

UNIVERSITY OF KERALA

Four Year Undergraduate Programme (FYUGP) — B.Com

Stream: Finance

FINTECH

Discipline	COMMERCE
Course Code	UK5DSECOM301
Course Title	FinTech
Type of Course	Discipline Specific Elective (DSE)
Semester	V
Academic Level	300 – 399
Course Details	4 Credits (Theory) Lecture: 4 hrs/week Tutorial: – Practical: – Total: 4 hrs/week (60 Hours)
Pre-requisites	Basic knowledge of banking, financial systems and digital payment services.
Course Summary	This course enables learners to understand the FinTech ecosystem and to apply emerging financial technologies in practice. It develops the ability to compare digital banking, payment and lending platforms, analyse the role of artificial intelligence and blockchain, and develop cybersecurity and data-protection measures for secure digital financial operations.

Detailed Syllabus

Unit	Content	Hrs
Module I: Introduction to FinTech		12
1	FinTech Concepts and Ecosystem Concept, Evolution, Scope, Relevance and FinTech Ecosystem in the Indian Context.	3
2	FinTech in Banking and Finance — ESG and Green FinTech.	3
3	Digital Disruption in Financial Markets.	3
4	Innovation and Transformation in FinTech.	3
Suggested Activities - Group discussion: how has FinTech disrupted traditional banking in India? Use examples from Paytm, PhonePe, Zerodha and Navi. - Survey of FinTech apps used by the class — classify each by category (payment, lending, insurance, investment) and present a structured analysis of the ecosystem.		
Module II: FinTech Trends and Applications		12
5	Digital Banking and FinTech Verticals Digital Banking, Peer-to-Peer Lending, Robo-Advising, Payment-Tech, Insur-Tech, Reg-Tech — Concept, Features and Merits.	4
6	Digital Payments Mobile Wallets, Payment Gateways, UPI, IMPS, NEFT, RTGS and Digital Payment Ecosystem.	4

Unit	Content	Hrs
7	Lending Platforms and Crowdfunding P2P Lending (Lending Club, Funding Circle); Crowdfunding Platforms (Kickstarter, GoFundMe, Equity-based Crowdfunding).	4
Suggested Activities • Demonstrate a UPI transaction and map the stakeholders involved — payer's bank, NPCI, payee's bank, payment gateway and how settlement occurs. • Case study: compare two P2P lending platforms (Lending Club and Faircent) on interest rates, borrower risk assessment and regulatory compliance.		
Module III: Artificial Intelligence in FinTech		8
8	Credit Scoring and AI Implementation — Concept, Features and Merits.	2
9	Detection of Fraud in Financial Transactions — Concept, Features and Merits.	2
10	Business Intelligence in Financial Services — Concept, Features and Merits.	2
11	AI-powered Chatbots, Algorithmic Trading and Personalised Financial Services.	2
Suggested Activities • Explore AI-based credit scoring: compare a traditional bank credit assessment with an AI-driven FinTech approach — identify differences in speed, accuracy and inclusion. • Group discussion: how does algorithmic trading affect market volatility and the participation of retail investors? Discuss with reference to SEBI's regulatory stance.		
Module IV: Blockchain and Cryptocurrency		16
12	Cryptocurrency Concept, Merits and Demerits.	2
13	Major Cryptocurrencies Bitcoin, Ethereum, Stablecoins and Emerging Digital Assets.	4
14	Types of Digital Tokens Utility Tokens (BAT, ETH, WRX), Security/Equity Tokens, Asset-backed Tokens and Non-Fungible Tokens (NFTs): Concepts and Applications.	4
15	Blockchain Banking Concept and Applications in Financial Services.	3
16	Blockchain in Cross-Border Payments.	3
Suggested Activities • Seminar: should India regulate or ban cryptocurrency? Present arguments for and against with reference to global regulatory precedents (El Salvador, China, EU MiCA). • Case study: analyse the role of blockchain in cross-border payments — compare the SWIFT system with blockchain-based remittance solutions on speed, cost and transparency.		
Module V: FinTech Security and Regulation [CCA Only]		12
17	Cybersecurity and Financial Data Protection.	2
18	Information Technology Act 2000 and Cyber Security Regulations in India.	3
19	Ethical Hacking, Cyber Threats, Firewalls and Security Measures in Financial Systems.	4
20	Issues and Challenges in Ensuring FinTech Security.	3

Unit	Content	Hrs
Suggested Activities - Evaluate the cybersecurity measures of two digital payment apps — identify potential vulnerabilities (phishing, data breach, man-in-the-middle) and suggest improvements. - Prepare a compliance brief for a FinTech startup covering key regulations applicable in India: RBI guidelines, SEBI regulations, IT Act 2000 and data protection requirements.		
Total Instructional Hours		60

References

Text Books

- Schueffel, P. – The Fintech Opportunity (IESE Insight).
- Arner, D., Barberis, J., & Buckley, R. P. – FinTech, RegTech, and the Reconceptualization of Financial Regulation (Northwestern Journal of International Law and Business).

Standard Reference Books

- Dhar, V., & Stein, R. M. – FinTech Platforms and Strategy (Communications of the ACM).
- Nicoletti, B. – Future of FinTech (Palgrave Macmillan).
- Desai, F. – The FinTech Revolution (Forbes Media).
- Reserve Bank of India – Reports and circulars on digital payments and FinTech – <https://www.rbi.org.in/>.

