Card Payment Systems in Banking Training Course

Professional Development Training Course Outline

Category	Banking Institute	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The landscape of retail banking and consumer finance is undergoing an unprecedented paradigm shift driven by the rise of agentic commerce, network tokenization, and real-time processing infrastructures. Card Payment Systems in Banking Training Course is engineered to equip banking professionals with an elite understanding of modern card payment systems, breaking away from siloed traditional methodologies to embrace hyper-secure, invisible transactional architectures. Participants will unpack the mechanics of legacy 3-party and 4-party clearing models while mastering modern shifts like SoftPOS (Software Point of Sale), digital identity wallet integration under eIDAS 2.0 frameworks, and the transition of cross-border card transactions toward the standardized ISO 20022 XML messaging protocol.

Survival in today's financial ecosystem demands that institutions move past reactive fraud filters and rigid core systems. This course delivers deep technical and operational expertise in Edge AI on-device inference for intelligent transaction routing, Variable Recurring Payments (VRPs) via Open Banking, and real-time adaptive risk scoring. Combining strategic frameworks with actionable architecture blueprints, the curriculum directly prepares your team to minimize false declines, maximize authorization optimization, and confidently implement cutting-edge card payment ecosystems that support both human and autonomous AI consumer agents.

Programme Curriculum

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Course Objectives

By the end of this professional development course, participants will be able to:

1. Architect modern payment flows utilizing Network Tokenization strategies to replace primary account numbers (PANs) and eliminate data exposure risks at checkout.
2. Implement autonomous transaction protocols that securely support Agentic Commerce and delegated AI-driven purchasing systems.
3. Optimize interchange and processing economics through intelligent Real-Time Routing Engines to maximize approval rates.
4. Deploy multi-layered machine learning models for Real-Time Adaptive Risk Scoring to reduce chargebacks while mitigating false declines.
5. Formulate compliance strategies for regional mandates including 3D Secure (3DS), Strong Customer Authentication (SCA), and evolving digital identity standards.
6. Integrate legacy core banking modules with Digital Identity Wallets to achieve seamless, friction-free "Log in and Pay" user onboarding.
7. Transition card clearing infrastructures to the mandatory ISO 20022 Messaging Standard to avoid hard declines and enrich transactional metadata.
8. Evaluate the deployment requirements for SoftPOS technologies across retail acceptance networks.
9. Engineer resilient card networks capable of executing Secure Offline Authorization and deterministic reconciliation in low-connectivity areas.
10. Assess the impact of alternative payment rails such as Buy Now Pay Later (BNPL) and Stablecoins on traditional credit/debit card portfolios.
11. Govern chargeback and card scheme disputes efficiently using automated Case Management software and automated network lifecycles.
12. Leverage enhanced metadata payloads to comply with Visa's Digital Commerce Authentication Program (VDCAP) for immediate fee reductions.
13. Design high-performance, Agnostic Payment Architectures that liberate traditional banking tech stacks from restrictive single-vendor dependencies.

Target Audience

- Payment Product Managers & Directors.
- Card Operations & Settlement Specialists.
- Risk Management & Fraud Analysts

- Fintech & Open Banking Strategy Leads
- Core Banking IT Architects & Engineers
- Compliance, Legal, & Regulatory Officers
- Merchant Acquiring & Business Development Managers.
- Treasury & Liquidity Managers

Course Modules

Module 1: Foundational Card Architecture & Ecosystem Mechanics

- Deconstructing the 3-Party (Closed-Loop) vs. 4-Party (Open-Loop) foundational networks.
- The transaction execution lifecycle.
- Hardware Security Modules (HSMs) and cryptographic verification of Online PINs.
- The mechanics of Interchange Fees, scheme fees, and merchant discount rates (MDR).
- Switching and message routing protocols across local and international card networks.
- **Case Study:** *The Visa/Mastercard 4-Party Settlement Model*

