Certificate in Fintech

Syllabus

Module 1: Foundations of Fintech

- Meaning, scope and evolution of fintech.
- Digitisation, digitalisation and financial innovation.
- Fintech, techfin and technology-enabled financial services.
- Traditional institutions, fintech firms and technology platforms.
- Business-to-consumer, business-to-business and infrastructure models.
- Unbundling and rebundling of financial services.
- Customer access, convenience, cost and service quality.
- Opportunities and limitations of technology-led innovation.
- Financial inclusion and responsible product design.
- Distinguishing technological capability from regulatory permission.

Module 2: The Fintech Ecosystem

- Banks, NBFCs, insurers, asset managers and market intermediaries.
- Payment businesses, lending platforms and distribution networks.
- Technology vendors and infrastructure providers.
- Regulators, industry bodies and innovation institutions.
- Investors, incubators and accelerators.
- Partnership-led and independently licensed operating models.
- Value chains and allocation of responsibilities.
- Network effects and platform economics.
- Competition, collaboration and disintermediation.
- Indian and selected international fintech ecosystems.

Module 3: Technology Foundations for Finance Professionals

- Applications, databases, servers and networks.
- Cloud computing and service models.
- APIs and system integration.
- Microservices and modular architecture: introductory concepts.
- Real-time processing and batch processing.
- Digital identity, authentication and access.
- Encryption, digital signatures and secure communication.
- Data pipelines and system interoperability.
- Legacy-system integration and technical debt.
- Scalability, availability and operational dependencies.
- Interpreting technical proposals in business terms.

Module 4: Digital Public Infrastructure and Financial Access

- Digital identity and electronic verification.
- Digital payments infrastructure.
- Consent-based financial-data sharing.
- Digital document exchange and electronic execution.
- Roles of government, public institutions and private participants.
- Interoperability and open standards.
- Customer access and assisted digital services.
- Rural, small-business and underserved customer needs.
- Accessibility, language and digital literacy.
- Infrastructure dependencies and exclusion risks.
- Distinguishing identity verification, consent and product eligibility.

Module 5: Digital Payments and Merchant Services

- Payment initiation, authorisation, clearing and settlement.
- UPI, cards, wallets and other payment methods.
- Payment gateways and payment aggregators.
- Merchant onboarding and acceptance infrastructure.

- Recurring payments and mandates.
- Refunds, reversals, disputes and chargebacks.
- Reconciliation and settlement exceptions.
- Merchant pricing and payment economics.
- Fraud, authentication and transaction controls.
- Customer communication and grievance handling.
- Cross-border payment models: introductory perspective.

Module 6: Digital Banking and Banking Partnerships

- Digital banking channels and customer journeys.
- Neobanking propositions and partner-bank models.
- Account opening, servicing and account management.
- Banking-as-a-service: concepts and structural limitations.
- Banking licences versus technology-service arrangements.
- Product ownership and allocation of responsibilities.
- Deposit, payment and lending interfaces.
- Customer disclosures and service boundaries.
- Outsourcing, vendor oversight and operational dependencies.
- Business continuity and customer-service risks.
- Evaluating partnership agreements at a business level.

Module 7: Digital Lending and Credit Platforms

- Digital lending lifecycle.
- Customer acquisition, onboarding and verification.
- Credit assessment and affordability.
- Bureau, bank-statement and alternative-data inputs.
- Loan pricing, disclosures and repayment terms.
- Regulated lenders and lending-service providers.
- Loan disbursement, servicing and collections.
- Embedded lending and point-of-sale finance.
- Default, delinquency and portfolio-quality measures.

- Fraud, bias and over-indebtedness risks.
- Consent, data access and customer protection.
- Partnership oversight and regulatory accountability.

