIN643	PAYMENTS AND CRYPTOCURRENCIES	3	0	3	MR	No
FIN694	CAPSTONE CONSULTING PROJECT	0	18	6	MR	18 credits

Master in Financial Technology

Program Components

Course Type	CRD
University Requirement (UR)	
College Requirement (CR)	
General Studies Compulsory (GSCC)	
Major Requirement (MR)	33
Major Elective (ME) ¹	
General Studies Elective (GSE) ²	
Training (Internship)	
Total Credit (CRD)	33

Foundation courses (0 credit hours): (only for those with irrelevant major bachelor's degree).

Course Code	Course Title	Course Hours		
		LEC	PRAC	CRD
ACCM500	FUNDAMENTAL ACCOUNTING	3	0	0
ECONM500	SURVEY OF ECONOMICS	3	0	0
FINM500	MANAGERIAL FINANCE	3	0	0

Detailed Study Plan

Year 1 - Semester 1

Course Code	Course Title	Course Hours			Course Type	Pre requisite	Major GPA
		LEC	PRAC	CRD			
FIN641	FUNDAMENTALS OF FINANCIAL TECHNOLOGY	3	0	3	MR	No	Yes
FIN642	BLOCKCHAIN AND APPLICATIONS	3	0	3	MR	No	Yes
FIN620	CORPORATE FINANCE	3	0	3	MR	No	Yes

Year 1 - Semester 2

Course Code	Course Title	Course Hours			Course Type	Pre requisite	Major GPA
		LEC	PRAC	CRD			
FIN622	PORTFOLIO MANAGEMENT AND INTERNATIONAL INVESTMENTS	3	0	3	MR	No	Yes
FIN621	MONEY, BANKING, FINANCIAL MARKETS	3	0	3	MR	No	Yes
FIN643	PAYMENTS AND CRYPTOCURRENCIES	3	0	3	MR	No	Yes

Year 2 - Semester 3

Course Code	Course Title	Course Hours			Course Type	Pre requisite	Major GPA
		LEC	PRAC	CRD			
FIN645	BIG DATA IN FINANCE	3	0	3	MR	No	Yes
FIN644	CYBER SECURITY/ CRYPTOGRAPHY	3	0	3	MR	No	Yes
FIN646	FINANCIAL ANALYTICS AND MACHINE LEARNING	3	0	3	MR	No	Yes

Year 2 - Semester 4

Course Code	Course Title	Course Hours			Course Type	Pre requisite	Major GPA
		LEC	PRAC	CRD			
FIN694	CAPSTONE CONSULTING PROJECT	0	18	6	MR	24 credits	Yes

Course Description

Courses Descriptions

Course Code: FIN620

Course Title: Corporate finance

This course will cover the advanced concepts and methodologies of corporate finance, including capital budgeting and investment appraisal, optimal capital structures, advanced financial analysis, dividend policies and risk management. Students will critically analyze the financial frameworks that govern corporate operations and learn to apply quantitative and qualitative techniques emphasizing on strategic financial decision-making in complex organizational environments. By the end of the course, participants will be adept at crafting financial strategies that align with corporate goals and navigating the complexities of the global financial landscape.

Course Code: FIN621

Course Title: Capstone Consulting Project

The course will cover financial markets, financial institutions and financial instruments; the interest-rate determination; the structure and operations of banks and financial institutions; the operations, tools, and policies of central banks; and on the meaning and functions of money and its relation with inflation. By the end of this course, students will understand the primary participants in the money and the financial markets, the operations and goals of these participants, the various types of financial instruments and how they differ, the role of interest rates in the economy, how interest rates are determined and the basics of monetary policy.

Course Code: FIN622

Course Title: Portfolio Management and International Investment

This course will cover suitable investment policies and strategies, balancing asset classes, integrated risk management, efficient diversification, market efficiency, measuring and attributing performance for an

investment portfolio; analyzing international assets and techniques and using them both opportunistically (tactically) and strategically; specific risks of global investing such as country, political, currency, convertibility, liquidity and settlement; analyze key issues in managing emerging market portfolios.

Course Code: FIN641 **Course Title:** Fundamentals of Financial Technology

This course will cover the core foundational understanding of Financial Technology applications. It will start by talking about a new taxonomy of innovations that had affected the financial industry, followed by how bitcoin, and hence all blockchain and smart contract applications work, which together with big data techniques are used in FinTech. By the end of this course, students will have a full understanding for how, why, and when banks, financial institutions and other firms can benefit from using these technologies as a way of making payments more efficient, improving user experience, tokenizing assets and setting up secure smart contracts.

Course Code: FIN642 **Course Title:** Blockchain and applications

This course will cover the integration of the fundamental principles behind the workings of Blockchain technology. It allows students to identify and contrast different blockchain technologies, exploring their opportunities, challenges, and potential risks to various entities. The course focuses on the applications of blockchain, consensus algorithms, and smart contracts in different industries, not only in the financial sector.

Course Code: FIN643 **Course Title:** Payments and Cryptocurrencies

This course will cover the potential impact of digital tokens, including cryptocurrencies, and how disrupting it can be to the traditional ways of doing business. It enables students to critically differentiate the numerous digital tokens in the financial market. The course equips the students with the knowledge to evaluate various financial trading and investment strategies when dealing with numerous cryptocurrencies. The course covers topics related to regulation of cryptocurrencies in financial markets, as well as principles behind engaging with digital currencies and assets.

Course Code: FIN644 **Course Title:** Cyber Security/ Cryptography

This course will cover computer security breaches that affect financial systems. Many of these breaches are easily preventable if proper security principles are effectively used. This course will present a set of core principles to follow for a future in which computer security plays a significant role in using and designing computer based financial systems.

Course Code: FIN645 **Course Title:** Big data in Finance

This course will cover the applications, tools, and the underlying technology of Big Data in the field of finance. Students will explore the intersection of finance and Big Data analytics to gain a comprehensive understanding of how data-driven strategies can drive innovation and competitive advantage. Topics covered include: data acquisition and management, data preparation, data mining, descriptive, predictive, and prescriptive analytics, fraud detection, risk management, customer analytics, real-time monitoring of financial markets, identification and mitigation of financial risks, and ethical considerations associated with the use of Big data in the finance industry.

Course Code: FIN646 **Course Title:** Financial Analytics and Machine Learning

This course will cover three main building blocks: basic econometrics, statistics and probabilistic theory and introduction to machine learning in finance. The course aims to build basic knowledge in to critically address and use standard financial methods and terminologies of the day-to-day activity in financial markets, and to set the stage for further analysis of cutting-edge research in financial modelling. Also, the course will cover Machine Learning in finance, based on Supervised vs Unsupervised Learning methods, such as K-Nearest Neighbour, Decision Trees, Logistic Regression, Support Vector Machines, Model Evaluation, K-Means Clustering, Hierarchical Clustering, Density-Based Clustering, Deep Clustering.

Course Code: FIN694 **Course Title:** Corporate finance

This course will cover the synthezation of theoretical knowledge and practical skills that students have learned during the program to assess and critically examine real world issues faced by an institution in the area of financial technology. Students will apply advanced quantitative methods and tools to come up with findings, propose solutions and provide recommendations for stakeholders within technology-driven and technology-enabled financial environments.