



Semester: V				
Course Title: FINTECH				
Course Code: S3BC230511T			Credits: 3	
Classes/week : 3			Marks: 100	
Category: SEC				
Theory/Practical/Composite : Theory				
No. of Units : 4				
<p>Course Overview: This course provides learners with a comprehensive understanding of FinTech, covering foundational principles, key opportunities, challenges, and the evolutionary milestones that have shaped the industry. It explores applications, benefits, challenges and ethical consideration of core technologies such as Artificial Intelligence, Blockchain, Cloud Computing, and Data Analytics within the FinTech ecosystem. This course analyzes the impact of PayTech, LendingTech, Insurtech, BankTech, WealthTech, RegTech on traditional finance, role of government driven innovation and security challenges. Learners will gain insights into emerging FinTech trends, enabling them to forecast future opportunities and challenges in this rapidly evolving landscape.</p>				
Course Outcomes: By the end of this course, learners will be able to:				
CO1: Recall key FinTech concepts and terminology and explain their relevance in the financial ecosystem and value creation.				
CO2: Use core FinTech technologies (AI, Blockchain, Cloud Computing, and Big Data) to solve real-world financial problems and analyze relevant use cases across diverse FinTech domains.				
CO3: Analyze various FinTech applications (PayTech, LendingTech, InsurTech, WealthTech, BankTech, RegTech) and evaluate their impact on traditional financial systems, including regulatory and security dimensions.				
CO4: Analyze government-driven innovations, evaluate cybersecurity challenges and support ethical considerations in FinTech ecosystems.				
CO5: Evaluate emerging FinTech trends and develop strategic insights to forecast opportunities, risks, and future directions in financial innovation.				
CO6: Demonstrate the ability to interpret real-world FinTech case studies and develop context-specific solutions to contemporary financial and technological challenges.				
Prerequisites: A basic understanding of financial systems, banking operations, and digital technologies is expected to grasp FinTech concepts and applications; no prior knowledge of advanced technologies is required.				
SYLLABUS				
Unit with Topic Name	Content	Number of Classes	CO Mapping	Cognitive Level
I. Introduction to FinTech	FinTech: Concept, Scope, Opportunities and Challenges, Evolution of FinTech: 5 Key Eras; 5 D's of FinTech; FinTech Unicorns; Comparison with TechFin; Global Landscape: Key Players and Ecosystems	05	CO1	K1(Remember) K2(Understand)



<p>II. ABCD: Core Technologies of FinTech</p>	<p>A. Artificial Intelligence (AI) in FinTech: Concepts and Application Areas of AI, Machine Learning (ML) and Natural Language Processing (NLP) (Credit Scoring, Fraud Detection, Chatbots and Virtual Assistant); Impact of AI in Financial Services; Use of Generative AI and Prompt Engineering in Finance; Ethical Consideration and Challenges</p> <p>B. Financial Blockchain and Digital Currencies: Blockchain for Finance; Major Digital Currencies, Cryptocurrency: Bitcoin, Ethereum, Initial Coin Offering (ICO); Smart Contracts; Decentralized Finance (DeFi): Concepts, Benefits, Associated Risks</p> <p>C. Cloud Computing in FinTech: Cloud-Based Financial Services: Benefits and Challenges, Use of IoT-Cloud platforms in BFSI sector</p> <p>D. Big Data Analytics in FinTech: Big Data Technologies for handling large datasets in Finance; Application of Big Data Analytics (Predicting Market Trends, Customer Behaviour, Customer Insights and Personalization), Real-time Analytics; FinTech Data Protection and Privacy (GDPR, CCPA)</p>	<p>18</p>	<p>CO2 CO4 CO6</p>	<p>K3 (Apply) K4 (Analyze) K5 (Evaluate)</p>
<p>III. Overview of FinTech Applications and Innovations</p>	<p>PayTech (Existing Payment Ecosystem and Trends, Innovation in the Payment Ecosystem, UPI, CBDC, Cross-Border Payments)</p>	<p>15</p>	<p>CO3 CO4 CO6</p>	<p>K3 (Apply) K4 (Analyze)</p>



