Course Code	Course Title:	L	T	P	C
UCCA335L	Block Chain Management	3	0	0	3
Pre-requisite	NIL	Syllabus Version			
		1.0			

Course Objectives

1. To understand basic concepts and foundational principles of block chain management technology.
2. To explore practical applications real world use cases of block chain in finance.
3. To analyze the impact of block chain on financial systems and services and its role in enhancing transparency, security, and efficiency in finance.

Course Outcomes

On successful completion of this course, the students will be able to

1. Explain the fundamental concepts of block chain technology in simple terms.
2. Identify and describe key applications of block chain in the finance industry.
3. Discuss the benefits and challenges associated with implementing block chain solutions in finance.
4. Evaluate real-world use cases of block chain and their impact on financial operations.
5. Assess the future potential and emerging trends of block chain in finance.
6. Apply the concepts of block chain in enhancing security and efficiency in finance.

Module:1	Overview of Block chain	6 hours

Blockchain definition - Key characteristics of blockchine: decentralization, immutability, transparency- Blockchain Working model: Blocks chains, and transactions- Consensus mechanisms brief overview- The Evolution of Blockchain - History and development- Blockchain generations: from Bitcoin to smart contracts.

Module:2	Cryptocurrencies and Digital Assets	6 hours

Centralized Vs Decentralized - Introduction to Cryptocurrencies- Definition and overview Popular cryptocurrencies: Bitcoin, Ethereum, Ripple, Types of Cryptocurrencies - Utility tokens- security tokens- stable coins- Digital Assets and Tokenization - Asset tokenization and its benefits- Examples of tokenized assets in finance.

Module:3	Smart Contracts	6 hours

Understanding Smart Contracts - Definition and key features- How smart contracts work- Applications of Smart Contracts in Finance - Automated transactions and settlements- Use cases in lending- insurance- derivatives. Platforms for Smart Contracts - Ethereum and its role in smart contracts- Other smart contract platforms.

Module:4	Blockchain in Financial Services	7 hours

Payment Systems and Remittances – Blockchain based payment solutions- Advantages over traditional payment systems- Trade Finance - blockchain based transforming trade and finance - Identity Verification and KYC - Blockchain for secure identity management- Benefits for financial institutions.

Module:5	Permissioned Block chains and Enterprise Solutions	6 hours

Introduction to Permissioned Block chains - Difference between public and permissioned block chains- Hyper ledger Framework - Overview of Hyper ledger projects- Applications in finance- IPFS (Inter Planetary File System) - IPFS working model- Benefits for financial data storage and sharing.

Module:6	Blockchain Wallets and Security	6 hours

Blockchain Wallets - Types of blockchain wallets: hot wallets, cold wallets- Setting Up and Using Blockchain Wallets - Sending and receiving cryptocurrencies- Security best practices for wallet management- The Importance of Wallets in

Financial Transactions - Role in secure transactions - Case studies of wallet use in finance.		
Module:7	**The Future of Blockchain in Finance**	**6 hours**
Emerging Trends and Innovations - New developments in blockchain technology- Potential future applications in finance - The Role of Blockchain in Digital Transformation - blockchain is shaping the future of finance - The integration of blockchain with other emerging technologies (AI, IoT)- Skills and knowledge for future finance professionals - Ethical considerations and social impact.		
Module:8	**Contemporary Issues**	**2 hours**
Total Lecture hours		**45 Hours**

Text Book(s)	
1.	Jai Singh ArunJerry CuomoNitin Gaur, (2019), “Blockchain for Business”, Pearson Education Press, India.
2.	Kumar Saurabh, Ashutosh Saxena, V. K. Saraswat, Bimal Kumar Roy, C P Gurnani , (2020). “Blockchain Technology - Concepts and Applications” John Wiley & Sons, Inc.
Reference Books	
1.	Daniel Drescher, (2017) “Blockchain Basics: A Non-Technical Introduction in 25 Steps”, Apress Publishing.
2.	Symons Ben(2023), “Cryptocurrency and Blockchain”, Bloomsbury Publishing PLC.
3.	Frank Miller, (2022) “Crypto Master”, Driven Trader Publishing.
4.	Alex Tapscott and Don Tapscott, (2016) "Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World", Penguin Publishing Group.

Mode of Evaluation: CAT, Quiz, Digital Assignments and FAT			
Recommended by Board of Studies	24-05-2024		
Approved by Academic Council	No.76	Date	27-11-2024