Module 8: Open Banking, Open Finance and Account Aggregation

- Open banking versus open finance.
- Permissioned data access and consent management.
- Account Aggregator ecosystem: introductory overview.
- Data providers, recipients and intermediaries.
- Customer authorisation and withdrawal of consent.
- Data standardisation and interoperability.
- Applications in lending, wealth and personal finance.
- Data quality and incomplete financial information.
- Privacy, security and purpose limitation.
- Business models and adoption barriers.
- Distinguishing data access from permission to provide a financial service.

Module 9: Wealthtech and Digital Investing

- Digital investment platforms and distribution models.
- Automated and hybrid advisory.
- Client onboarding, risk profiling and suitability.
- Goal-based investing and portfolio tools.
- Investment execution and account aggregation.
- Portfolio reporting and performance presentation.
- Digital access to public and private markets.
- Customer communication and behavioural nudges.
- Fees, commissions and conflicts of interest.
- Investor protection and misleading performance claims.
- Regulatory boundaries between advice, research, distribution and execution.

Module 10: Insurtech and Digital Protection

- Digital insurance distribution and servicing.
- Product discovery, comparison and purchase journeys.
- Underwriting and risk assessment.
- Embedded and usage-based insurance concepts.
- Claims submission, verification and processing.
- Data-driven personalisation.
- Intermediary and insurer responsibilities.
- Fraud detection and claims integrity.
- Customer disclosures and exclusions.
- Privacy, fairness and discrimination risks.
- Evaluating the value of digital insurance propositions.

Module 11: Embedded Finance and Platform Models

- Embedding financial services into non-financial journeys.
- Embedded payments, lending, insurance and investments.
- Contextual distribution and customer access.
- Platform, provider and intermediary responsibilities.
- Revenue sharing and commercial alignment.
- Customer ownership and servicing responsibilities.
- Consent, disclosures and complaint resolution.
- Product suitability and inappropriate cross-selling.
- Partner concentration and dependency.
- Exit arrangements and continuity of customer service.
- Assessing whether embedding improves the customer outcome.

Module 12: Regtech, Suptech and Compliance Automation

- Regulatory technology and supervisory technology.
- Digital KYC and identity-verification tools.
- AML screening and transaction monitoring.
- Regulatory reporting and compliance workflows.

- Document intelligence and information extraction.
- Rule engines and automated checks.
- Alert triage and case-management systems.
- Audit trails and evidence retention.
- False positives, false negatives and human review.
- Vendor evaluation and model limitations.
- Accountability when compliance processes are automated.

Module 13: Financial Data, Analytics and AI

- Structured, unstructured and alternative data.
- Data quality, lineage and governance.
- Descriptive, diagnostic, predictive and prescriptive analytics.
- Machine-learning applications in financial services.
- Credit scoring, fraud detection and customer segmentation.
- Personalisation and customer-service applications.
- Generative AI and AI-assisted workflows.
- Training, validation and performance monitoring.
- Bias, explainability and model drift.
- Confidentiality and information leakage.
- Human oversight and responsible deployment.
- Distinguishing model accuracy from business value.

Module 14: Blockchain, Tokenisation and Digital Assets

- Distributed ledgers and blockchain concepts.
- Permissioned and permissionless networks.
- Smart contracts and their limitations.
- Tokenisation of assets and financial claims.
- Custody, wallets and private-key management.
- Stablecoins and central bank digital currencies: conceptual distinctions.
- Settlement, ownership and interoperability.
- Counterparty, liquidity and operational risks.

- Fraud, scams and market-integrity concerns.
- Legal enforceability and jurisdictional uncertainty.
- Distinguishing a technology use case from an investable proposition.
- Evaluating applications without assuming regulatory approval.

Module 15: Fintech Product Development and Customer Experience

- Identifying customer problems and underserved needs.
- Customer research and journey mapping.
- Product-market fit and value propositions.
- Minimum viable products and controlled pilots.
- Product requirements and acceptance criteria.
- Design for trust, accessibility and transparency.
- Consent and disclosures within customer journeys.
- Testing, feedback and product iteration.
- Friction reduction versus necessary safeguards.
- Dark patterns and manipulative design.
- Product governance and change approval.
- Coordination across business, technology, risk and compliance.

