



Semester: V			
Course Name: FINTECH			
Course Code: S3BC230511T		Course Type: SEC	
Course Credits: 3			
Pedagogy: Classroom Lectures, Case Studies, Assignments, Invited Lectures, Group Discussion, Seminars, Industry Interactions, Internal Assessment			
<p>Course Description: 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>			
<p>Learning Objectives: The course aims to help learners to acquire conceptual knowledge of.</p> <p>LO1. Foundational principles, opportunities, and challenges, evolutionary milestones, innovative features, global landscape and emerging paradigm of FinTech.</p> <p>LO2. Basic concepts, applications, benefits, challenges, and ethical consideration of core technologies in FinTech such as Artificial Intelligence, Blockchain, Cloud Computing, Data Analytics.</p> <p>LO3: FinTech applications and their impact on traditional finance, the role of government-driven innovation and relevant security challenges.</p> <p>LO4: Future FinTech trends for forecasting opportunities and challenges in FinTech.</p>			
<p>Course Outcomes: On successful completion of the course, students will be able to:</p> <p>CO1. Explain basic principles, impact, opportunities, and challenges, evolutionary milestones, innovative features, global landscape and emerging paradigm of FinTech.</p> <p>CO2. Apply concepts, applications, benefits, challenges, and ethical consideration of core technologies of FinTech in BFSI sector.</p> <p>CO3: Understand various types of FinTech applications, government-driven innovation and relevant security challenges and their impact on traditional payment, insurance, bank, lending, wealth and regulation.</p> <p>CO4: Identify future trends in FinTech to forecast potential challenges and opportunities in the field.</p>			
Unit No.	Unit Name	Topics	No. of Classes
1	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	8
2	ABCD: Core Technologies of FinTech	<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,</p>	20



		<p>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>	
3	Overview of FinTech Applications and Innovations	<p>PayTech (Existing Payment Ecosystem and Trends, Innovation in the Payment Ecosystem, UPI, CBDC, Cross-Border Payments)</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>	20
4	Future Trends in FinTech	<p>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</p>	8

Practical Exercises/Skill Development Activities: Class Seminars, Group Discussions, Analysis of Cases

*Relevant Case-Studies to be discussed to explain the topics under each unit.

**Latest edition of the books is recommended.

RECOMMENDED BOOKS:



1. Chandrahauns Chavan, Atul Patankar, Introduction to Fintech, 2024, Pearson Education.
2. Len Mei, Fintech Fundamentals, 2022, Mercury Learning & Information.
3. David Kuo Chuen Lee, Linda Low, Inclusive Fintech: Blockchain, Cryptocurrency And Ico, 2018, World Scientific Publishing Company.
4. Steven O'Hanlon, Susanne Chishti, FinTech For Dummies, 2021, WILEY.
5. Susanne Chishti, Janos Barberis, The Fintech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries, 2016, WILEY.
6. Paul Moon Sub Choi, Seth H. Huang (Ed), Fintech with Artificial Intelligence, Big Data, and Blockchain, 2021, Springer Verlag, Singapore.
7. Bernardo Nicolett, The Future of FinTech: Integrating Finance and Technology in Financial Services, 2017, Springer International Publishing.
8. Paolo Sironi, FinTech Innovation: From Robo-Advisors to Goal Based Investing and Gamification, 2016, WILEY.
9. Krishna Potnis, Connecting Fintech: Building Techno-Financial Bridge Using 5D Model, 2023, Pendown Press.
10. Janos Barberis, Douglas W. Arner, Ross P. Buckley, The REGTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries in Regulation, 2019, WILEY.
11. Henri Arslanian, Fabrice Fischer, The Future of Finance: The Impact of FinTech, AI, and Crypto on Financial Services, 2019, Springer International Publishing.
12. Indrajit Ghosal, Priya Jindal, Suresh Chandra Padhy, Banktech 4.0: The Next Wave of Transformative Banking, 2024, Nova Science Publishers.
13. Janthana Kaenprakhamroy, Navigating Insurtech: Opportunities and Challenges in Digital Insurance, 2024, Kogan Page.
14. Susanne Chishti, Tony Craddock, Robert Courtneidge, Markos Zachariadis, The PAYTECH Book: The Payment Technology Handbook for Investors, Entrepreneurs, and FinTech Visionaries, 2020, WILEY.
15. Agustin Rubini, Fintech in a Flash: Financial Technology Made Easy, 2017, De Gruyter.