Module 2: Next-Gen Security: Network Tokenization & Cryptography

- Transitioning from traditional PAN storage to EMV-compliant Network Tokenization.
- Restricting security tokens by device, specific merchant ID, or digital channel.
- Architecting token generation, vaulting, and de-tokenization layers within core banking.
- Mitigating the impact of intercept attacks through dynamic cryptographic keys.
- Aligning systems with PCI-DSS standards while maintaining unredacted data for customer support.
- **Case Study:** *Adyen's Enterprise Tokenization Rollout*

Module 3: Autonomous Payments & Agentic Commerce

- The architecture of Agentic Commerce
- Configuring user-defined boundaries, budget thresholds, and trigger conditions for automated bots.
- Implementing tokenized credentials dedicated exclusively to delegated system-to-system actions.
- Redesigning payment authorization flows when transactions are system-executed rather than user-initiated.
- Managing risk, liability, and dispute frameworks for unauthorized autonomous spend.
- **Case Study:** *The Autonomous Consumables Pipeline*.

Module 4: Open Banking, VRPs, and Digital Identity Wallets

- Unifying identity and transactions via the frictionless "Log in and Pay" framework.
- Integrating bank legacy infrastructure with decentralized Digital Identity Wallets
- The mechanics of Variable Recurring Payments (VRPs) as a direct replacement for traditional direct debits.
- Leveraging government-verified credentials to replace probability-based KYC and onboarding checks.
- Eliminating micro-deposits and document uploads from the card application lifecycle.
- **Case Study:** *The EUDI Wallet Integration Blueprint*.

Module 5: Real-Time Fraud Mitigation & Edge AI Analytics

- Moving from rigid, rule-based fraud blocking to real-time adaptive risk scoring.
- Deploying Edge AI on payment terminals and mobile devices for instant localized anomaly flags.
- Analyzing high-velocity metadata signals.
- Balancing aggressive fraud filters against the cost of false declines and card churn.

- Managing compliance mandates with updated card network risk thresholds
- **Case Study:** *Stripe's Radar Adaptive Engine Deployment*.

Module 6: Merchant Acquiring Innovation

- Transforming standard commercial smartphones into contactless readers via SoftPOS technology.
- Multi-mode acceptance architecture.
- Deploying Pay-by-Link and secure remote invoicing solutions for service-sector merchants.
- Integrating mobile wallets directly into in-aisle checkout systems.
- Managing device security, tamper-proofing, and secure boot keys on commercial Android devices.
- **Case Study:** *Phos by Ingenico Contactless Modernization*

Module 7: Data Quality, ISO 20022, & Transaction Optimization

- The structural shifts of ISO 20022 XML messaging standards in card-adjacent payment rails.
- Incentivizing data payload perfection
- The cost of poor data hygiene: How missing billing details or customer emails trigger hard declines.
- Utilizing automated data capture tools to proactively append required payload details to checkout requests.
- Designing agnostic, modular architectures to decouple payment stacks from restrictive platforms.
- **Case Study:** *Checkout.com Revenue Recovery via VDCAP*

Module 8: Cross-Border Card Payments, Stablecoins, and Settlement Resiliency

- The mechanics of international card routing, correspondent banking, and Nostro/Vostro accounting.
- Evaluating the threat and utility of Stablecoins as primary settlement infrastructure.
- Designing secure offline authorization protocols for intermittent-connectivity environments
- Deterministic reconciliation workflows for processing batch queues after offline network recovery.
- Managing liquidity, currency conversion spreads, and settlement risk across multiple time zones.
- **Case Study:** *FedNow & Card Coexistence in Transit Systems*

Training Methodology

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
07 Sep 2026	11 Sep 2026	Online	$1,000
07 Sep 2026	11 Sep 2026	Physical	$1,500
14 Sep 2026	18 Sep 2026	Online	$1,000
14 Sep 2026	18 Sep 2026	Physical	$1,500
21 Sep 2026	25 Sep 2026	Online	$1,000
21 Sep 2026	25 Sep 2026	Physical	$1,500
28 Sep 2026	02 Oct 2026	Online	$1,000
28 Sep 2026	02 Oct 2026	Physical	$1,500

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