Module 16: Business Models and Unit Economics

- Transaction, subscription, distribution and service-fee models.
- Interest-based and lending-related economics.
- Acquisition channels and customer acquisition cost.
- Activation, retention and churn.
- Customer lifetime value and its assumptions.
- Contribution margin and cost-to-serve.
- Revenue recognition and pass-through amounts.
- Volume, revenue, profitability and cash flow.
- Credit losses, fraud losses and support costs.
- Incentives, subsidies and sustainable growth.
- Cohort analysis and customer concentration.

- Stress-testing a fintech business model.

Module 17: Fintech Strategy, Partnerships and Due Diligence

- Build, buy and partner decisions.
- Strategic fit and capability assessment.
- Partner selection and commercial due diligence.
- Regulatory status and permitted activities.
- Ownership, governance and management quality.
- Technology architecture and integration readiness.
- Security, resilience and data practices.
- Financial sustainability and funding dependence.
- Contractual responsibilities and service levels.
- Subcontractors and concentration risk.
- Exit planning and portability.
- Preparing a partnership recommendation.

Module 18: Cybersecurity and Financial Fraud

- Cyber-risk foundations for fintech businesses.
- Identity theft and account takeover.
- Phishing, impersonation and social engineering.
- Payment diversion and unauthorised transactions.
- Access controls and privileged accounts.
- Secure development and vulnerability management.
- Cloud and third-party exposures.
- Fraud monitoring and exception handling.
- Incident escalation and evidence preservation.
- Customer communication and recovery coordination.
- Business continuity and operational resilience.
- Boundaries between business oversight and specialist technical work.

Module 19: Regulation, Legal Structures and Consumer Protection

- Roles of RBI, SEBI, IRDAI, PFRDA and IFSCA.
- Activity-based regulation and regulatory perimeter.
- Licensing, registration and authorisation.
- Regulated entities versus technology-service providers.
- Financial contracts and electronic agreements.
- Customer identification, AML and reporting interfaces.
- Data protection and confidentiality.
- Outsourcing and partnership accountability.
- Advertising, disclosures and mis-selling.
- Complaints, grievance redressal and customer remediation.
- Cross-border services and jurisdictional considerations.
- Monitoring amendments and implementation dates.

Module 20: Innovation, Sandboxes and Responsible Experimentation

- Purpose of regulatory and innovation sandboxes.
- Controlled testing versus unrestricted commercial launch.
- Eligibility, applications and test objectives.
- Customer safeguards and risk controls.
- Test boundaries, success measures and exit criteria.
- Inter-operable testing of cross-sector propositions.
- Cross-border collaboration and referral mechanisms.
- GIFT IFSC and fintech experimentation.
- Distinguishing sandbox participation from general authorisation.
- Transition from pilot to permitted commercial operations.
- Documenting outcomes, limitations and unresolved risks.

Module 21: Fintech Investment and Commercial Evaluation

- Evaluating the customer problem and addressable market.
- Differentiation, competition and defensibility.
- Distribution strength and customer acquisition.

- Revenue quality and unit economics.
- Product adoption versus subsidised activity.
- Regulatory dependence and partnership risks.
- Funding needs, runway and capital intensity.
- Governance, founder incentives and ownership.
- Technology and operational due-diligence questions.
- Valuation approaches and their limitations.
- Scenario analysis and downside assessment.
- Distinguishing growth narratives from sustainable economics.

Module 22: Ethics, Inclusion and Professional Judgement

- Fair treatment and responsible innovation.
- Financial inclusion without exploitative design.
- Suitability and affordability.
- Transparent pricing and meaningful consent.
- Algorithmic bias and discriminatory outcomes.
- Privacy and proportionate data collection.
- Conflicts of interest and commercial pressure.
- Responsible use of customer information.
- Accuracy of product and performance claims.
- Human oversight and accountability.
- Recognising limits of competence.
- Escalating concerns and documenting decisions.