



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

FINANCIAL TECHNOLOGIES (FINTECH)								
III Semester: MBA								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
CMBE34	Elective	L	T	P	C	CIA	SEE	Total
		4	-	-	4	40	60	100
Contact Classes: 45	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 45			
Prerequisite: Financial Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course provides an in-depth understanding of the FinTech ecosystem, technological enablers, and their applications in banking, capital markets, and financial services. It emphasizes the role of digital transformation, blockchain, artificial intelligence, payment systems, and regulatory frameworks in reshaping the financial sector. Students will gain both conceptual knowledge and practical insights through case studies and applications, preparing them for careers in the evolving FinTech landscape.

II. COURSES OBJECTIVES:

The students will try to learn:

- I. The role of FinTech in transforming traditional financial and service sectors.
- II. The technology enablers such as UPI, blockchain, APIs, Robo-advisors, and chatbots in promoting digital finance.
- III. The applications of FinTech in banking operations, lending, and payment systems.
- IV. The significance of FinTech in capital markets and its related stakeholders, operations, and emerging innovations.
- V. The regulatory, ethical, and security challenges in FinTech with an emphasis on sustainable finance and financial inclusion.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

- CO1 Explain the fundamentals of FinTech and its role in digital transformation of financial ecosystems.
- CO2 Demonstrate the applications of technology enablers such as UPI, APIs, blockchain, and robo-advisors in financial services.
- CO3 Analyze the impact of FinTech on banking operations, lending, and customer experience
- CO4 Evaluate the role of FinTech in capital markets, InsurTech, PropTech, and RegTech with real-world case applications.
- CO5 Assess the regulatory frameworks, cyber security concerns, and challenges faced by FinTech companies.
- CO6 Apply sustainable finance practices and innovative FinTech solutions to promote financial inclusion and green economic growth.

IV. COURSE CONTENT:

MODULE – I: INTRODUCTION TO FINTECH (09)

Digital Transformation in Manufacturing and Service Industry, The changing structure of the Financial ecosystem. Fintech and its advantages, Digital India and its role in promoting Fintech. Introduction to India Stack – Unique Identification, Presence Less Verification, eKYC, Digital Signature, Digital Document Repository (DigiLocker), Use of DigiLocker to Expedite Recruitment Process, Cashless Digital Payments, Account Aggregation, Receivables Exchange TReDS, Regulatory Framework.

MODULE - II: TECHNOLOGY ENABLERS FOR FINTECH (09)

Digital Payments, Unified Payment Interface (UPI), Payment Gateway, The Instant Mobile Payment System (IMPS), Chatbots - Customer Relationship and Service, Use of Chatbots in P2P Platforms, Chatbots for Guiding Personal Financial Management, Robo Advisors or Algorithm-Based Planners - The Advantages of Robo Advisors, Application Programming Interface (API), Blockchain – key concepts, applications, Distributed ledger technology and Decentralized Finance (DeFi)]Cross Border Trade Using Blockchain, Value Chain of Blockchain, Working of a Business Blockchain, Case Study—Capgemini Solution on AWS Managed Blockchain: From Proof of Concept to Production.

MODULE - III: FINTECH IN BANKING (09)

Digital Transformation in Banks. Changing Customer Expectations, Fitment of FinTech Companies in Digital Transformation – Core Banking Solutions, Network Banking and Cheque Truncation System, Cards with Chip and Pin, Net banking, Toll Gate Collections, PoS Terminals, Buy Now Pay Later (BNPL), Prepaid Mechanisms.

FinTech in Lending and Borrowing: Introduction to the Business of Lending - Credit-worthiness of the Borrower, FinTech in Lending Business, Latest Technology Trends in Lending, Case Study—Amazon SMB Lending - Amazon as a FinTech Lender, Case Study—Indifi - How the Platform Works

MODULE - IV: FINTECH IN CAPITAL MARKETS (09)

Raising Capital, Types of Securities, Important Stakeholders in Capital Markets, The Trade Lifecycle, Clearing, Settlement & Back office Operations – Clearing, Settlement, Asset Servicing, How Technology Supports Capital Market Processes, Other Types of FinTech Companies: Insurtech, PropTech – Case Study—Property Locator App of DBS Bank, TailFin, EnablingTech, RegTech.

MODULE - V: FINTECH REGULATIONS AND CHALLENGES (09)

Concerns and Trends in FinTech World: Concerns of FinTech Companies, Challenges Faced by FinTech Companies. Cyber security Sustainable Finance: Sustainable business practices, the role of Fintech in the Society, Green economic growth, Financial Inclusion and the role of Technology.

V.TEXT BOOKS:

1. Chandrashaun Chavan and Atul Patankar, Introduction to Fintech, Pearson, 2024
2. Peter Goldfish, A Global guide to Fintech and Future Payment Trends, Routledge, 2023
3. Sanjay Phadke, Fintech Future The Digital DNA Finance, Sage, 2020
4. Chenjiayi Zhong, Cryptocurrencies and Beyond, Business experts press, LLC, 2025

VI. REFERENCE BOOKS:

1. Shrier, David L. Frontiers of Financial Technology: Expeditions in Future Commerce, From Blockchain and Digital Banking to Prediction Markets and Beyond. VisionaryFuture, 2016.
2. Mills, Karen G. Fintech, Small Business & the American Dream. 2nd ed., Palgrave Macmillan, 2024.
3. Teigland, Robin, Shahryar Siri, et al., editors. The Rise and Development of FinTech: Accounts of Disruption from Sweden and Beyond. Routledge, 2018.

VII. WEB REFERENCES:

1. [http://www.icsi.in/Study%20Material%20Executive/Executive%20Programme-2013/COST%20AND%20MANAGEMENT%20ACCOUNTING%20\(MODULE%20I%20PAPER%202\).pdf](http://www.icsi.in/Study%20Material%20Executive/Executive%20Programme-2013/COST%20AND%20MANAGEMENT%20ACCOUNTING%20(MODULE%20I%20PAPER%202).pdf).

VIII. E-TEXT BOOKS:

1. [https://www.free-ebooks.net/ebook/Fin technologies](https://www.free-ebooks.net/ebook/Fin+technologies)