



## MODULE-1: APPLIED FINTECH

### INTRODUCTION TO BFSI

#### Knowledge Cluster 1

- BFSI Value chain
- How FinTech changed BFSI
- Modern Banking Landscape
- Introduction to BankTech
- Introduction to InsureTech

### FINTECH PRIMER

#### Knowledge Cluster 2

- Introduction to the Fintech landscape
- FinTech Architecture
- FinTech Technologies
- Latest Trends and future of FinTech
- Applications of FinTech
- Use cases of FinTech in banks
- Fintech startups
- Fintech unicorns and business models

### MACHINE LEARNING & AI

#### Knowledge Cluster 3

- Introduction to Machine Learning
- ML Algorithms and applications
- AI and applications
- AI/ML –changing business landscape
- AI/ML –in practice
- Use cases and applications

#### Knowledge Cluster 4

- Introduction to Cloud Computing
- Cloud Computing Architecture
- Technologies for Cloud
- Building Robust, Secure & Scalable APIs
- API Economy, Open APIs & Connected Businesses
- Use cases



## **MODULE-2: BLOCKCHAIN FOR FINTECH & APPLICATIONS**

### **BLOCKCHAIN TECHNOLOGY AND INFRASTRUCTURE**

#### **Knowledge Cluster 5**

- Blockchain Foundations
- Blocks and Blockchain, the Chain, Nodes and Network
- Blockchain in Use
- Trust Framework and Consensus Mechanisms, Public, Consortium, Private Blockchains, Blockchain Interoperability

### **BLOCKCHAIN AND CRYPTOGRAPHY**

#### **Knowledge Cluster 6**

- Cryptography
- Application to Blockchain
- Hash Functions
- Public Key Cryptography and Signing
- Use cases and applications

### **SMART CONTRACTS AND HYPERLEDGERS**

#### **Knowledge Cluster 7**

- Understand smart contracts
- Computational model of Smart contracts
- Ethereum and Working with Smart Contracts
- Hyperledger Architecture
- Hyperledger Blockchain Technology
- Use cases of Smart contracts

### **APPLICATIONS OF BLOCKCHAIN ARCHITECTURE**

#### **Knowledge Cluster 8**

- Setting up a Private Blockchain Environment
- Blockchain and Bitcoin
- Example Blockchain Networks and Use Cases
- Practical Blockchain Architecture and use-cases



## **Module-3: PAYMENTS, CRYPTO-CURRENCIES & ALTERNATIVE FINANCE**

### **CRYPTO-CURRENCIES AND ICOS**

#### **Knowledge Cluster 9**

- Cryptocurrencies Primer
- Bitcoin and Applications
- Cryptocurrencies and Digital Crypto Wallets
- Types of Cryptocurrencies
- Cryptocurrencies and Applications
- What is an ICO?
- Importance of ICO in Alternative Finance
- Regulations for Cryptos and tokens

### **PAYMENTS -ARCHITECTURE AND TECHNOLOGIES**

#### **Knowledge Cluster 10**

- Global Payment Ecosystem
- Payments Architecture and Setup
- Innovation in Consumer and Retail payments
- Popular Payments Technology
- Blockchain and Cryptocurrencies in Payments
- Payment Stacks in India
- B2B & B2B2C solutions
- Innovative Products in Mobile based, Credit Cards, POS based ecosystem

### **P2P LENDING, CROWD-FUNDING AND INFRASTRUCTURE**

#### **Knowledge Cluster 11**

- Concept of P2P Lending
- P2P and Marketplace Lending
- P2P Infrastructure and technologies
- Concept of Crowdfunding
- Crowdfunding Architecture and Technology
- P2P and Crowdfunding unicorns and business models
- SME/MSME Lending: Unique opportunities and Challenges, Solutions and Innovations



## **MODULE-4 : BANKTECH,INSURTECH , REGTECH & Market Operations**

### **BANKTECH**

#### **Knowledge Cluster 12**

- Regulatory Framework for Product Pricing, loan origination and servicing
- Social media-based profiling, comparison tools and aggregators
- Dynamic credit rating, Risk management & underwriting
- Using Credit Counsellor Robo/Bot for faster approvals & funding
- Utilizing data science tools and machine learning for data mining/ cross sale
- Hybrid Lending Products

### **INSURTECH**

#### **Knowledge Cluster 13**

- How does InsurTechwork
- Business model disruption
- Aggregators
- AI/ML in InsurTech
- IoT and InsurTech
- Risk Modeling
- Fraud Detection
- Processing claims and Underwriting
- Innovations in Insurance Services
- Unicorns and business models

### **REGTECH**

#### **Knowledge Cluster 14**

- Evolution of RegTech
- RegTechEcosystem: Financial Institutions
- RegTechEcosystem: Startups
- Ensuring Compliance from the Start: Suitability and Funds
- RegTechStartups: Challenges
- RegTechEcosystem: Regulators
- Use Case of AI in Smart Regulation and Fraud Detection
- Regulatory Sandboxes
- Smart Regulation





## **DISCOUNT BROKING**

### **Knowledge Cluster 15**

- Discount Broking
- Disruption to Broking model
- Core Services and Busines model
- Technology setup
- Unicorns of Discount Broking and business models
- Technology stacks for Discount Brokers
- How can they improve
- Other differentiated offerings and services

## **ALGORITHMIC TRADING**

### **Knowledge Cluster 16**

- Architecture of Algorithmic Trading
- Lifecycle of Algorithmic Trading
- Risk, Costs and Roles in Algorithmic Trading
- Conceptualization and Backtesting Strategies
- Business aspects of FinTech in Capital Markets
- Fund Management and Algorithmic Trading
- Setting up an Algo bot

## **ROBO-ADVISORY**

### **Knowledge Cluster 17**

- Robo Advisory
- Automating Investment rules
- ML/AI in Robo-advisory
- Robo-advisory Platforms and Architecture
- Building a Robo Advisory Platform
- Unicorns of Robo-advisory and business models
- State of Robo-advisory in India