	<p>LendingTech (PayTech Companies as LSP Business Model, BNPL, P2P, Invoice Discounting, Account Aggregator, OCEN and ULI)</p> <p>InsurTech (Digital Distribution, Connected Insurance, Claims Automation)</p> <p>WealthTech (Robo- Advising, Discount Broking, Algorithmic Trading)</p> <p>BankTech (Neobank, BaaS, Open Banking, Video Banking)</p> <p>RegTech & SupTech</p> <p>Government-led infrastructure to drive FinTech innovations; Cybersecurity challenges</p>			K5 (Evaluate)
IV. Future Trends in FinTech	Emerging FinTech Platforms; Alternative Finance; Embedded Finance; Growing Adoption of FinTech Apps with integration of Gamification; Impact of Robotic Process Automation (RPA), Metaverse and Quantum Computing; Green FinTech for Sustainable Solutions	07	CO5	K4 (Analyze) K5 (Evaluate) K6 (Create)
** Relevant case studies will be incorporated to facilitate practical understanding and application of concepts covered in each unit.				
Text Books				
1. Chandrahauns Chavan, Atul Patankar, Introduction to Fintech, 2024, Pearson Education.				
2. Len Mei, Fintech Fundamentals, 2022, Mercury Learning & Information.				
3. Steven O'Hanlon, Susanne Chishti, FinTech For Dummies, 2021, WILEY.				
4. Susanne Chishti, Janos Barberis, The Fintech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries, 2016, WILEY.				
5. Agustin Rubini, Fintech in a Flash: Financial Technology Made Easy, 2017, De Gruyter.				
Suggested Readings				
1. David Kuo Chuen Lee, Linda Low, Inclusive Fintech: Blockchain, Cryptocurrency And Ico, 2018, World Scientific Publishing Company.				
2. Susanne Chishti, Tony Craddock, Robert Courtneidge, Markos Zachariadis, The PAYTECH Book: The Payment Technology Handbook for Investors, Entrepreneurs, and FinTech Visionaries, 2020, WILEY.				
3. Janthana Kaenprakhamroy, Navigating Insurtech: Opportunities and Challenges in Digital Insurance, 2024, Kogan Page.				



4. Indrajit Ghosal, Priya Jindal, Suresh Chandra Padhy, Banktech 4.0: The Next Wave of Transformative Banking, 2024, Nova Science Publishers.
5. Henri Arslanian, Fabrice Fischer, The Future of Finance: The Impact of FinTech, AI, and Crypto on Financial Services, 2019, Springer International Publishing.
6. Janos Barberis, Douglas W. Arner, Ross P. Buckley, The REGTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries in Regulation, 2019, WILEY
7. Krishna Potnis, Connecting Fintech: Building Techno-Financial Bridge Using 5D Model, 2023, Pendown Press.
8. Paolo Sironi, FinTech Innovation: From Robo-Advisors to Goal Based Investing and Gamification, 2016, WILEY.
9. Bernardo Nicolett, The Future of FinTech: Integrating Finance and Technology in Financial Services, 2017, Springer International Publishing.
10. Paul Moon Sub Choi, Seth H. Huang (Ed), Fintech with Artificial Intelligence, Big Data, and Blockchain, 2021, Springer Verlag, Singapore.
Web Resources
1. https://www.ibm.com/think/topics/fintech
2. https://ocw.mit.edu/courses/15-s08-fintech-shaping-the-financial-world-spring-2020/
3. https://www.infosys.com/industries/financial-services/insights/bank-tech-index.html
4. https://thedigitalfifth.com/indian-digital-lendingtech-ecosystem/
5. https://www.ey.com/en_in/industries/wealth-asset-management/money-in-motion-enabling-the-evolving-finance-sector-with-wealthtech
6. https://www.elinext.com/industries/financial/trends/paytech-comprehensive-overview-payments-technologies/
7. https://corporatefinanceinstitute.com/collections/fintech/?tab=courses
8. https://railwaymen.org/blog/abcd-in-fintech
9. https://www.investopedia.com/terms/f/fintech.asp
10. https://masterofcode.com/blog/generative-ai-for-fintech

****Latest edition of the book is recommended.**

Course outcomes (COs) and Cognitive Level Mapping

COs	CO Description	Cognitive levels
CO1	Recall key FinTech concepts and terminology and explain their relevance in the financial ecosystem and value creation.	K1 (Remember) K2 (Understand)
CO2	Use core FinTech technologies (AI, Blockchain, Cloud Computing, and Big Data) to solve real-world financial problems and analyze relevant use cases across diverse FinTech domains.	K3 (Apply) K4 (Analyze)
CO3	Analyze various FinTech applications (PayTech, LendingTech, InsurTech, WealthTech, BankTech, RegTech) and evaluate their impact on traditional financial systems, including regulatory and security dimensions.	K4 (Analyze) K5 (Evaluate)
CO4	Analyze government-driven innovations, evaluate cybersecurity challenges and support ethical considerations in FinTech ecosystems.	K4 (Analyze) K5 (Evaluate)
CO5	Evaluate emerging FinTech trends and develop strategic insights to forecast opportunities, risks, and future directions in financial innovation.	K5 (Evaluate) K6 (Create)
CO6	Demonstrate the ability to interpret real-world FinTech case studies and design context-specific solutions to contemporary financial and technological challenges.	K3 (Apply) K6 (Create)