



UK

SYLLABUS 2025-2026

Financial Technology and Innovation in Digital Finance

MODULE SPECIFICATION

Module Code	2526_DFC_2_EN_025 / 2526_DFC_3_EN_012
Campus	Oxford
Department(s)	Law, Finance and Control
Level / Semester	Masters Year 2 (M2); Equivalent to FHEQ level 7 Semester 10
Language of Instruction	English
Teaching Method	☒ In-person (face-to-face) ☐ Distance learning (live online) ☐ e-Learning (asynchronous) ☐ Hybrid: _____
Pre-requisite(s)?	None
ECTS <i>Reminder: 1 ECTS = between 20 and 30hr- student workload</i>	5
Equivalent FHEQ credits	10
Study Hours	100 hours which comprise of 28 directed learning and 72 independent learning/assessment hours

MODULE DESCRIPTION

Module Aims	This module explores the transformative impact of FinTech (Financial Technology) on banking, financial services, and global markets. It combines theoretical frameworks with real-world applications, covering blockchain, AI, digital payments, RegTech, CBDCs, and disruptive business models. Students will critically analyse risks, opportunities, and regulatory challenges while developing strategic insights for innovation in finance.
Teaching Arrangement	The module will be delivered through lectures, seminars, and

	workshops.
Learning Outcomes	By the end of this module, students should be able to: 1. Evaluate the role of FinTech in reshaping traditional banking and financial systems. 2. Analyse core technologies (e.g., blockchain, AI, APIs) and their applications in finance. 3. Assess regulatory and ethical challenges in FinTech adoption (e.g., GDPR, PSD2, AML). 4. Critique disruptive business models (e.g., DeFi, neobanks, InsurTech). 5. Develop strategic solutions for FinTech-driven challenges in financial institutions.
Competency Goals <i>(Knowledge, expertise and interpersonal skills)</i>	PGE_M_CG01 - To be equipped with efficient business skills PGE_M_CG04 - To be a project manager with a strategic overview
Alignment with Programme Learning Goals	PGE_M_CG01_LO01 - To apply appropriate financial skills PGE_M_CG04_LO01 - To do a global analysis of the firm in its environment PGE_M_CG04_LO02 - To make relevant strategic recommendations PGE_M_CG01_LO01_I01 - To realise a financial analysis PGE_M_CG04_LO01_I02 - To distinguish between what is a strategic situation and what is not

SESSION TOPICS / MODULE SCHEDULE

(Please note, a session/sequence may be more than one scheduled class)

<u>Session 1: FinTech and the Digital Financial Ecosystem – Foundations and Disruption (Recap & Critical Analysis)</u> <i>Content:</i> • Evolution of FinTech: disruption vs. Innovation in traditional finance • Key drivers (technology, regulation, customer demand, and globalisation) • Current trends (Open Banking, embedded finance, and the future of money) <i>Assignments:</i> • Assignments will be announced closer to the relevant session dates
<u>Session 2: Core Technologies Powering FinTech</u> <i>Content:</i> • Blockchain and Distributed Ledger Technology (DLT): ◦ Cryptocurrencies (e.g. Bitcoin, Ethereum) vs. CBDCs (e.g. Digital Pound)

Last reviewed: 08/09/2025

- Smart contracts and decentralised finance (DeFi)
- Artificial Intelligence (AI) and Machine Learning (ML):
 - Applications in credit scoring, fraud detection, and robo-advisory
- Big Data and APIs:
 - Role in Open Banking (PSD2) and personalised financial services

Assignments:

- Assignments will be announced closer to the relevant session dates

Session 3: FinTech Business Models and Applications

Content:

- Digital payments and wallets (e.g. Stripe, Alipay)
- Neobanks vs. Incumbent banks (e.g. Monzo, Starling, Goldman's Marcus)
- InsurTech (e.g. Lemonade, parametric insurance)
- Peer-to-peer (P2P) lending and crowdfunding platforms

Assignments:

- Assignments will be announced closer to the relevant session dates

Session 4: Regulatory and Ethical Challenges

Content:

- Regulatory frameworks (FCA, PSD2, GDPR, and AML/KYC compliance)
- RegTech – automating compliance through AI and blockchain
- Ethical dilemmas (data privacy, algorithmic bias, and financial inclusion)

Assignments:

- Assignments will be announced closer to the relevant session dates

Session 5: Emerging Frontiers in FinTech

Content:

- Central Bank Digital Currencies (CBDCs) -- design and global case studies
- Quantum computing's potential impact on financial security
- Sustainable FinTech (green finance and ESG-driven innovations)

Assignments:

- Assignments will be announced closer to the relevant session dates

Session 6: Strategic Implementation and Risk Management

Content:

- Barriers to FinTech adoption in traditional institutions
- Cybersecurity risks and fraud mitigation
- Scaling innovations – from startups to enterprise solutions

Assignments:

- Assignments will be announced closer to the relevant session dates

KEY TEXTS

1. Shrier, D.L. and Pentland, A. (eds.) (2022) *Global fintech: Financial innovation in the connected world*. Cambridge, United States: MIT Press.

SUPPLEMENTARY TEXTS

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| 1. Additional readings and materials will be provided closer to the relevant session dates. |
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MODES OF ASSESSMENT

Continuous Assessment (40%)	Project report
Final Exam (60%)	Research paper

MODULE DESIGN TEAM

- Author: *Mitra Arami*
- Reviewer: *Paul Griffiths*
- External Reviewer: *Tahsin Ozalan*