Journals, Reports and Web Resources

- Reserve Bank of India – Digital payments regulations – <https://www.rbi.org.in/>
- National Payments Corporation of India (NPCI) – <https://www.npci.org.in/>
- SEBI – FinTech regulatory resources – <https://www.sebi.gov.in/>
- CERT-In – Cyber security guidelines – <https://www.cert-in.org.in/>

Course Outcomes (COs)

No.	Upon completion of the course the graduate will be able to:	Cognitive Level	Module	PSO Addressed	Knowledge
CO1	Explain the concepts, evolution, ecosystem and significance of FinTech in modern financial services.	U	M I	PSO6, PSO10	F, C
CO2	Design a comparative framework for FinTech applications, including digital banking, digital payments and lending platforms.	C	M II	PSO6, PSO10	P, M
CO3	Analyse the role of artificial intelligence and data-driven technologies in financial decision-making and service delivery.	An	M III	PSO6, PSO10	C, P
CO4	Evaluate blockchain technology, cryptocurrencies and digital token systems in financial transactions.	E	M IV	PSO6, PSO10	C, P
CO5	Evaluate the ethical, regulatory and governance issues associated with FinTech services.	E	M IV	PSO5, PSO6, PSO10	C, P

No.	Upon completion of the course the graduate will be able to:	Cognitive Level	Module	PSO Addressed	Knowledge
CO6	Develop cybersecurity and data-protection measures for secure digital financial operations.	C	M V	PSO5, PSO6, PSO10	P, M
Cognitive Levels: R – Remember U – Understand Ap – Apply An – Analyse E – Evaluate C – Create Knowledge: F – Factual C – Conceptual P – Procedural M – Metacognitive					

CO – PO/PSO, Cognitive Level and Knowledge Category

Credits: 4 : 0 : 0 (Lecture : Tutorial : Practical)

CO No.	CO	PO	PSO	Cognitive Level	Knowledge	Module	L / T / P
CO1	Explain the concepts, evolution, ecosystem and significance of FinTech in modern financial services.	1,2,7	6,10	U	F, C	M I	L / - / -
CO2	Design a comparative framework for FinTech applications, including digital banking, digital payments and lending platforms.	1,2,5,7	6,10	C	P, M	M II	L / - / -
CO3	Analyse the role of artificial intelligence and data-driven technologies in financial decision-making and service delivery.	1,2,5,7	6,10	An	C, P	M III	L / - / -
CO4	Evaluate blockchain technology, cryptocurrencies and digital token systems in financial transactions.	1,2,5,6,7	6,10	E	C, P	M IV	L / - / -
CO5	Evaluate the ethical, regulatory and governance issues associated with FinTech services.	1,2,6,7,8	5,6,10	E	C, P	M IV	L / - / -
CO6	Develop cybersecurity and data-protection measures for secure digital financial operations.	1,2,5,6,7,8	5,6,10	C	P, M	M V	L / - / -

CO No.	CO	PO	PSO	Cognitive Level	Knowledge	Module	L / T / P
Cognitive Levels: R – Remember U – Understand Ap – Apply An – Analyse E – Evaluate C – Create Knowledge: F – Factual C – Conceptual P – Procedural M – Metacognitive							

Mapping of COs with PSOs

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9	PSO10	PSO11	PSO12	PSO13	PSO14
CO1	-	-	-	-	-	3	-	-	-	2	-	-	-	-
CO2	-	-	-	-	-	3	-	-	-	3	-	-	-	-
CO3	-	-	-	-	-	2	-	-	-	3	-	-	-	-
CO4	-	-	-	-	-	2	-	-	-	3	-	-	-	-
CO5	-	-	-	-	2	3	-	-	-	2	-	-	-	-
CO6	-	-	-	-	2	3	-	-	-	2	-	-	-	-
Correlation: (Nil) – No correlation 1 – Mild 2 – Moderate 3 – Strong														

Mapping of COs with POs

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	1	-	-	-	-	2	-
CO2	2	1	-	-	2	-	2	-
CO3	2	1	-	-	2	-	2	-
CO4	2	1	-	-	2	2	2	-
CO5	2	1	-	-	-	2	2	2
CO6	2	1	-	-	2	2	2	2
Correlation: (Nil) – No correlation 1 – Mild 2 – Moderate 3 – Strong								

Assessment Rubrics

Assessment tools: Quiz / Assignment / Discussion / Seminar / Case Study / Activity / Internal Examination / Project / End Semester Examination

	Internal Exam	Assignment	Project / Case Study	End Semester Exam
CO1	✓			✓
CO2	✓			✓
CO3	✓	✓		✓
CO4	✓			✓
CO5	✓			✓
CO6	✓		✓	

Assessment Pattern

Component	Basis / Assessment Tools	Marks
Continuous Comprehensive Assessment (CCA) – All Modules (I–V)		24
Formative Assessment (FA)	Three components of 4 marks each (4 + 4 + 4 = 12 marks): • Assignment on FinTech application analysis or digital payment system evaluation (4 marks) • Case study on blockchain/cryptocurrency or AI in finance (4 marks) • Quiz on FinTech concepts, cybersecurity and regulatory framework (4 marks)	12
Summative Assessment (SA)	Internal examination conducted after a defined instructional period; the score is converted to 12 marks	12
End Semester Evaluation (ESE) – Modules I–IV only		56
Written Examination	2 hours – covering Modules I, II, III and IV only	56
Total		80

Notes:

Total marks: 80 (4-credit course). CCA : ESE = 30 : 70. CCA covers all five modules (I–V); ESE covers Modules I–IV only. FA and SA carry equal weightage (12 marks each).

Formative Assessment (FA): continuous, in-process evaluation across all modules (I–V). The three suggested tools (4 + 4 + 4 = 12 marks) are indicated above.

Summative Assessment (SA): internal examination conducted after a defined instructional period; the score is converted to 12 marks. Covers all modules (I–V).

End Semester Evaluation (ESE): a two-hour external written examination of 56 marks covering Modules I–IV only. Module V is assessed exclusively through the CCA.