



DeFi (Decentralised Finance): Stablecoins, AMMs, Lending Protocols and Tokenisation



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Introduction:

DeFi decentralised finance now reaches banks, asset managers and payment firms through stablecoin settlement, tokenised funds and client exposure to lending and trading protocols, yet many institutions still assess these protocols with tools built for intermediated markets. The result is unpriced liquidation, oracle and smart contract risk, weak screening of on-chain counterparties and stalled tokenisation pilots. This Core Concept course builds the skills to read how decentralised exchanges, lending pools and stablecoins work, measure their risks and decide how to engage. Participants finish with a DeFi Risk Assessment and Institutional Engagement Roadmap.

Course Objectives:

- Explain how protocol-based DeFi services differ from intermediated finance in custody, settlement and counterparty structure
- Analyse fiat-backed, crypto-collateralised and algorithmic stablecoins for reserve quality, redemption terms and de-peg risk
- Calculate automated market maker pricing, slippage and impermanent loss for a liquidity pool position
- Evaluate lending protocol parameters, oracle design and liquidation mechanics for exposure to leverage and collateral shocks
- Assess the governance, smart contract, MEV and AML exposures of a DeFi protocol using a due diligence scorecard
- Produce a DeFi Risk Assessment and Institutional Engagement Roadmap covering tokenisation pilots and permissioned DeFi options

Target Audience:

- Bank treasury, markets and product professionals evaluating stablecoin settlement and tokenised deposits
 - Fintech and payment professionals building services that connect to on-chain protocols
 - Investment and asset management professionals assessing tokenised funds and on-chain yield
 - Risk professionals responsible for new-product approval and counterparty exposure limits
 - Compliance and AML professionals who screen wallets and monitor on-chain transactions
 - Supervisory and policy professionals who assess links between DeFi and regulated institutions
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Course Outline:

Day 1: From Traditional Finance to DeFi: Protocols, Ledgers and Custody

- Intermediated Versus Protocol-Based Finance: Custody, Clearing and Settlement Compared
- DeFi Technology Stack: Settlement, Asset, Protocol and Application Layers
- Smart Contract Execution, Gas Fees and Transaction Finality on Public Ledgers
- Self-Custody Wallets, Seed Phrases and Multi-Party Computation Signing
- DeFi Market Map: Total Value Locked, Protocol Categories and Links with Centralised Venues

Day 2: Stablecoins and Decentralised Exchange Mechanics

- Fiat-Backed Stablecoins: Reserve Composition, Attestation Reports and Redemption Rights
- Crypto-Collateralised Stablecoins: Collateral Ratios, Vaults and Stability Fees
- Algorithmic Stablecoin Designs and De-Peg Run Dynamics
- Constant Product Automated Market Maker Formula, Liquidity Pools and Slippage
- Liquidity Provider Returns Versus Impermanent Loss Calculation Worksheet

Day 3: Lending Protocols, Yield and Tokenised Assets

- Pool-Based Lending: Utilisation Curves, Variable Rates and Health Factor
- Over-Collateralisation, Loan-to-Value Limits and Liquidation Auction Mechanics
- Price Oracles: Aggregated Feeds, Time-Weighted Average Prices and Flash Loans
- Staking, Liquid Staking Tokens and Yield Source Analysis
- Tokenised Real-World Assets, Tokenised Deposits and On-Chain Perpetual Futures

Day 4: DeFi Risk, Governance and Control Frameworks

- Governance Tokens, DAO Voting and Admin Key Concentration Review
- Composability and Contagion Mapping Across Interlinked Protocols
- Smart Contract Exploits and Oracle Manipulation Incident Analysis
- Maximal Extractable Value MEV, Front-Running and Sandwich Attacks
- AML/KYC for On-Chain Activity: Wallet Screening, Blockchain Analytics and Regulatory Approaches Compared

Day 5: Case Work: DeFi Risk Assessment and Institutional Engagement Roadmap

- Case Brief: Asset Manager Assessing a Tokenised Fund and Lending Pool Exposure
 - Protocol Due Diligence Scorecard: Code Audits, Oracle Design, Governance and Liquidity Depth
 - Stress Scenario Exercise: Stablecoin De-Peg and Collateral Liquidation Cascade
 - Engagement Options Matrix: Permissioned DeFi Pools, Tokenisation Pilots and Custody Partnerships
 - DeFi Risk Assessment and Institutional Engagement Roadmap Presentation and Peer Challenge
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Skills You Will Gain:

- Protocol Due Diligence
- Stablecoin Reserve Analysis
- AMM Pricing and Impermanent Loss
- Liquidation Risk Measurement
- Oracle Design Review
- On-Chain Wallet Screening
- DAO Governance Assessment
- Tokenisation Pilot Scoping

Why Attend This Course:

- Return with a DeFi Risk Assessment and Institutional Engagement Roadmap built on a realistic case and challenged by peers
- Question protocol teams, fintech partners and vendors on collateral, oracles and admin keys with evidence
- Recognise run, liquidation and exploit patterns early enough to set limits and controls
- Compare approaches with banking, investment, compliance and supervisory peers from several institutions and countries

Conclusion:

DeFi decentralised finance replaces intermediaries with code, pooled liquidity and collateral, which shifts risk rather than removing it. The course moves from the protocol stack and custody, through stablecoin designs and automated market makers, to lending pools, oracles, staking, on-chain derivatives and tokenised assets, then to governance, composability, exploits, MEV and AML controls. The final day turns this material into a DeFi Risk Assessment and Institutional Engagement Roadmap. The content is educational and does not constitute investment advice.
